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117 Congress
2d Session

COMMITTEE PRINT REPORT

CP 117–8
PART II

INVESTIGATION OF COMPETITION IN DIGITAL MARKETS

MAJORITY STAFF REPORT AND RECOMMENDATIONS

SUBCOMMITTEE ON ANTITRUST,
COMMERCIAL, AND ADMINISTRATIVE LAW
OF THE COMMITTEE ON THE JUDICIARY OF
THE HOUSE OF REPRESENTATIVES

PART II

JERROLD NADLER, CHAIR, COMMITTEE ON THE JUDICIARY

DAVID N. CICILLINE, CHAIR, SUBCOMMITTEE ON ANTITRUST,
COMMERCIAL, AND ADMINISTRATIVE LAW

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ONLINE PLATFORMS AND MARKET POWER, PART 1: THE FREE AND DIVERSE PRESS

HEARING

BEFORE THE

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

OF THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

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ONLINE PLATFORMS AND MARKET POWER, PART 1: THE FREE AND DIVERSE PRESS

TUESDAY, JUNE 11, 2019

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

COMMITTEE ON THE JUDICIARY

Washington, DC.

The subcommittee met, pursuant to call, at 2:37 p.m., in Room 2141, Rayburn House Office Building, Hon. David Cicilline [chairman of the subcommittee] presiding.

Present: Representatives Cicilline, Nadler, Johnson, Raskin, Jayapal, Demings, Scanlon, Neguse, McBath, Collins, Gaetz, Armstrong, and Steube.

Also Present: Representative Jackson Lee.

Staff Present: David Greengrass, Senior Counsel; John Doty, Senior Advisor; Madeline Strasser, Chief Clerk; Moh Sharma, Member Services and Outreach Advisor; Amanda Lewis, Counsel; Joseph Van Wye, Professional Staff Member; Lina Khan, Counsel; Slade Bond, Chief Counsel; Daniel Flores, Minority Chief Counsel; and Andrea Woodard, Minority Clerk.

Mr. CICILLINE. The committee will come to order.

The chair is authorized to declare recesses of the committee at any time.

We welcome everyone to our first hearing on Online Platforms and Market Power Focusing on the Free and Diverse Press.

I now recognize myself for an opening statement.

In recent years, there has been a cascade of competition problems on the Internet. Concentration in the digital advertising market has pushed local journalism to the verge of extinction. The combination of predatory acquisitions, a growing innovation kill zone, and high network effects and switching costs appear to have undermined entrepreneurship and startup rates.

And the sheer dominance of some platforms has resulted in worse products and significantly less choice leaving people without a competitive alternative to services that harvest their data, manipulate their behavior, and monetize their attention.

In response to these trends, the committee announced last week that we will conduct a bipartisan investigation into competition in the online marketplace. The purpose of this investigation is to document anticompetitive conduct online, examine whether dominant

firms are engaging in anticompetitive conduct, and assess whether our competition system and current enforcement levels are adequate to address these problems.

Over the coming months, we will conduct a top-to-bottom review of online markets through a series of hearings on these topics, request information that is relevant to the investigation, and engage in a series of discussions with key stakeholders and policy experts.

This is the first significant antitrust investigation undertaken by Congress in decades. In the past, these investigations, which included studies of monopoly power in the airline industry, banking, oil and Ma Bell led Congress to consider whether it needed to make changes to our laws and agencies. I strongly believe that this investigation is long overdue.

This subcommittee has a constitutional responsibility to conduct oversight of our antitrust laws and competition system to ensure that they are properly working. Congress, not the courts, agencies, or private companies, enacted the antitrust laws. And Congress must be responsible for determining whether they are equipped for the competition problems of our modern economy.

Today's hearing is the first step in this process for examining these trends. The free and diverse press is the backbone of our vibrant democracy. As Justice Louis Brandeis wrote in 1927, those who want our independence believe that public discussion is a political duty, that the greatest threat to freedom is an uninformed citizenry and that the freedom of thought and speech are indispensable to the discovery and spread of political truth.

But over the past decade, the news industry has been in a state of the economic free fall. From 2006 to 2017, advertising revenue has fallen from $49 billion to $15.6 billion resulting in mass layoffs of newspapers—mass layoffs or newspapers folding altogether. This year alone, roughly 2900 reporters and other news staff have already lost their jobs.

These massive cuts are happening to traditional news companies and online news sources alike. For example, earlier this year, The Cleveland Plain Dealer announced another round of layoffs due to advertising losses reducing its staff by 80 percent from employment levels just 7 years ago. BuzzFeed and the Huffington Post have also announced significant layoffs. These are online publishers that have never relied on revenue from classified sections or subscriptions and are designed to appeal to readers on social media sites and mobile devices.

This raises a critical question. If online news publishers can't survive, then who can? During this same period, online platforms that are gateways to news online have operated with virtual immunity from the antitrust laws. Since 2007, Google has acquired several of its competitors in the online advertising market resulting in significant concentration and a complete lack of transparency in this market.

And since 2011, another dominant online platform, Facebook, has acquired two of its rivals, Instagram and WhatsApp, in an effort to corner the market for social media services and advertising on these services. Facebook now controls a user base of 2.7 billion people worldwide, the largest communications platform in human history. It soon plans to combine its products into a single platform,

a move critics have suggested Facebook is making to thwart antitrust enforcement.

As Australia's competition authority noted in its preliminary report on digital platforms, both Google and Facebook have substantial market power in a number of markets that is unlikely to erode over time through new competitive threats. There have also been numerous reports of these platforms engaging in anticompetitive conduct such as favoring their own products or discriminating against rivals that has gone unchecked by Congress and unchallenged by antitrust enforcers in the United States.

These trends strongly suggest that the decline of the new industry is not the inevitable result of the arrival of the Internet, but is instead a direct consequence of enforcement choices that have created a market structure where a small number of platforms are capturing the value created by journalists and publishers.

This has affected news publishers in two key ways. First, news publishers rely on Google and Facebook for the vast majority of traffic online. Even minor changes to the platform's algorithms can have significant effects on the news industry overall.

Furthermore, as a result of this immense concentration of economic power, news publishers, and local news in particular have little bargaining power with the online platforms exacerbating the economic crisis for trustworthy news.

Second, these platforms have a dominant position in the advertising market. Last year, Facebook and Google amassed more than $60 billion from online advertising, the majority of all online ad revenue, while controlling 90 percent of the growth in this market. As David Chavern, the president of the News Media Alliance, will testify today, this dynamic has resulted in economic catastrophe for news publishers forcing them to cut back on their investments and quality journalism.

In response, I have introduced the Journalism Competition and Preservation Act with Ranking Member Collins to give news publishers an even playing field to collectively negotiate with dominant platforms to improve the quality, accuracy, attribution, and interoperability of news online.

While I do not view this legislation as a substitute for more meaningful competition online or antitrust scrutiny, it is clear that we must do something in the short-term to save trustworthy journalism before it is lost forever. This bill is a life support measure, not the remedy for long-term health.

Whether it is an online publisher or a local newspaper, we cannot have a democracy without a free and diverse press. Our country will not survive if we do not have shared facts, if corruption is not exposed and rooted out at all levels of government, and if power is not held to account. This is the very reason the press is called the fourth estate.

I view today's hearing as an opportunity to continue the conversation on how to address this crisis. Both I and the ranking member are open to exploring ways to strengthen the Journalism Competition and Preservation Act. My hope is that today's hearing will serve as the starting point in this discussion.

I thank our panel of extraordinary experts for participating in today's hearing, and I look forward to hearing your testimony.

At this time, I yield to Mr. Armstrong for his opening statement.

Mr. ARMSTRONG. I don't know where the button is over here.

So, no, I appreciate that. And I—at this time, I would ask unanimous consent to enter Congressman Sensenbrenner's statement into the record.

Mr. CICILLINE. Without objection, so ordered.

[The statement of Mr. Sensenbrenner follows:]

MR. ARMSTRONG FOR THE RECORD

Statement of Subcommittee Ranking Member

F. James Sensenbrenner

Subcommittee on Antitrust, Commercial and Administrative Law
Hearing on Online Platforms and Market Power, Part 1: The Free and Diverse Press

Tuesday, June 11, 2019

Thank you Chairman Cicilline. Today's hearing kicks off the Subcommittee's work investigating competition in digital markets. It will focus on how the dominance of big technology companies is affecting the economic viability of local news organizations.

Though more news is being consumed than ever, news publishers are strained financially. Publishers have lost more than $30 billion in ad revenue since 2006 while Facebook and Google made more than $60 billion in ad revenue just last year

alone. Not only is advertising revenue declining but so is readership. Only 20 percent of adults in the U.S. receive news regularly from a print paper, the Pew Research Center found last year; that drops to 5 percent among 18- to 29-year-olds.

Journalism, especially local journalism, is certainly in need of new revenue streams, as the industry faces a fundamental challenge to its business model. While some have found success offering digital subscriptions, local newspapers especially continue to struggle across the country. Journalists are being laid off and newspapers are disappearing. The U.S. has lost almost 1,800 papers since 2004. Roughly half of the remaining 7,100 are located in small and rural communities.

Publishers argue they receive little, if any, compensation from Google and Facebook for their shared work and little, if any, say in how and where it is shared. Acting individually, they argue,

provides them with very little leverage to improve their situation.

In response, Chairman Cicilline and Ranking Member Collins recently introduced the Journalism Competition and Preservation Act. The bill would provide a temporary "safe harbor" — a four-year antitrust exemption for news publishers as they negotiate with Google and Facebook over how news content is used and how advertising dollars are distributed. The goal of which would give news publishers greater leverage.

The loss of print and digital newsrooms should be cause for concern. I look forward to hearing from today's witnesses and to discuss efforts to protect the future of news publishers and high-quality journalism in the United States and legislative efforts to address those challenges.

However, moving forward, I would caution against using antitrust law for purposes of "breaking up big tech". America's leading technology companies have brought us massive benefits both as consumers and as citizens. Most leading internet companies were founded in this country in large part because they were not blocked by government interference. While many acknowledge tighter regulations are needed, to go further would likely stifle growth and innovation.

I yield back the rest of my time.

###

Mr. ARMSTRONG. And the best thing I can do for all of you is give you as much time as possible. So with that, I will yield.

Mr. CICILLINE. I thank the gentleman.

The chair now recognizes the chairman of the full committee, the gentleman from New York, Mr. Nadler, for his opening statement.

Mr. NADLER. Thank you, Mr. Chairman, for holding today's hearing.

And before I deliver my statement, let me apologize. I am going to have to leave afterwards. We have a slight resolution on the floor I have to deal with.

Over the course of the last 200 years, Congress has routinely passed laws to protect and advance a free and diverse press. Whenever new technologies have transformed how Americans produce and share news, be it the telegraph, the radio, the telephone, or broadcast television, Congress has sought to ensure that these new markets were structured to facilitate the free flow of information and to protect the independence and financial viability of the press.

Today as the Internet becomes the dominant platform for accessing news and as this platform grows more and more concentrated in the hands of just two major companies, the news media once again faces serious threats. And congressional action, once again, may be required.

As avenues for accessing news have narrowed in recent years, advertising revenue, which is the primary means of support for most news publishers, has steadily declined as well. And as revenue has fallen, so too has the number of journalists whose work can be supported by news publications.

Local news outlets have been the most severely affected by this trend, with nearly 2,000 local news publishers ceasing operations since 2007. In fact, the majority of counties in the United States no longer have a publisher of local news at all. Hundreds of other publishers have been forced to consolidate or shrink their operations.

This journalism crisis is also a democracy crisis. As sources of trustworthy news disappear, American civic life suffers. The majority of local newspapers and television stations no longer even assign a reporter to cover State and local government matters.

With a less informed citizenry, communities without quality local news generally see lower rates of voter turnout. And cities where newspapers shut down have even seen their borrowing costs rise suggesting, according to one study, that diminished transparency may enable governments to engage in riskier and more inefficient or perhaps more corrupt financing arrangements.

While there are a number of causes of this multi decade decline in the news industry, including reduced print circulation and reduced revenue from classified advertisements, one of the major concerns that has emerged in recent years is the power of a small number of gatekeepers over the news and information that citizens see.

Today, the vast majority of Americans consume their news online. And two online platforms have immense control over how Americans access their news sources. A single algorithm change by one of these private corporations can entirely distort what informa-

tion the public shares and consumes and what revenue the publisher receives.

Moreover, these same platforms dominate the online advertising market, and they account for nearly all of the growth in this market in recent years. No single factor has led to this immense concentration of control, but it is incumbent on Congress to understand the sources of this problem and to address it urgently.

The American tradition has long recognized that preserving an open marketplace of ideas is vital to safeguarding the 1st Amendment and vital to a Democratic form of government. The antitrust and antimonopoly laws have been a primary way that lawmakers and regulators have policed the problem of overly concentrated markets. When Congress enacted the antitrust laws, it was with the purpose of protecting economic opportunity and political equality.

Senator John Sherman, the author of the Sherman Antitrust Act, referred to the first antitrust law as a bill of rights and a charter of liberty. Overly concentrated—and he didn't regard it as simply a question of economic efficiency or reducing prices. Overly concentrated markets concentrate economic and political power and stifle competition.

It is important to keep these broad goals of reducing concentration and promoting competition in mind as we examine how online platforms impact the free and diverse media. As the judge reviewing the consent decree breaking up AT&T wrote, quote, "in promoting diversity and sources of information, the values underlying the 1st Amendment coincide with the policy of the antitrust laws," closed quote.

Congress also has a constitutional duty to ensure that markets are structured in a way that is compatible with our democratic values. While new technologies may upend how news and information are shared, it is vital that we maintain open and competitive markets which will best foster a robust independent press.

With this in mind, I welcome today's hearing as the beginning of the committee's investigation of competition in digital markets, and I look forward to hearing from our panel of experts.

And I thank the chairman, and I yield back.

Mr. CICILLINE. I thank the chairman for yielding back.

The chair now recognizes the ranking member of the full committee, the gentleman from Georgia, Mr. Collins, for his opening statement.

Mr. COLLINS. Thank you, Chairman Cicilline. And thanks for holding this hearing today. I am glad that you and I have found some commonality in this and look forward to working together.

This is the first of many hearings and oversight activity the subcommittee expects to hold over the coming months on the important antitrust and competition issues in the tech sector.

I firmly support this initiative. The conversations we will have in our committee are critical as Congress evaluates the depth, breadth, and importance of these tech issues and whether any amendments to the antitrust laws are needed. The public understanding of these issues and the evolving role of tech in the daily lives of the American people are equally important as we have these discussions.

If we do identify needs for new legislation, it is important we keep two principles in mind. First, like the existing antitrust laws, new legislation be consistent in keeping the free market free. Proposals to construct broad new regulatory regimes should be viewed with caution. Experience shows that regulatory solutions often miss the mark, solve problems less efficiently than free markets, and can create new opportunities for anticompetitive companies to suppress competition through rent seeking. That is especially true when regulation attempts to take on evolving problems in fast moving markets like tech. I speak from experience here. I have worked through these before.

And we have to make sure that we are not looking for an immediate solution to the soreness in our foot and recognize that we have a problem with our leg. We need to make sure we are working this through.

Secondly, big is not necessarily bad. Companies that offer new innovations, better solutions, and more consumer benefit at lower prices often become big to the benefit of society, shockingly. Proposals to break up big companies just because they are big risk throwing out the baby with the bath water. And any discussion that simply moves to that discussion first is not the right way to move.

It is because I embrace these principles that I am excited to have joined Subcommittee Chairman Cicilline in the introduction of the Journalism Competition and Preservation Act. This bill takes head on the problem of local and other news organizations disappearing from the public square as news consumption moves increasingly online.

A vibrant press has been critical to the success of our democracy since the founding of the republic. In the old days, press organizations were able to thrive based on their subscription and advertising revenues. But as news consumption has moved to the Internet, traditional subscriptions are speedily drying up, and online advertising revenues are increasingly becoming dominated by online platforms. As a result, news organizations across the country are rapidly losing their economic lifeblood and disappearing from the public square.

If individual news outlets could count on being able to negotiate fair attribution and advertising revenue agreements with the online platforms, the bleeding could be stopped. The problem, however, is that smaller news organizations don't stand a fair negotiating chance when they try to negotiate deals with a platform giant. These giants stand as a bottleneck, a classic antitrust problem but consumers—between consumers and the producers of news content.

Journalism Competition Preservation Act seeks to solve this problem simply: By allowing news publications to take the platforms bottleneck together. Specifically, the bill allows the publications 4 years in which they can collectively negotiate with the platforms without fearing antitrust enforcement against that activity. In other words, the bill allows news publications to take on an antitrust problem without worrying that the antitrust laws themselves will stand in the way.

It does not propose any new regulatory structures. It does not threaten to break up any company. It does promise to simply and effectively solve the problem.

Today's hearing provides an excellent opportunity to examine this bill and other issues related to journalism in an online environment. These issues include matters as diverse as a boon in tech mergers and acquisitions to the mushrooming problem of online outlets that freeze viewpoints out of the online public square.

As we begin this, for all that are here, and many of you are here representing a large diverse group, I met with many of you over the years. Understand from my position as I have stated clearly the principles that I have laid out. And as we go forward this, anything that happens should be done when everyone comes to the table.

Everyone has a chance to share their opinion. Everyone has a chance to offer what may or may not be good legislative solutions. It is up to this body to hear honestly from the people and the companies involved. If we take everybody at face value, it is the American people at the end of the day that will benefit.

I promise from my perspective, and our side will not rush to judgment. We encourage you to decide to not rush to judgement and companies to participate in a positive solution. When this body does that, we have seen great things happen. When we do not, we end up with more problems than we began with.

With that, I yield back.

Mr. CICILLINE. I thank the gentleman for yielding back.

It is now my pleasure to introduce today's witnesses. Our first witness is David Chavern, the president and CEO of the News Media Alliance, where he has been since 2015. Mr. Chavern spent 10 years at the United States Chamber of Commerce in a number of executive roles, including executive vice president, chief operating officer, and chief of staff. He is a member of the board of directors of Transamerica Insurance and serves on the board of trustees at the University of Pittsburgh, his alma mater. Mr. Chavern received his bachelor of arts at the University of Pittsburgh, his MBA from Georgetown University, and his JD from Villanova University School of Law.

Our second witness is the president and CEO of Public Knowledge, Gene Kimmelman. Before his time at Public Knowledge, Mr. Kimmelman served as the director of the Internet Freedom and Human Rights Project at the New America Foundation and as the chief counsel for the U.S. Department of Justice Antitrust Division. He has also served as chief counsel and staff director for the Antitrust Subcommittee of the Senate Judiciary Committee as well as the legislative director for the Consumer Federation of America. Mr. Kimmelman currently serves as an adjunct professor at Georgetown Washington University School of Law, a senior fellow at the Silicone Flatirons Center for Law, Technology, and Entrepreneurship at the University of Colorado and on the boards of both International Media Support and Global Partners Digital. He received his BA from a spectacular university, Brown University in Providence, Rhode Island, and his JD from the University of Virginia.

Our third witness is Sally Hubbard, the director of enforcement strategy at the Open Markets Institute. Prior to her time with Open Markets, Ms. Hubbard was the senior editor of antitrust enforcement and regulation of tech platforms at the Capitol Forum. She has also spent 7 years as the assistant attorney general at the New York State office of the attorney general's antitrust bureau. Ms. Hubbard earned her bachelor of arts at the college of William and Mary and her JD at New York University School of Law.

Our fourth witness on the panel is Matthew Schruers, the vice president of law and policy at the Computer and Communications Industry Association. As vice president, he advises Internet and technology companies on matters including Internet law, intellectual property competition, and trade. Additionally, he is an adjunct professor at Georgetown University Law Center, the Georgetown Graduate School, and the American University, Washington College of Law. Mr. Schruers received his BA from Duke University and his JD from the University of Virginia Law School.

Our fifth witness is David Pitofsky, executive president and general counsel at News Corp, the son of the dean of Georgetown Law School when I attended it. Prior to joining News Corp, Mr. Pitofsky was a partner at Goodwin Procter LLP where he focused on white collar defense and securities litigation and enforcement. He has also served as an assistant U.S. attorney in the Eastern District of New York where he was the deputy chief of the criminal division. Mr. Pitofsky is a member of the executive committee of the Federal Bar Counsel and an officer of the Federal Bar Foundation. He received his BA from the University of Michigan and his JD from Georgetown University Law Center.

It is now my pleasure to yield to the gentleman from Georgia for our final introduction, Mr. Collins.

Mr. COLLINS. Thank you, Mr. Chairman.

I appreciate this. This is an interesting thing from my—from being a member of Congress now to be introducing a member of the press from my own State, which I am please to do.

It is an honor and a privilege to welcome Kevin Riley to Capitol Hill today. Kevin serves as the editor of the Atlanta Journal Constitution in my home State of Georgia. As those of you from Georgia know, the AJC is one of the best in the business. Even though it is located in Atlanta, I would argue it is where the entire State of Georgia goes to get their news.

Kevin has served as editor for nearly 10 years now and has worked in the news industry for nearly 40. In 2001, the Newspaper Association of America named Riley one of the industry's 20 under 40 up-and-comers, and he is well-known as an effective collaborative and innovative leader.

But you know sometimes you need to say a little more. So we asked one of his reporters, Greg Bluestein of the AJC that works for Kevin describe how he would describe his boss. I think it is very telling.

Kevin is the type of editor who encourages the reporters to experiment and try new things by doing it himself. Shortly after the AJC unveiled a personal journey feature, he wrote a masterful story about a World War II veteran returning to the French battlefield for the fist time since the fight helping to unlock a 69-year-old mys-

tery in the process. And when we started getting involved in the podcast, Kevin headlined a season of the Breakdown show focusing on the murders of two young Atlantans. As we in the newspaper industry face more demands to tell stories in different ways, Kevin has been on the forefront of going on TV and radio to share our work.

He goes on to say, I am not just sucking up by saying this. Kevin is a perfect example of the case to lead.

And I think another one of your reporters Tamar Hallerman is here as well and probably would say the same thing. The perfect cases lead by example, and I can't think of a better compliment.

Earlier this year before we even introduced the Journalism Competition and Preservation Act, Kevin called to explain how critical this bill is for the AJC, for communities across Georgia, and for the entire newspaper industry. Local journalism is a core part of every community in Georgia and nationwide, and it is an honor to have a member of our local media here today.

And I yield back.

Mr. CICILLINE. I thank the gentleman.

We welcome all of our very distinguished witnesses and thank you for participating in today's hearing.

Now, if you would please rise, I will begin by swearing you in.

Please raise your right hands.

Do you swear or affirm, under penalty of perjury, that the testimony you are about to give is true and correct to the best of your knowledge, information, and belief, so help you God?

Thank you.

Let the record reflect that the witnesses answered in the affirmative.

You may be seated.

Please note that each of your witness statements will be entered into the record in its entirety. Accordingly, I ask that you summarize your testimony in 5 minutes. And to help you stay within that time, there is a timing light on the table. When the light switches from green to yellow, you have 1 minute to conclude your testimony. When the light turns red, it signals your 5 minutes have expired.

Mr. Chavern, you may begin. You are recognized for 5 minutes.

TESTIMONY OF DAVID CHAVERN, PRESIDENT, NEWS MEDIA ALLIANCE; GENE KIMMELMAN, PRESIDENT, PUBLIC KNOWLEDGE; SALLY HUBBARD, DIRECTOR OF ENFORCEMENT STRATEGY, OPEN MARKETS INSTITUTE; MATTHEW SCHRUERS, VICE PRESIDENT, LAW AND POLICY, COMPUTER AND COMMUNICATIONS INDUSTRY ASSOCIATION; DAVID PITOFSKY, GENERAL COUNSEL, NEWS CORP; AND KEVIN RILEY, EDITOR, ATLANTA-JOURNAL CONSTITUTION

TESTIMONY OF DAVID CHAVERN

Mr. CHAVERN. Thank you. Chairman Cicilline, Chairman Nadler, Ranking Member Collins, Representative Armstrong, and members of the subcommittee, thank you for inviting me to participate in today's hearing.

My name is David Chavern, and I am the president and CEO of the News Media Alliance, a nonprofit trade association representing over 2,000 publishers across the United States. Our members include some of the largest news organizations covering events around the globe as well as local publishers focussing on the issues that impact communities and the daily lives of citizens in every state and congressional district.

The news media has played a key role in our democracy since its founding. The mission has been to enrich society's understanding and foster public discourse that is vital to a healthy democracy. And over the years, the news media has filled that mission extremely well.

We are also an industry that has fully embraced a digital future. Publishers offer a wide array of innovative and compelling online experiences sustained by truly great journalism. And my membership includes a number of digital only news publishers.

But the rise of digital news distribution has also introduced new and potentially existential threats to the news industry. Specifically the emergence of dominant tech platforms as intermediaries between publishers and their audiences. Online platforms serve an important purpose. Today, 93 percent of Americans get at least some of their news online. These platforms help users find great journalism. And in doing so, they have contributed to the enormous growth in news audiences over the past 2 decades.

In the same way the digital platforms are critical for online news, online news is critical for the digital platforms. The public demand for quality journalism is massive and growing, and that has driven deep engagement with Facebook and Google. A study we released yesterday estimates that news content generated some $4.7 billion for Google in 2018.

The platforms and news organizations mutual reliance would not be a problem if not for the fact that the concentration among the platforms means that a small number of companies now exercise an extreme level of control over the news. And, in fact, a couple of dominant firms act as regulators of the news industry. Only these regulators are not constrained by legislative or Democratic oversight.

The result has been to siphon revenue away from news publishers. This trend is clear if you compare the growth in Google's total advertising revenue to the decline in the news industries' ad revenue.

In 2004, Google's U.S. revenue was 2.1 billion while the newspaper industry accounted for 48 billion in advertising revenue. In 2017, in contrast, Google's U.S. revenue had increased over 25 times to 52.4 billion while the newspaper industry's ad revenue had fallen 65 percent to 16.4 billion.

The effect of this revenue decline in publishers has been terrible, and they have been forced to cut back on their investments in journalism. That is a reason why newsroom employment has fallen nearly a quarter over the last decade. One question that might be asked is if the platforms are on balance having such a negative impact on the news media, then why don't publishers do something about it?

The answer is they cannot, at least under the existing antitrust laws. News publishers face a collective action problem. No publisher on its own can stand up to the tech giants. The risk of demotion or exclusion from the platforms is simply too great. And the antitrust laws prevent news organizations from acting collectively. So the result is that publishers are forced to accept whatever terms and restrictions are imposed on them.

The Journalism Competition and Preservation Act introduced by Chairman Cicilline and Ranking Member Collins is an innovative market-oriented solution to this collective action problem. Markets work best when both parties have some leverage to ask for better terms and to credibly withdraw from negotiations if the other side's demands are unreasonable.

Our goal is actually to find a way to work sustainably with the online platforms to give Americans the best journalism possible. Present trends in the news business simply cannot continue. Without some action to give news publishers a voice in their future, we will all experience the effects of deep financial stress in this industry and the loss of great important journalism in communities across the country.

It is not too much to say that the very fabric of our civic society is at risk. And this is not a problem that will be solved by private charity, from individuals, or even the big platforms themselves. What we need are sustainable business relationships that return value to the great important journalists who create the news content on which we all depend.

Again, thank you very much for having me here today.

[The statement of Mr. Chavern follows:]

Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
United States House of Representatives

Testimony of David Chavern
President and CEO
News Media Alliance

June 11, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and members of the subcommittee, thank you for inviting me to participate in today's hearing.

My name is David Chavern, and I am president and CEO of the News Media Alliance, a nonprofit trade association representing over 2,000 newspapers across the United States. Our members include some of the largest news organizations covering events around the globe, as well as local newspapers focusing on the issues that impact the communities and daily lives of citizens in every state and congressional district. Our members publish both online and in print.

The news media has played a key role in our democracy since our founding. Its mission has been to enrich society's knowledge base and to foster the public discourse that is vital in a healthy democracy. And over the years, the news media has fulfilled that mission.

We are an industry of innovators. News organizations have always been among the first to adopt new technologies and to find new ways to connect with the public. That has never been more true than with the advent of the Internet. Over the past two decades, news organizations have rapidly evolved from providing content solely in print to offering digital access across a range of mediums and devices. In doing so, they have reimagined the ways in which they report news and distribute content:

- They have invested in making sure their audiences have up-to-the-minute facts about rapidly developing world events.
- They have personalized news by delivering stories that are most relevant to individual readers.
- They have developed new ways to gather, analyze, and present data that gives people a deeper understanding of their world.
- They have created apps and websites to offer a better user experience that invites audiences to engage more deeply in current events.
- And they have invested in video, podcasting, and other online media formats to connect with audiences in new ways.

The news media has thus been at the forefront of embracing and adapting to the digital age. But at the same time, the rise of digital news distribution has introduced new,

potentially existential threats to the news industry. Specifically, the emergence of dominant tech platforms as intermediaries between news organizations and their audiences threatens to bring to naught the news industry's investments in a digital future.

Online platforms serve an important purpose. Today, 93% of Americans get at least some of their news online.[1] Digital platforms help online users find news and other content that they might otherwise miss. In doing so, they have contributed to the enormous growth in digital news audiences over the past two decades.

In the same way that digital platforms are critical for online news, online news is critical for the digital platforms. According to a study conducted by NMA, approximately 40% of clicks on "Trending Queries" and 16% on high-volume queries in Google Search are news content.[2] That translates into big money for Google. Our researchers estimate that links to news content have earned approximately $4.7 billion annually for Google in search advertising revenue—and that number does not even include the revenue Google generates from ads that appear on news organizations' own sites.[3] Facebook's reliance on news content to drive user engagement (and revenue) is similarly high.

Estimation of Google Revenue from News Search Results

Year	Revenue from Google Properties	Google Stated Value of Google News	Google News Fraction of Properties Revenue	Google News to Google Search Scaling Factor	Fraction of Google Property Revenue attributable to news on Google Search	Estimated value of news on Google Search	Estimated value of news on Google Search and Google News
2014	$14b	$100m	0.7%	6	4.2%		
2018	$96b		0.7%	6	4.2%	$4.0b	$4.7b

The platforms' and news organizations' mutual reliance upon one another would not be a problem if not for the fact that concentration among the platforms means a small cadre of tech giants exercise an extreme level of control over news. At the same time, those same platforms also control the digital advertising technologies that news organizations use to monetize traffic. This has proven to be a dangerous combination.

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[1] http://www.journalism.org/fact-sheet/digital-news/; http://www.journalism.org/2016/07/07/pathways-to-news/.

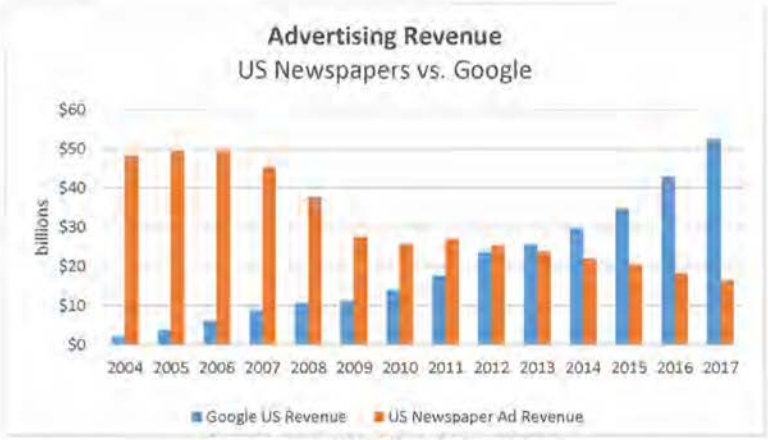
[2] To conduct this study, NMA researchers scraped Google desktop search results pages on a daily basis between February 8, 2019 to March 4, 2019 after generating query terms based on ahrefs.com and Google Trends. The researchers then cross-referenced the results against news domains identified by NMA and Google News. They then developed click-through data and other data based on third-party research.

[3] This estimate is based off of Google's public statements that Google News alone—which accounts for only a fraction of Google's news-related content and traffic—generated an estimated $100 million in yearly revenue in 2008. http://fortune.com/2008/07/22/whats-google-news-worth-100-million/. Although Google has provided no more recent estimates of the value of news content, the $100 million figure quoted by Google can be extrapolated in a straightforward way to suggest an estimated $4.7 billion of news-related revenue in 2018.

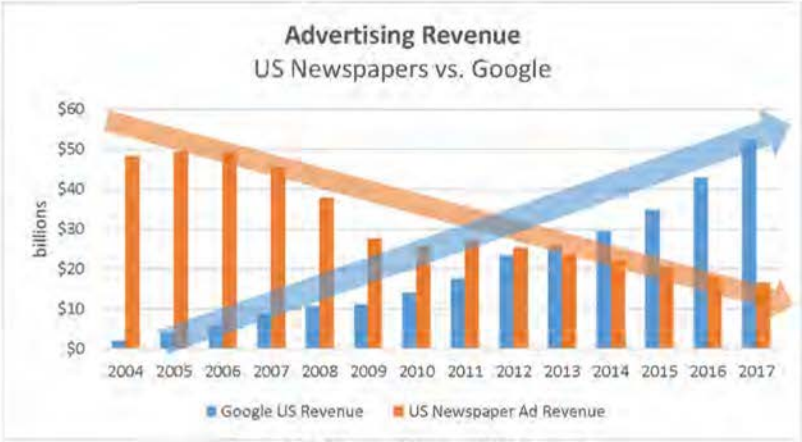
In today's digital age, the tech giants' dual control over news distribution and monetization threatens the very survival of news organizations. These tech giants use secret, unpredictable algorithms to determine how and even whether content is delivered to readers. They scrape news organizations' content and use it to their own ends, without permission or remuneration for the companies that generated the content in the first place. They also suppress news organizations' brands, control their data, and refuse to recognize and support quality journalism.

In effect, a couple of dominant tech platforms are acting as regulators of the digital news industry. Only these regulators are unconstrained by legislative or democratic oversight. And their primary motivation is not to serve the public interest, but rather to maximize their own advertising revenues. Indeed, two dominant platforms—Google and Facebook—now take the vast majority of U.S. online ad revenue through their online advertising services, leaving news organizations with little to reinvest in high-quality, original journalism. They capture that revenue in two ways. First, they scrape news organizations' content and display it on their own pages, where they can monetize it through ads. Second, they control the advertising technology news organizations use to sell ads on their own sites, and the platforms charge increasingly exorbitant fees for the use of those technologies.

The result of the tech platforms' regulation of the news industry has been to siphon revenue away from news organizations. This trend is clear if you compare the growth in Google's total advertising revenue to the decline in the newspaper industry's ad revenue. In 2004, Google's US revenue (which came overwhelmingly from digital advertising) was $2.1 billion, while the newspaper industry accounted for $48 billion of advertising revenue. In 2017, in contrast, Google's US revenue had increased over twenty-five times to $52.4 billion, while the newspaper industry's ad revenue had fallen 65% to $16.4 billion.



Source: Google 10-K filings; NAA Estimates

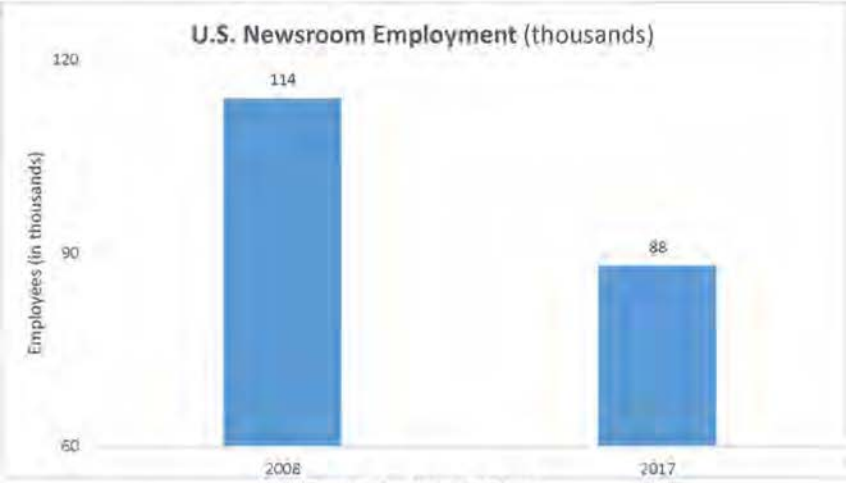


Source: Google 10-K filings; NAA Estimates

	Google US Revenue ($b)	US Newspaper Ad Revenue ($b)
2004	2.1	48.2
2005	3.8	49.4
2006	6.0	49.3
2007	8.7	45.4
2008	10.6	37.8
2009	11.2	27.6
2010	14.1	25.8
2011	17.6	27.1
2012	23.5	25.3
2013	25.6	23.6
2014	29.5	22.1
2015	34.8	20.4
2016	42.8	18.3
2017	52.4	16.5

The effect of this revenue decline on news organizations has been catastrophic, and they have been forced to cut back on their investments in journalism. That is the reason that newsroom employment has fallen by nearly a quarter over the last decade.[4]

[4] Elizabeth Grieco, Newsroom employment dropped nearly a quarter in less than 10 years, with greatest decline at newspapers, Pew Research Ctr. (July 30, 2018), https://www.pewresearch.org/fact-



Source: Pew Research Center

One question that might be asked is, "If the platforms are, on balance, having such a negative impact on the news media, then why don't news organizations do something about it?" The answer is that they cannot—at least not under the existing antitrust laws.

News organizations face a collective action problem. It is in each of their interests to resist harmful or exploitative policies imposed by platform monopolists. It is in their interest to resist scraping, to demand attribution for their content, to demand better remuneration for their content, and to demand a greater focus on originality and reliability. But no news organization on its own can stand up to the platforms. The risk of demotion or exclusion from the platforms is simply too great. And the antitrust laws prevent news organizations from acting collectively, so the result is that publishers are forced to accept whatever terms or restrictions the dominant platforms choose to impose.

The Journalism Competition and Preservation Act, introduced by Chairman Cicilline and Ranking Member Collins, is an innovative, market-oriented solution to this collective action dilemma. Markets work best when different parties can negotiate with one another on reasonably even footing—and where both parties have some leverage to credibly withdraw from negotiations if the other side demands unreasonable or exploitative terms. Monopolies frustrate this dynamic because monopolists know the other side cannot afford to resist their demands, so they are free to impose welfare-reducing, inefficient terms on their negotiating partners. The Journalism Competition and Preservation Act helps remedy this imbalance by allowing news organizations to bargain collectively against dominant tech platforms. Our expectation is that, by doing so, news organizations

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tank/2018/07/30/newsroom-employment-dropped-nearly-a-quarter-in-less-than-10-years-with-greatest-decline-at-newspapers/.

will be better situated to partner with tech platforms to find better ways to reach audiences, generate content, and support high-quality journalism.

Ultimately, our goal is to work with online platforms to give Americans the best news content and experience possible. Today's market dynamics—in which a few tech intermediaries have been permitted to thoroughly monopolize their distribution channels—is not conducive to that goal. The Journalism Competition and Protection Act promises to help solve that problem while remaining true to the spirit of free market competition that animate the antitrust laws.

Present trends in the news business cannot continue. Without action by the Congress, we will all experience the effects of deep financial stress in the industry, and the loss of great, important journalism in communities all across the country. The very fabric of our civic society is at risk. And this is not a problem that will be solved by private charity from the wealthy – or even from the big platforms themselves. What we need to sustainable business relationships that actually return value to the great and important journalists who create the news content on which we all depend.

Mr. CICILLINE. Thank you, Mr. Chavern.

Mr. Kimmelman, you are now recognized for 5 minutes.

TESTIMONY OF GENE KIMMELMAN

Mr. KIMMELMAN. Thank you, Mr. Chairman, members of the subcommittee. On behalf of Public Knowledge, I appreciate the invitation to testify today.

Your opening statements across the—across the board highlight what I think are the natural economic tendencies of what has happened in the digital marketplace. We have enormous sunk cost in platforms that then return scale economies and scope economies with declining costs. These are network effect industries. It is not new to our economy. This is a new form of it. And what we see is a tendency towards a few companies dominating in that space. It is the natural economics of the space.

And you have also highlighted the concern about gatekeeper roles and bottlenecks. And we have a history of this, of concern about this. And the history includes all of the media including the newspapers, for abusive power when we have had too much concentration, too few players in the marketplace, too few independent voices that stifle a marketplace of ideas.

So we have had these problems in the past with previous technologies. We are having them again now. In some instances, antitrust has been the right tool to address them. In some instances, Congress has stepped in with other policy solutions. I urge you to consider all of that.

We have massive power here in the marketplace of ideas, and it stems both on the technology side and on the content and distribution side. I think all of it needs to be looked at.

It is important to fight against concentrated power and dominance at all levels of the distribution chain and to maximize competitive market forces, particularly when they involve the marketplace of ideas. Clearly we need strong enforcement of the antitrust laws, and we need to consider new laws. I appreciate the committee stepping in to begin this detailed study.

But it is important that, as we attempt to stop these abuses where we find them, that we don't create new monopoly power just to take on dominance. It is critical to tackle dominance head on and not create more monopoly.

The digital marketplace, as we all know, has totally transformed our lives. It has destroyed all kinds of brick-and-mortar players, industries, companies, and that includes classified and display ads in the print business. It is much broader than just news, news as being important.

What I am afraid we need to confront is the money from that old model, from that business model, will never come back. It is gone. I think journalism needs to consider a new business model, and we should do everything we can with public policy tools to help. The digital age will require new forms of creative financing in order to get local news and fight misinformation in the marketplace. Public support will be necessary.

I urge you to consider creating some kind of public service duty of care to deliver trustworthy information, not subsidizing companies or industries but instead promoting fact-checking information

accuracy services that deliver value and that can be supported to protect local media and news in particular.

In a digital platform space, I think what is most important is to look at those natural economic tendencies towards—tipping towards dominance, creating barriers to entry that make it very difficult to foster competition and innovation in the markets and examine whether anyone is putting their thumb on the scale either in violation of the antitrust laws or otherwise principles of fairness in our society.

That is why your inquiry is so important, and I commend your effort to look carefully both at what the problems are and what the possible solutions should be.

Consumers themselves are actually reinforcing the problem. We are on the negative side lazy but mostly just complacent to do what is simple. That reinforces the power of those who have our attention in the first place and can find ways to make it very attractive for us not to consider competitive options, new options, better news as opposed to just salacious information.

It is important that we look at all policy tools that are available to address these concerns. Antitrust can do something to try to improve enforcement. But where you have dominance in markets, few players, little entry, often you need broader policy tools. I urge you to consider nondiscrimination, interoperability where there is bottleneck problems. We have done this in telecommunications before. We have done it in the cable industry. This would not be a first for Congress. Now is the time to consider it for digital platforms.

Thank you.

[The statement of Mr. Kimmelman follows:]



Testimony of
Gene Kimmelman[1]
President and CEO
Public Knowledge

Before the
United States House of Representatives
Committee on the Judiciary

Subcommittee on
Antitrust, Commercial, and Administrative Law

Hearing on:
Online Platforms and Market Power, Part 1: The Free and Diverse Press

Washington, D.C.
June 11, 2019

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[1] I want to thank Charlotte Slaiman, Competition Policy Counsel, and Sanjay Jolly, Legal Advocacy Intern, for their support in preparing this statement.

Given the important role large digital platforms play in virtually every aspect of our economy and democracy, we welcome the House Judiciary Committee's decision to launch an investigation into competition in digital platforms. As a few companies have grown to increasingly dominate key elements of the digital marketplace, this investigation is very timely and necessary.

Just as this committee and the Energy & Commerce Committee engaged in economic marketplace analysis through extensive hearings and legislative deliberations in the 1980s and 90s, seeking to understand potential market disruptions in the telecommunications and media industries, it is now appropriate to do the same in the digital marketplace. We hope the Committee will focus on information gathering to determine the ways in which the market is not performing optimally and identify what legal changes are necessary. We believe that strong antitrust enforcement and updated understanding of market dynamics can address many competitive shortcomings. However antitrust alone cannot maximize competition and sustain the democracy to which we aspire. Congress must do more to address these challenges.

Communications platforms have played a critical role in the dissemination of news and information and the practice of democracy in our society for almost two hundred years. Whether it was the telegraph, radio, telephone, television, cable, broadband or the internet, these distribution systems have influenced the way journalism is amplified throughout our society to extend the power of news and print media with each technological advancement. Each of these communications platforms also embodied economic and technological attributes that made robust market competition across platforms difficult, if not impossible, without policy intervention. Whether it was spectrum limitations, monopoly franchising arrangements, or network economics, we have constantly struggled to bring maximum market competition and diversity of ownership and viewpoints to bear in the dissemination of news and information in our society. Today is no exception.

Critical analytical journalism, a pillar of the democratic process, should benefit from a mass communications distribution platform to reach the broadest public. But as with past platforms, the internet distribution system needs public policy oversight to prevent monopolistic players from limiting robust, diverse, and thought-provoking journalism from reaching the public.

The harsh realities of the journalism marketplace coincide with the growing importance of digital platforms as an essential tool for news and information dissemination. More and more consumers get their newspaper and media news information online, relying upon platforms like Google, Apple, and Facebook to deliver the

content they desire. As we consider policy interventions necessary to overcome the digital market's natural inability to generate enough revenue to support the highest quality journalism, it is important to consider whether the major digital platforms should play a more meaningful role to help overcome these problems.

The Crucially Important News Industry Faces Economic Challenges Today

A thriving news industry benefits our democracy immensely. News that is independent, follows the ethics of journalistic integrity, and that is focused at the state and local level, provides an important check on the power that large institutions--corporations and the government--have over the people. The news helps us hold these institutions to account, and make sure we are making informed choices at the ballot box and with our purchase decisions.

Local news is particularly important and faces more difficult challenges. In the last decade, several hundred newspapers have shut down, merged or cut back from daily to weekly publication. Most of the approximately 8,000 local newspapers that survive are small dailies and weeklies with a circulation of less than 15,000. Many are the primary, if not sole, source of local news. Since 2004, more than a third of the country's newspapers have changed ownership; some sold two or more times. Faced with steep declines in revenue, many long-time owners have declared bankruptcy. At the end of 2004, the three largest companies owned 487 newspapers with a combined circulation of 9.8 million. In 2016, the three largest companies own about 900 papers that have a combined circulation of 12.7 million. In contrast to 20th century media companies that would "buy and hold" newspapers for many years, today's investment groups actively manage the newspapers they own, keeping a short-term focus on the bottom line. Because the media barons acquire newspapers primarily—or solely—as an investment, often as a relatively modest part of a diverse portfolio of non-media assets, they do not pay close attention to the quality of journalism produced by their newspapers.[2] As the realities of the digital marketplace started taking hold, profit-maximizing newspapers and media felt increasing pressure between preserving quality and making money, often choosing consolidation to the detriment of diverse ownership to preserve their embedded business structure. The result is lower quality news.

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[2] Abernathy, P.M. (2016). The Rise of the New Media Baron and the Emerging Threat of News Deserts. Center for Innovation and Sustainability in Local Media, University of North Carolina at Chapel Hill. Available at http://newspaperownership.com/wp-content/uploads/2016/09/07.UNC_RiseOfNewMediaBaron_SinglePage_01Sep2016-REDUCED.pdf

Today, the economics just don't work for most newspapers. As readers transitioned to consuming news online, several important changes occurred in the industry. Classified ads, historically a major source of revenue for newspapers, have largely been replaced by online products like Craigslist, AutoTrader, and Zip Recruiter. More accurate data identifying what sources of information people actually spend most time on, now possible in the digital realm, has had the duel effects of decreasing the value of ads, and highlighting which types of news achieve the best "bang for the buck" in terms of obtaining many readers for a low investment. Unfortunately, it's not the type of high-quality journalism we'd like to imagine people seek out from newspapers. Print ad revenue has declined as data demonstrated to advertisers that they were not placing their ad money where consumers were spending the most time.[3]

Misinformation

As we consider the plight of journalism and the news industry in today's digital marketplace, one fact must not be forgotten. The historically powerful television media and the most prominent print journalism entities contribute some of the most powerful sources of news and information on the internet. Whether it is Fox News, NBC, the New York Times or the Wall Street Journal, these established media "brands" have a supersized and amplified role in today's internet driven information marketplace as redistributed content. In other words, traditional media, and its most powerful players, are integrally connected to the most powerful ways that the internet informs and influences consumers in the digital marketplace.

As Harvard Law Professor and news industry researcher Yochai Benkler points out in his book Network Propaganda, we cannot understand the power of internet information distribution without also accounting for the manner in which traditional powerful media voices fuel the information that flows on the internet. In 2016, he says, "Something fundamental was happening to threaten democracy, and our collective eye fell on the novel and rapidly changing— technology. Technological processes beyond the control of any person or country—the convergence of social media, algorithmic news curation, bots, artificial intelligence, and big data analysis—were creating echo chambers that reinforced our biases." But that wasn't quite the whole story according to Benkler and his co-authors. "Facebook didn't create the asymmetric architecture of the American public sphere. Nor did the internet or the blogosphere. The asymmetry is already clear in patterns of attention to cable news networks and talk radio." Even without the choices made by digital

[3] Mary Meeker, Internet Trends 2018, Kleiner Perkins, Slide 96, available at https://techcrunch.com/2018/05/30/internet-trends-2018/; compare to Meeker, Internet Trends 2015, Kleiner Perkins, Slide 16, available at https://techcrunch.com/2015/05/27/the-mary-meeker-internet-trends-2015-report/.

platforms, we see the problems of misinformation in the news media. Benkler's in depth analysis showed that, "On the left, politicians and partisans have to navigate the scrutiny and fact checking of objective media sources to reach broader audiences. On the partisan right, the gatekeepers are Fox News, talk radio, Breitbart, and the Drudge Report." Needless to say, Benkler does not consider these news outlets to be responsible curators of high quality news.

Another important source of misinformation and political radicalization has been YouTube, owned by Google's parent company, Alphabet.[4] YouTube's recommendation algorithm, the computer program that decides which video to recommend to users after they have watched one video, appears to have discovered that extreme content is more likely to keep users watching.[5] Even if you yourself don't take recommendations from the algorithm, 70% of time spent on the site is watching algorithm-suggested videos.[6] Just as sensational headlines helped sell more papers during the height of the original "fake news" at the turn of the last century, sensational videos increase user engagement, helping YouTube and its content creators make more money.

The Role of Digital Platforms

We have witnessed the early power of the internet explode to the point where today, there is no area of human life that has not been affected by it. We now buy goods and services, do banking, pay bills, find information, and talk with multiple groups of friends and acquaintances on the web. The speed, scale, and scope of the internet, and of the technologies it has enabled, have been of unprecedented value.

In particular, digital platforms have aided citizens in their role as information producers and disseminators. While the curatorial role of traditional news outlets is incredibly valuable, it is not infallible. In 2014, Michael Brown was fatally shot by police officer Darren Wilson in Ferguson, Missouri. This tragedy, and the ensuing protests that it sparked, were initially ignored by mainstream media outlets. Regular people, "citizen journalists," took to Twitter to share what they were seeing, and eventually the mainstream news had no choice but to pay attention. Black Lives Matter activist DeRay McKesson said,

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[4] Kevin Roose, "The Making of a YouTube Radical", New York Times, June 8, 2019. Available at https://www.nytimes.com/interactive/2019/06/08/technology/youtube-radical.html.
[5] Just last week, YouTube announced that it is planning to change some of its content moderation policies to try to address this problem. It remains to be seen what impact this change will have. YouTube Official Blog, "Our ongoing work to tackle hate", June 5, 2019. Available at https://youtube.googleblog.com/2019/06/our-ongoing-work-to-tackle-hate.html.
[6] Kevin Roose, "The Making of a YouTube Radical", New York Times, June 8, 2019. Available at https://www.nytimes.com/interactive/2019/06/08/technology/youtube-radical.html.

"In no uncertain terms, if it were not for Twitter and Instagram, the majority would have tried to convince you that we did not exist."[7]

At the same time, the exploding digital marketplace has effectively wiped out the market for print classified and display advertising. Because digital advertising is much cheaper, can be more personally targeted, and fits well with today's disaggregated news delivery, it is hard to imagine that the newspaper and news media industry could replace its lost print advertising online, even if all ad revenue flowed back to journalism. Therefore, the financing of quality news in the digital market will require new sources of revenue far beyond advertising to remain a positive force for democracy.

I have attached a report I recently co-authored that analyzed the economics of digital platforms and potential policy solutions.[8] The report found that digital platforms, such as Google, Amazon, Apple, and Facebook, often have strong economies of scale and economies of scope. They have low marginal costs since their products are digital rather than physical, and they benefit from increasing returns to data collection and aggregation. They often have strong network effects. This leads platform markets to be prone to tipping towards monopoly or dominance. As a result, we see significant barriers to entry into these markets by any new competitor. The winner in these settings often has a large cost advantage from its scale of operations and profit advantage from the scale of its data. An entrant cannot generally overcome these without a similar user base which is difficult to obtain quickly and cost-effectively.

Additional barriers to entry are generated by consumer behavior. Economists increasingly recognize that consumers do not always behave perfectly rationally, and sometimes it's rational not to expend the extra time to allow products to compete for your business. Crucial to the power of digital platforms, the report found that, "Consumers do not scroll down to see more search results, they agree to settings chosen by the service,

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[7] Jenee Desmond-Harris, "Twitter forced the world to pay attention to ferguson. It won't last.", Vox.com, available at https://www.vox.com/2015/1/14/7539649/ferguson-protests-twitter. Also see Zeynep Tufekci, Twitter and Tear Gas, for an excellent and nuanced discussion of this topic.

[8] The University of Chicago Booth School of Business, George J. Stigler Center for the Study of the Economy and the State hosted its annual Antitrust and Competition Conference this year on the subject of digital platforms. The Market Structure and Antitrust Subcommittee Report is appended to this statement, and it is available at https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure---report-as-of-15-may-2019.pdf. Hereinafter, the Chicago Report. Harold Feld also recently discussed these issues in his ebook "The Case for the Digital Platform Act." See http://www.digitalplatformact.com

they single-home on one platform, and they generally take actions that favor the status quo and make it difficult for an entrant to attract consumers. In general, the findings from the behavioral economics literature demonstrate an under-recognized market power held by incumbent digital platforms."[9] This impact can be purposefully exacerbated by platforms using the very detailed large datasets they acquire from us to identify and exploit consumers' many behavioral shortcomings and biases in real time. "Framing, nudges, and defaults can direct a consumer to the choice that is most profitable for the platform," often staying on the platform for as long as possible, also known as "engagement".[10]

The role of data in digital sectors is critical. Personal data of all types allows for targeted advertising to consumers, a common revenue model for platforms. The report shows that the returns to more dimensions and types of data may be increasing, which again advantages incumbents. Consumer data in the United States is not regulated in any way that gives useful control or privacy to consumers; and additionally, most consumers have little idea what is being collected about them and re-sold. One way in which digital platforms often exploit their market power – and increase their profits – is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing, but which give the platform freedom to monetize consumers' personal data.

New entrants are crucial to market dynamism, provide more choice, different features, and a chance of higher quality. Even just the threat of new entry spurs an incumbent to provide lower prices, higher quality and innovation, and to do so more quickly. New competition in digital platforms would also provide broader societal benefits, that we believe should lead to a market that offers a better financial situation and more opportunities for news. Persistent market power by one or a few firms leads to stagnation. It is impossible to know what innovations we are missing out on today because there has been dampened competition in this crucial portion of the digital economy for the last few years.

Policy Solutions

These market realities present significant challenges for antitrust enforcement. Even if the Federal Trade Commission (FTC) and Department of Justice (DOJ) enforce the antitrust laws to the fullest, as we advocate for them to do, that may not be enough to generate competitive digital markets in a timely fashion. That's why we think this Committee's investigation into competition and the necessary tools to promote increased competition in digital markets is crucially important.

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[9] Chicago Report, 6.
[10] Chicago Report, 7.

Ultimately we cannot rely on antitrust alone to address the problems of platform power. We need a sector-specific regulator with expertise in how digital platforms operate and authority to affirmatively promote competition. The potential problems posed by the power of digital platforms are myriad, and impact not just the news industry, but all of digital commerce and communication. The tendency of these platforms to tip toward monopoly once a sufficient size is reached requires policy tools than can be deployed much more quickly than the antitrust investigation process tends to allow for. This means a regulator with broader authority and a speedy rulemaking process is needed for competition to thrive. I look forward to the Subcommittee's continued investigation of this broader subject.

Any solution focused on news must address the concerns of misinformation and lack of trust in the news. The new expert regulator can set up systems of content moderation for platforms to pay for various mechanisms of information reliability. This includes products like NewsGuard, which analyzes the news outlet and its news gathering processes to give a certification of compliance with journalistic ethics. It could be expanded to include direct fact-checking and information analysis of individual articles and even other internet-distributed content the public tends to rely upon as sources of information. It's important to note, that although the digital platform may, and we believe should pay for these content moderation services, it does not make sense for the platform itself to provide these services. The key is to separate these functions from the ad-driven goal of increasing engagement and compensate those who provide the public with information analytics to help separate fact from fiction.[11]

We believe Congress should provide new incentives for investment in high-quality local journalism.[12] Any method of public funding that Congress devises must focus on supporting local news outlets to provide quality local news. This is the type of news that is most needed and yet is least supported in today's market.

In addition, the digital platforms that have grown dominant through scale, scope, and control of data must not be allowed to use their market power to in any way impede

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[11] This concept was proposed at the same Chicago Conference by the subcommittee focused on the media. That subcommittee has published an executive summary, but their full report is still forthcoming. It will be available here when it is published: https://research.chicagobooth.edu/stigler/events/single-events/antitrust-competition-conference. We also believe their other proposals are worthy of discussion and may indicate a path forward.

[12] The media subcommittee, after extensive research, identified public funding for news as its top priority.

fair market pricing for valuable journalistic products. Even when fully complying with the antitrust laws, it also makes sense to require dominant digital platforms to contribute to sustain the positive benefits to our democracy that flow from the dissemination of quality news and information on their platforms.

We do not believe this problem will be solved by allowing more consolidation of power, whether among platforms or media. And we believe exceptions to the antitrust laws should be a tool of last resort, if they are ever used.[13] Enabling excess market power to challenge the existing dominant platforms does nothing to address the long term need to develop market forces that promote strong local journalism, and does nothing to reduce any undue market power that may have made current market conditions worse.

Conclusion

Congress must address the market externalities and any unfair practices that are undermining opportunities to invest in and make money through sound journalism. We are firmly committed to working with Congress and law enforcement agencies to modernize our laws and update enforcement practices to achieve this important goal. We urge the Committee to use this investigation process to evaluate where markets are not performing properly and what policy tools are best suited to addressing these harms. A thorough investigation of the digital marketplace should inform policy proposals both for antitrust and other pro-competition tools that can most effectively open markets to expanded competition while simultaneously preventing abusive practices by dominant firms. We urge the Committee to methodically probe market problems and determine the most effective policy tools necessary to address them.

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[13] Newspapers and others have alternative ways to band together with the blessings of antitrust enforcers, which prevent industry collusion. https://www.justice.gov/sites/default/files/atr/legacy/2010/04/01/257318.pdf

Mr. CICILLINE. Thank you, Mr. Kimmelman.

The chair now recognizes Ms. Hubbard for her opening statement for 5 minutes.

TESTIMONY OF SALLY HUBBARD

Ms. HUBBARD. Chairman Cicilline and members of the subcommittee, thank you for inviting me to speak with you today.

In my view as a former antitrust enforcer, the starving of journalism and the disinformation crisis are both, in good part, monopoly problems. I have been writing about antitrust and tech platforms since the summer of 2016 when I noticed that the tech giants, Google, Apple, Facebook, and Amazon, were all doing the same types of things that Microsoft had been sued for nearly 20 years earlier. They were leveraging their market power to make fair competition impossible.

These tech giants are gatekeepers that also compete against companies that must get through their gates to reach users. News publishers must get through Facebook and Google's gates due to the two platforms' concentrated control over the flow of information.

But Facebook and Google compete against news publishers for user attention, data, and ad dollars. They are controlling the game and playing it too.

Publishers never had a fair shot, nor do they have bargaining power against the platforms. The platforms can cut them off with a simple tweak of their algorithms. Facebook and Google exploit their middleman positions to divert ad revenue away from publishers and into their own pockets. And the platforms can hyper target users based on their 360-degree views of what their users read, think, and do, thanks to their ability to track users across millions of websites and even offline.

Last year, Facebook and Google accounted for approximately 85 percent of the growth of more than—of the more than $150 billion digital ad market in the U.S. and the EU according to Digital Content Next, which is a main trade association for publishers.

As for disinformation, Facebook and YouTube program their algorithms to prioritize engagement which amplifies propaganda. Through surveillance, Facebook and Google learn what messages people are susceptible to whether ads or propaganda. Then they rent out these manipulation machines to others for huge profit.

The scale of the manipulation is massive because of Facebook and Google's dominance. And the platform's lack of competitive pressure to fix the disinformation problem because the closest subsidy for Facebook users is Instagram which Facebook owns. Users need to be able to vote with their feet and switch to alternatives.

To their credit, Facebook and Google started on their paths to dominance with innovation. But their monopoly power is not purely the result of competing on the merits. Facebook has repeatedly acquired rivals including Instagram and WhatsApp. And Google's acquisition cemented its market power throughout the ad ecosystem as it bought up the digital ad market spoke by spoke including Applied Semantics, AdMob, and DoubleClick.

Together Facebook and Google have bought 150 companies in just the last 6 years. Google alone has bought nearly 250 companies. Thus far, antitrust enforcers have not stood in their way nor

have they stopped Facebook and Google from leveraging their monopoly power to exclude competition.

Weak antitrust enforcement set the stage for these platforms to extract the fruits of publishers' laborer as much as monopolies are extracting wealth across most sectors of our economy. Monopolies are putting the American Dream at risk as people, including journalists, are not rewarded for their efforts.

Beginning immediately, antitrust enforcers should prevent Facebook and Google from acquiring competitive threats and companies that fortify their monopoly power. They should unwind anticompetitive deals and divest subsidiaries to open up competition, and they should stop exclusionary practices.

Antitrust enforcement alone won't solve everything discussed here today, but we won't be able to solve anything unless we weaken monopoly's power. It is a necessary but not sufficient condition. News is a social good that is essential to hold power account. It was a journalist named Ida Tarbell that took down the most notorious monopoly in U.S. history, Standard Oil.

News deserves special protection like it has had throughout American history through nondiscrimination and interoperability rules. We also need rules to curb invasive data collection by default and to give citizens ownership of their data.

The good news is we have been here before, as Gene pointed out. We have—these are not new challenges. We have stood up to powerful tech monopolists. Each time we are better for it. We only see new waves of innovation. We have restored our markets and removed gatekeepers.

But if we don't act now to change the structure of our markets, titans will continue to control speech, journalism will continue to wither, and so will our democracy.

Thank you.

[The statement of Ms. Hubbard follows:]

Testimony of Sally Hubbard

Director of Enforcement Strategy
Open Markets Institute

Before the
House Judiciary Committee
Subcommittee on Regulatory Reform, Commercial and Antitrust Law

On

"Online Platforms and Market Power, Part 1: The Free and Diverse Press"

June 11, 2019

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I. Introduction

Over the last two years, Americans have come to understand two fundamental problems relating to digital concentration. First is the realization that political actors abroad and in the United States had figured out how to exploit digital platforms to distribute propaganda and misinformation – popularly called "fake news" – in ways that disrupt our electoral systems and politics. Second is that the advertising-dependent business models of Facebook and Google (and increasingly Amazon) are based on an intimate surveillance of the actions and communications of hundreds of millions of individuals, and on the manipulation of user and business data.

These two private corporations simultaneously have centralized control over the flow of information and news between reporters and readers and diverted advertising revenue away from both traditional and Internet "native" publishers, at both the national and local levels, into their own coffers. With the ability to control the distribution of information, ad money, and the relationship between the reader and the news outlet, tech platform monopolists now have unprecedented power over reporters and news publishers themselves. This dynamic poses a threat to American democracy and to the most fundamental liberties of the individual.

Americans have faced similar challenges before, with the rise of then-revolutionary technologies such as the telegraph and telephone in the 19th century and of radio and television in the 20th Century. In each instance, we used government and competition policy to ensure the independence and financial viability of the news media. Over the course of more than two centuries, Americans developed many regulatory and policy tools that can be of use to us today.

II. Threats to Democracy

For today's hearing, I will focus on three main ways that digital platform monopolies threaten American democracy: (1) disinformation and propaganda; (2) the starving of journalism; and (3) control over speech.

A. Disinformation and Propaganda

First, digital platforms like Facebook and Google, and the Google-owned YouTube, are the main source of disinformation and propaganda. Facebook and Google track people both on their platforms and off, in order to target and influence them with advertising. And just as these platforms enable advertisers to influence people's purchasing decisions, they likewise enable propagandists to influence people's political decisions. Propagandists and disinformation agents are not hacking these platforms or misusing them. Rather, they are using these platforms exactly as designed, for influence and manipulation.

The problem is not just that Facebook and YouTube cannot properly identify and quickly take down disinformation, but rather that these platforms actually amplify propaganda. Facebook and YouTube program their algorithms to prioritize engagement to keep people on their platforms longer, collecting more of their data and showing them more ads. Their algorithms boost disinformation and propaganda because fear and anger "engage" humans the most.

Even worse, through ubiquitous tracking and compiling the data sets of billions of people, Facebook and Google learn what messages people are susceptible to – whether advertisements, extreme political propaganda, or election meddling.

Facebook and Google make a lot of their money by renting out their manipulation machines to just about anyone who comes along. In 2016 alone, the year of the U.S. presidential election and the Brexit vote, Facebook nearly *doubled* its ad revenue.[1] The scale of the manipulation is massive because of Facebook and Google's dominance and control of the flow of information globally.

These problems are not inevitable, but rather are the result of business choices. If Facebook and Google stopped collecting massive amounts of user data to feed their targeted advertising business models, foreign agents would not be able to so easily interfere with our elections by precisely targeting and manipulating users. If Facebook and YouTube stopped programming their algorithms to prioritize engagement, fake news and incendiary, hateful and polarizing content would not rise to the top of news feeds. Facebook and YouTube make business choices to prioritize engagement, keeping users on their platforms as long as possible to show them ads and collect their data.

We cannot have Democracy if we turn our broadcast platforms over to control by foreign agents and purveyors of disinformation.

B. The Starving of Journalism

A second important threat is that Facebook and Google exploit their middlemen positions to divert advertising away from publishers and into their own pockets in ways that starve trustworthy journalism. Last year Facebook and Google accounted for approximately 85% of the growth of the more than $150 billion North American and European digital advertising market.[2]

That's because Facebook and Google can hyper-target users based on their 360-degree views of what their users read, think, and do, thanks to their ability to track users across millions of websites and even offline. Facebook got so good at tracking consumers –

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1 "Facebook Ad Revenue Tops $10bn," BBC News. November 01, 2017. https://www.bbc.com/news/business-41835989

2 Canada. Parliament. House of Commons. Standing Committee on Access to Information, Privacy and Ethics. *Testimony of Jason Kint*. 1st sess., 42nd Parliament, Meeting No. 151, 2019. https://www.ourcommons.ca/DocumentViewer/en/42-1/ETHI/meeting-151/evidence#Int-10649964

whether on Facebook or on millions of other websites with Facebook pixels[3] – that it could target ads better than any publisher could. Google likely knows more about consumers than even Facebook does.[4]

No publisher has anything similar, which means no publisher can really hope to compete with Google and Facebook for the advertising dollars needed to support journalism. As a result, we have seen our society hugely disrupted by the collapse of journalism at the local and state level. This means thousands fewer reporters and editors are covering the news.

The story of *Women You Should Know*, a pioneering online publisher that has been telling empowering women's stories for years, illustrates these first two threats to democracy. The site's founders, Jen Jones and Cynthia Hornig, built their small business with Facebook at its core, growing their Facebook fan base to more than 350,000 loyal followers. Their digital ad-supported business thrived, with Facebook followers regularly clicking to read their articles on their website.

But recently they began getting confusing messages from their followers, messages criticizing *Women You Should Know* for only sharing negative stories of violence against women and straying from their positive brand. Jen and Cynthia were baffled. Sure, they occasionally shared a story about gender-based violence, an important issue, but the uplifting stories outnumbered those articles by 20 to 1. Jen and Cynthia realized that Facebook's algorithms often were not showing followers their positive stories, but rather serving up the stories the provoke fear and anger. Jen and Cynthia wanted to empower women, but Facebook's algorithms were programmed to prioritize engagement, and so Facebook made women afraid instead.

Then Facebook tweaked its algorithm in 2018, promising to show more posts from friends and family.[5] Facebook's flip of a switch decimated *Women You Should Know*'s website traffic, as it did to many other publishers, a stark demonstration of Facebook's monopoly and gatekeeper power. Jen and Cynthia tried to enlist financial support from their huge base of Facebook followers. But Facebook, again, had other plans. All posts that used words like "donate" or "contribute" got buried by Facebook's algorithms and did not show up in their followers' news feeds. Why? Facebook had vertically integrated into fundraising, and in order to get donations to show up in followers' feeds, Jen and Cynthia needed to use Facebook's own fundraising feature. This is a common tactic of big tech platforms, using their monopoly power to steer users to their own products and services.

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3 "Facebook Letter to UK Parliament." Rebecca Stimson to Damian Collins Chair, Digital, Culture, Media and Sport Committee House of Commons. June 8, 2018. https://www.parliament.uk/documents/commons-committees/culture-media-and-sport/180608-Rebecca-Stimson-Facebook-to-Chair-re-oral-ev-follow-up.pdf.
4 "What Google and Facebook Know About You." Al Jazeera, March 29, 2018: https://www.aljazeera.com/news/2018/03/google-facebook-180329092252320.html
5 Mark Zuckerberg's Facebook Page. January 11, 2018. https://www.facebook.com/zuck/posts/10104413015393571

Women You Should Know is a publisher that is digital-native, with a huge Facebook following, and Facebook nonetheless managed to decimate them. Publishers like Mother Jones,[6] Vox[7] and Slate[8] also reportedly had their livelihood threatened by the 2018 algorithmic change. If Facebook had not consolidated gatekeeper power over the internet, its changes – even purportedly well-intentioned ones – would not determine which news publishers get to exist.

Jen and Cynthia are still struggling like so many other publishers to find a new, sustainable business model.

C. The Automation of Fear

On top of amplifying propaganda and starving journalism, Facebook and Google can exploit their control over access to the market to silence potential criticism. In most cases, people won't speak up in the first place, due to fear of retribution.

Wired Editor-in-Chief Nicholas Thompson and Fred Vogelstein in February 2018 published what may be the most concise description of today's relationship between reporters and publishers and the platform monopolists, a relationship characterized increasingly by dependence, exploitation, and fear.

"Every publisher knows that, at best, they are sharecroppers on Facebook's massive industrial farm... And journalists know that the man who owns the farm has the leverage. If Facebook wanted to, it could quietly turn any number of dials that would harm a publisher – by manipulating its traffic, its ad network, or its readers."[9]

Nick recently updated that piece in an article titled "15 Months of Fresh Hell Inside Facebook."[10] He wrote that, just after the first article appeared last year:

"[T]raffic from Facebook suddenly dropped by 90 percent, and for four weeks it stayed there. After protestations, emails, and a raised eyebrow or two about the coincidence, Facebook finally got to the bottom of it. An ad run by a liquor advertiser, targeted at

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6 Monika Bauerlein and Clara Jeffery. "How Facebook Screwed Us All." *Mother Jones*, March 2019. https://www.motherjones.com/politics/2019/02/how-facebook-screwed-us-all/

7 Jeremy Barr. "Post-Facebook News Feed Tweaks, Vox Media Lays off 50 Employees." The Hollywood Reporter, February 21, 2018. https://www.hollywoodreporter.com/news/vox-media-laying-around-50-people-1086869.

8 Will Oremus. "The Great Facebook Crash." Slate, June 27, 2018. https://slate.com/technology/2018/06/facebooks-retreat-from-the-news-has-painful-for-publishers-including-slate.html.

9 Nicholas Thompson and Fred Vogelstein. "Inside The Two Years That Shook Facebook – And The World." *Wired*, January 2018. https://www.wired.com/story/inside-facebook-mark-zuckerberg-2-years-of-hell/.

10 Nicholas Thompson and Fred Vogelstein. "15 Months of Fresh Hell Inside Facebook." *Wired*. April 2019. https://www.wired.com/story/facebook-mark-zuckerberg-15-months-of-fresh-hell/.

WIRED readers, had been mistakenly categorized as engagement bait by the platform. In response, the algorithm had let all the air out of WIRED's tires. The publication could post whatever it wanted, but few would read it. Once the error was identified, traffic soared back."

Nick concluded by doubling down on what he wrote last year: *"It was a reminder that journalists are just sharecroppers on Facebook's giant farm."*

The same relationship applies to Google. As Jim VandeHei of *Axios* wrote recently, "The media is obsessed with Facebook."[11] But publishers and reporters are "exponentially more dependent on Google." The corporation, he wrote "is a gigantic octopus, with sprawling, growing tentacles reaching deep into every nook and crevice of media companies."

Today, in America, news publishers understand very well that digital platforms have the power to cut off their pathway to the reader and to cut off what little revenue remains. We cannot have democracy unless every one of us, every citizen and every journalist, feels free to speak their mind.

III. The Role of Weak Competition Policy

These threats to democracy are not an inevitability of the internet, but rather they result from bad competition policy and poor enforcement of the law. In this section, I will explain why these threats are monopoly problems and how weak antitrust enforcement impacted where we are today.

A. Unfair Competition Between Facebook, Google, and Publishers

A major problem in the age of big tech is that platform monopolists are internet gatekeepers that also compete against companies that must get through their gates to reach users. But of course, this is not a fair competition. Rather, tech platforms have what I call *platform privilege* – the incentive and ability to prioritize their own products and services over those of competitors. Tech platforms get to both umpire the game and play in it too.

As an example of platform privilege, Google was found by the European Commission to have abused its dominance by prioritizing its own comparison shopping services in Google search and tweaking its algorithms to demote competitors in search results.[12] Amazon has reportedly preferred its own goods and services on its platform.[13] And Apple

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11 Jim VandeHei, "Behind the Curtain: How Google Got Media Companies Addicted," Axios, May 8, 2018. https://www.axios.com/google-media-companies-facebook-tech-industry-a10898ec-e0b7-46ef-bcfc- d2561a2e0630.html

12 European Commission. "Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service." News release, June 27, 2017. http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

13 Julie Creswell, "How Amazon Steers Shoppers to its Own Products," New York Times, June 23 2018. https://www.nytimes.com/2018/06/23/business/amazon-the-brand-buster.html

has been accused of discriminating against Spotify and giving favorable treatment to Apple Music.[14]

In the same way, Facebook and Google compete against news publishers that must get through their gates to reach users, due to the two platforms' concentrated power over the flow of information. But Facebook and Google compete against news publishers for user attention, data and advertising dollars.[15] Because Facebook and Google control the playing field for this competition, publishers never had a fair shot. How can publishers compete against platforms that can tweak their algorithms at any time to bury them?

Facebook and Google can simply change their algorithms or adjust their product design to keep users within their digital walls and reduce traffic to news publishers' properties, depriving publishers of the revenue essential to fund journalism and to counter disinformation.

Facebook's goal is to keep users engaged with content on its platform as much and as long as possible. The more time users spend on Facebook's platform, the more data it collects, the more ads it shows, and the more money it makes. On Facebook's first quarter 2016 earnings call, CEO Mark Zuckerberg announced that users spend on average more than 50 minutes per day using Facebook, Instagram and Messenger, up ten minutes from the number reported in 2014.[16]

And about 70 percent of Alphabet's total 2016 revenue came from the ads that the company sells on its own digital properties, including Google web search pages, YouTube and other Google apps.[17] Google thus has the incentive to steer search users to its own properties. YouTube benefits from prioritization in Google search results, and, like Facebook, makes more revenue the more people engage with content on its platform.

Because disinformation is more likely to gain attention and foster engagement, it better serves both Facebook and YouTube's advertising-based business models than does trustworthy news. The more outrageous content is, the more it elicits likes, shares, comments and clicks, and the more the algorithms promote it.

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14 Daniel Ek. "Consumers and Innovators Win on a Level Playing Field." *For the Record* (blog), March 13, 2019. https://newsroom.spotify.com/2019-03-13/consumers-and-innovators-win-on-a-level-playing-field/.

15 Sally Hubbard. "Fake News Is a Real Antitrust Problem." Competition Policy International Antitrust Chronicle, December 2017. https://www.competitionpolicyinternational.com/wp-content/uploads/2017/12/CPI-Hubbard.pdf.

16 James B. Stewart. "Facebook Has 50 Minutes of Your Time Each Day. It Wants More." New York Times. May 5, 2016. https://www.nytimes.com/2016/05/06/business/facebook-bends-the-rules-of-audience-engagement-to-its-advantage.html.

17 Shira Ovide. "Google Has a Chink in its Ad Armor," Bloomberg. January 27, 2017. https://www.bloomberg.com/gadfly/articles/2017-01-27/google-s-high-powered-ad-juggernaut-has-a-weak-spot.

B. Loss of Choice and Bargaining Power Due to Market Concentration

Because they lack meaningful competition, Facebook and Google can tailor their algorithms to serve their financial interests, rather than making profit-reducing changes to combat disinformation. Without choice and lacking bargaining power, consumers who want trustworthy news prioritized instead of disinformation and propaganda have limited ability to switch to alternatives. Hence the normal checks and balances of a free, competitive market do not constrain Facebook and Google from pursuing profits to democracy's detriment.

News companies also lack alternatives and bargaining power against Facebook and Google. Facebook and Google are constantly changing terms and adjusting their algorithms, and publishers have little choice but to adapt and accommodate regardless of how the changes may negatively affect their own profitability. In 2009, Rupert Murdoch accused Google of stealing media content and threatened to withdraw his media companies' articles from Google search, but he could not viably follow through on the threat.

Imagine instead a world with robust competition against Facebook and Google. Purveyors of disinformation would have less impact. News publishers would have bargaining power. Journalists and citizens would not be afraid to speak out. Users could vote with their feet when Facebook and Google amplify disinformation or abuse their privacy. The ability to switch to an alternative would apply competitive pressure on Facebook and Google to fix their problems because profits would be at stake.[18]

C. The Use of Anticompetitive Mergers and Conduct to Grow Monopoly Power

Facebook and Google started on their paths to dominance with innovation, but their monopoly power is not purely the result of competing on the merits or being the best.

Acquisitions of competitive threats have helped both firms amass and maintain market power, and weak merger enforcement is a big part of how we got where we are today. Instagram built a thriving social network with 27 million users on iOS alone, centered around sharing images.[19] Then Facebook bought it. WhatsApp succeeded in getting the attention of 450 million users and was also acquired by Facebook. Facebook even reportedly has its own app to detect new apps that could be competitive threats, so that it

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18 See Transcript of The Capitol Forum Conference Call with Professor Scott Galloway Vol. 5 No. 371, November 6, 2017 ("When big tech starts making noises that old media and the government seems to buy into that something would be impossible, that's Latin for we would be less profitable if we did this.").

19 "Facebook Buys Instagram For $1 Billion; Turns Budding Rival Into Its Standalone Photo App," TechCrunch. April, 2012. https://techcrunch.com/2012/04/09/facebook-to-acquire-instagram-for-1-billion/.

can build its own version.[20] DoubleClick was the leader in display advertising, and then Google bought it. Google's acquisitions cemented its market power throughout the vertical stack of the ad ecosystem, as it acquired the digital ad market spoke by spoke.[21]

Together Facebook and Google have bought over 150 companies just since 2013.[22] Google alone has acquired nearly 250 companies since 2006.[23]

Anticompetitive conduct has also grown Facebook and Google's monopoly power. Google has not competed purely on the merits, according to the European Commission decisions finding abuses of dominance regarding Google Shopping, Android, and AdSense.[24] In the Android case, the European Commission found that Google required phone manufacturers to install a suite of apps on Android phones as a condition of installing the must-have Google Play app, conduct that mirrors the *Microsoft* antitrust cases regarding Internet Explorer. The contracts also prohibited manufacturers from preinstalling competing search engines and other competing apps in Android phones, helping Google maintain its monopoly in search as the world moved from desktop to mobile. Google has also integrated into search verticals like reviews, maps and travel, and has been accused of degrading its search quality results in order to prioritize its own verticals or content that keeps users on Google search pages.[25]

As for Facebook, the German cartel office recently determined that the social media platform abused its dominance by excessive and improper collection of user data, in violation of Europe's privacy law, the General Data Protection Regulation.[26] And documents recently published by the UK parliament provide evidence of Facebook cutting

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20 Elizabeth Dwoskin. "Facebook's Willingness to Copy Rivals' Apps Seen As Hurting Innovation," The Washington Post. August 10, 2017. https://www.washingtonpost.com/business/economy/facebooks-willingness-to-copy-rivals-apps-seen-as-hurting-innovation/2017/08/10/ea7188ea-7df6-11e7-a669-b400e5e7e1cc_story.html.

21 "Infographic: Google's Biggest Acquisitions." Digital image. June 10, 2019. https://www.cbinsights.com/research/google-biggest-acquisitions-infographic/.

22 Rani Molla. "Amazon's Ring buy gives it the same number of acquisitions this year as Facebook and Google," ReCode by Vox, March 4, 2018. https://www.vox.com/2018/3/4/17062538/amazon-ring-acquisitions-2018-apple-google-cbinsights

23 "Infographic: Google's Biggest Acquisitions." Digital image. June 10, 2019. https://www.cbinsights.com/research/google-biggest-acquisitions-infographic/.

24 European Commission. "Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service," Supra note 4. News release, June 27, 2017. http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

25 Luca, Michael, Timothy Wu, Sebastian Couvidat, Daniel Frank, and William Seltzer. *Does Google Content Degrade Google Search? Experimental Evidence*. Working paper no. 16-035. Business School, Harvard. September 2015, (Revised August 2016); Jack Nicas. "Google Has Picked An Answer For You—Too Bad It's Often Wrong," November 16, 2017. https://www.wsj.com/articles/googles-featured-answers-aim-to-distill-truthbut-often-get-it-wrong-1510847867.

26 Germany. German Federal Cartel Office. *Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources*. 2019. https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Pressemitteilungen/2019/07_02_2019_Facebook_FAQs.pdf?__blob=publicationFile&v=5

off competitors' access to its API.[27] Such conduct likely amounts to a discriminatory refusal to deal, which is prohibited under Section 2 of the Sherman Act.

Thus far antitrust enforcers have not stopped Facebook and Google from using acquisitions to grow and maintain their monopoly power and leveraging their monopoly power to exclude competition. Weak antitrust enforcement deserves a large part of the blame for publishers' lack of bargaining power and alternatives to Facebook and Google, and it set the stage for these platforms to extract the fruits of publishers' labor.

IV. History of the American System of the Free Press

The failings of competition policy are not the only cause of the devastation of journalism in America. Government has also failed to protect the free press through public policy.

To understand what went wrong, the history of American journalism is instructive. That history is one of ceaseless private initiative and innovation, as individual citizens strive to figure out better ways and smarter business models to a) keep a check on government and private power, b) inform citizens, and specific communities within society, of the basic events and challenges of the day, and c) pay the costs of reporting, editing, and distributing the news.

From even before the Declaration of Independence, Americans used government both to promote the building of technologically sophisticated infrastructures to distribute the news, and to directly address threats to the free press posed by either private monopolists or by government actors.[28]

By the first decades of the 19th century a basic American model of the Free Press had been shaped. The model had three main components:

• **Local ownership of newspapers**. Most towns of any consequence came to have at least one and often more, independent papers.

• **An advertising-based business model**. Although many early papers were supported in part by various forms of government and party patronage, by the early 19th century American newspapers were supported, crucially, by subscriptions and local advertising.

• **A politically neutral network for distributing the news**, strongly buttressed where necessary by government funding, initially in the form of the Post Office system.

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27 United Kingdom. Parliament. House of Commons. *Disinformation and Fake News: Final Report*. 2019.

28 Paul Starr, The Creation of the Media: Political Origins of Modern Communications (New York: Basic Books, 2004)

A. Protecting the "American System" Against the First Tech Monopolies

The first great technological challenge to the basic balances of this "American System" of the free press came in the 1840s with the rise of the railroad and, especially, the telegraph. These technologies greatly sped the movement of news both in the form of the physical newspaper and in the form of the news story itself, which could now be distributed almost instantaneously across hundreds of miles by the telegraph. These technologies, however, also created chokepoints in the flow of information and ideas. During this period, the distribution of news became dependent on infrastructures developed and owned by rich and powerful private corporations that often enjoyed positions as *de facto* monopolies – over both communications and transportation – across large swaths of the nation.[29]

In response, American legislatures and courts at all levels of government began enacting policies designed to ensure that the private ownership and operation of these crucial technologies did not privilege some people's speech while suppressing others. Although there were widespread calls simply to nationalize the telegraph system, and perhaps attach it to the Post Office (as many European nations were then doing), Americans generally focused more on using other legal and policy tools to prevent these networks from discriminating in favor of, or against, any one person, party, or corporation, while leaving ownership and management of the networks in private hands.[30] Hence, perhaps the single most important action during this period was to impose various forms of common carriage rules, or common-carriage-like principles, to these new networks.

One of the first such efforts was New York State's Telegraph Act of 1848. Its goal was to check what one journalist at the time called the "stupendous power" of telegraph monopolies over the flow and content of news by making it easier for new competitors to join the market.[31] The law did so by prohibiting telegraph operators from discriminating in favor of any one person's or company's messages, which it did by mandating that the operator carry messages on a first- come, first-served basis, and that it charge all senders the same price and terms.

By the beginning of the 20th century, monopolists such as John D. Rockefeller and J.P. Morgan had captured control over great swaths of the American economy and American politics. Yet despite numerous attempts by the powerful to exploit the monopoly nature of the telecom and transportations networks of the day, Americans managed to protect and perpetuate the American System of the free press.

Indeed, it was America's magazines and newspapers which published the most powerful investigations and exposes of the Rockefellers and Morgans of the country, and of the

29 Richard John, Network Nation: Inventing American Telecommunications (Cambridge, Massachusetts: The Belknap Press of Harvard University Press, 2010)
30 John, Network Nation, 124-125, 138.
31 John, Network Nation, 91

politicians in Washington who served them, helping to catalyze public support for greater anti-monopoly action from the federal government.

B. Perpetuating the "American System" in the Era of Radio and Television

During and immediately after the First World War, Americans allowed the federal government to monopolize control over key communications and transportations systems, and over the use of the new wireless technologies. But after the end of the war, Americans moved swiftly to return telecommunications and transportation networks to private control. Despite the fact that radio (and later television) introduced entirely new ways to broadcast the news and sped up communications dramatically, Americans began to shape these technologies to make them fit with the American System of free press that had worked so well for so long.

Indeed, while other major nations moved to centralize communications and the news under the control of the government – as in the case of the United Kingdom's BBC – Americans took a directly opposed path, working to ensure that the new wireless networks would be as decentralized and democratic as possible, composed of thousands of local stations that would be locally owned, locally directed, and locally funded, mainly through local advertising.[32]

Within a few years, Americans had established policies that strictly limited the number of broadcast licenses a single person or corporation could control. They did so, for instance, by blocking any one corporation or individual from owning more than one TV or radio station in the same market, and by blocking corporations from owning more than seven TV stations, seven AM radio stations, and seven FM stations nationally.[33] They also limited how many networks any one independent broadcaster could affiliate with.[34]

American legislatures and courts also continued to promote and enforce "common carrier" rules that prohibited price discrimination in communication markets and kept networks open and neutral.

C. The American System in Crisis – Neoliberalism and the Internet

Over the last generation, the American System of Free Press has come under unprecedented pressure. Although many Americans only really began to focus on the state of the news media following the revelations about Russian meddling in the last general election, there has been a sharp and persistent decline in the number of American

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32 Starr, Creation of the Media, 9

33 U.S. Library of Congress, Congressional Research Service, The FCC's Rules and Policies Regarding Media Ownership, Attribution, and Ownership Diversity, by Dana A. Scherer, R43936 (2016), 9, 11, 20.

34 Tim Wu, *The Master Switch: The Rise and Fall of Information Empires* (New York: Random House, 2010), 83.

journalists working at the local, national, and international levels.[35] This is true for the journalism that aims to keep a check on our governments. And it is true for the journalism that is designed to keep a check on large private enterprises, such as business corporations and financial institutions. The overall result is a grave and growing threat to American liberties and American democracy.

Two radical changes are largely responsible for the dangerous state of American journalism today.

The first is intellectual, in the form of a new philosophy of competition. From the founding, Americans used government to promote open markets and wide distribution of power and opportunity. This played out in policies that promoted independent farms, independent business, and local control of enterprise and finance, across the whole American political economy, in almost exactly the same way as Americans promoted wide distribution of ownership over the news media. To the extent there was an organizing concept behind this approach to political economy, it was to protect and promote the interests and rights of a thinking, acting, productive citizenry.

But a generation ago, in the late 1970s and early 1980s, an alliance from across the political spectrum promoted the adoption of a new approach to competition policy. The new goal, they said, should be to promote more "efficient" forms of production, distribution, and business organization, in theory to create more material wealth to share across society. To the extent there was an organizing concept, it was to protect and promote the interests of the American as a "consumer." This movement is sometimes known as the "Chicago School," as many of its early promoters taught at the University of Chicago. It is also widely known as "neoliberalism."

This radical shift from a philosophy that promoted diversity and the distribution of power, to a philosophy that promoted efficiency—and hence the concentration and centralization of power— directly affected the American System of the free press in profound ways. Following the insights of the Chicago School, antitrust enforcers permitted private actors to concentrate far greater control than ever before over American news and entertainment media. And policymakers made a series of decisions that actually made it easier for powerful actors to further centralize control over news and information flows.

The second radical change over the last generation was the development and deployment of the Internet. Much in the same ways that the telegraph and the radio disrupted preexisting balances in the 19th and early 20th centuries, the rise of globe-spanning Internet-based communications corporations such as Facebook and Google similarly broke down existing structures and practices. These new tech platforms consolidated

35 Elizabeth Greico, "Newsroom employment dropped nearly a quarter in less than 10 years, with greatest decline at newspapers," Pew Research Center. (July, 30, 2018). https://www.pewresearch.org/fact-tank/2018/07/30/newsroom-employment-dropped-nearly-a-quarter-in-less-than-10-years-with-greatest-decline-at-newspapers/

power over America's news system, controlling and manipulating the flow of news and information across the internet.

And, closely related, these platforms developed a new system of automated advertising that depended on the intimate surveillance of individuals, and that – over the course of a few short years - allowed them to capture control over much if not most of the advertising market that once sustained America's independent press, and especially its local news media. The result, in a remarkably short period of time, was the choke pointing of news across a few vital platforms, the creation of extreme or even complete dependency by journalists and publishers on these platforms, and the development by the platforms of ever more automated systems for controlling and manipulating news flows in ways that promote their own financial – and ultimately their own political – interests.

Google and Facebook erected a duopoly over online advertising. Because these companies command far more data than other advertising-based businesses can hope to bring in, Google and Facebook can offer ads that are more targeted, more precise, and which reach more people than those sold by newspapers, magazines, and other journalistic outlets.

This is a significant change from the previous structure of the U.S. advertising market, under which news organizations drew in advertising revenue by creating products that attracted local audiences. Under the new system, it doesn't matter if newspapers attract local audiences or forge a strong connection with local readers. No matter what, advertisers can reach those audiences by going to Google or Facebook directly, bypassing local media entirely.

The rise of Facebook and Google's advertising businesses neatly coincides with the declining ad revenue of America's newspapers. Google launched its digital advertising business in 2001 and made its first billion from digital advertising in 2003. Facebook started its digital advertising business in 2009, after which it grew every single year. The two corporations in 2017 grossed just under $140 billion in advertising revenue, which represents 73% of the entire digital advertising market. Meanwhile, newspapers' aggregate revenue fell from the 2005 high of nearly $50 billion to less than $20 billion in 2017, when adjusted for inflation.[36]

The main difference in recent years from previous periods in American history is that for the first time ever, America's citizens have not used government to neutralize the power of today's monopoly communications networks. As a result, the executives and financiers

36 "Google's ad revenue from 2001 to 2017," Statista, accessed June 11, 2018 https://www.statista.com/statistics/266249/advertising-revenue-of-google/ ; "Facebook's advertising revenue worldwide from 2009 to 2017," Statista, accessed June 11, 2018 https://www.statista.com/statistics/271258/facebooks-advertising-revenue-worldwide/; Jillian D'Onfro, "Google and Facebook extend their lead in online ads, and that's reason for investors to be cautious," CNBC, Dec. 20. 2017, Accessed June 11, 2018 https://www.cnbc.com/2017/12/20/google-facebook-digital-ad-marketshare-growthpivotal.html; "Estimated aggregate revenue of U.S. newspaper publishers from 2005 to 2017," Statista, accessed June 11, 2018 https://www.statista.com/statistics/184046/estimated-revenue-of-us-newspaper-publishers-since2005/

in charge of these corporations have been left almost entirely free to further increase their power through the buying of potential rivals, to manipulate the flow of news between reporters and readers through such practices as personalized ("first-degree") discrimination in pricing and terms, and to divert the great bulk of remaining advertising dollars away from local and even national news media into their own pockets.

V. Solving the Crisis: Towards Regulated Competition[37]

Drawing on these lessons from history, saving the free press will require organizing market structures around four principles.

1. Business models must exist that allow for independent news gathering, because independent news gathering is a social good critical to democracy.

2. Any policy levers must preserve free speech and avoid government censorship.

3. Markets should be decentralized so that information production can be decentralized. Local communities need to be able to produce and distribute information about their own communities.

4. There should be no price and terms of service discrimination against consumers, advertisers, or publishers. Relationships between publishers and the audience should be kept under the control of publishers and audiences, and not structured to enable third parties to monetize relationships they don't invest in to produce.

Specific solutions include: a) non-discrimination regulations; b) structural separation; c) stronger antitrust enforcement; d) interoperability; and e) data privacy rules.

A. Non-Discrimination

Tech platforms that are providers of essential communications and information services should be subject to common carrier style regulation, which we have applied to every previous network monopoly in our history. There must be no discrimination in price or terms, be it towards the user or the publisher. When private companies become the infrastructure of the economy, policymakers must impose neutrality, non-discrimination, and equal access regulations.

B. Structural Separation and Market Segmentation

Both Google and Facebook have not only enormous advertising power but also multiple dominant networks as subsidiaries. As discussed above, each has an incentive to unfairly and inefficiently prioritize the content of its subsidiaries.

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37 This section is excerpted, with additions and modifications, from the forthcoming, "Financing Free Speech: Tech Platforms and Advertising Markets," Matt Stoller, Open Markets Institute.

By applying common sense standards to network products to split up Facebook and Google, policymakers would produce new independent companies that can compete: Instagram, WhatsApp, Facebook, Messenger, Maps, Search, YouTube, Android, Play, Analytics, DoubleClick Advertising, Analytics, Chrome, Gmail, and infrastructure services. This has been done before. One model for such a simplification would be the Public Utility Holding Company Act of 1935, which forced utility holding companies to break themselves up into component parts.

C. Stronger Antitrust Enforcement Against Mergers and Anticompetitive Conduct

First, the Department of Justice or Congress should recreate vertical merger guidelines to prohibit mergers that create anticompetitive market structures. These guidelines should establish "bright lines" for market share thresholds that make enforcement simple and market expectations clear.

Second, policymakers should establish a new strengthened framework for vertical restraints and monopolization. Congress could implement rules by statute, or the FTC could use its Section 5 rule-making authority to bar exclusionary practices by dominant internet platforms. It should also bar the use of dominant platform power to foreclose on or discriminate against competitors using that platform, and bar the use of data acquired as a result of platform dominance in anti-competitive ways.

The U.S. Department of Justice brought its antitrust case against Microsoft 18 years ago. The dearth of enforcement in the meantime is partly attributable to legal precedent that imposes high bars for prevailing on monopolization claims. Legal precedent involving monopoly, monopoly leveraging, attempted monopoly, predatory pricing, tying and bundling all require adaptation for Sherman Act Section 2 to optimally serve its purpose of preventing monopolization. Even under existing U.S. law, however, antitrust enforcers have the tools to combat illegal conduct and are beginning to gain the political will as well.

Immediately, antitrust enforcers should bar Facebook and Google from acquiring competitive threats and companies that fortify their monopoly power. Enforcers should also unwind anticompetitive deals to open up competition and sue to stop exclusionary practices.

The antitrust laws, however, should not be used against journalists who collectively negotiate against tech platforms. The Open Markets Institute thus supports the *Journalism Competition and Preservation Act* proposed by Representative Cicilline. Although Open Markets ordinarily does not favor exemptions from the antitrust laws, this measure is now necessary due to the absence of bargaining power against tech platform monopolists. The exemption is structured in a way that is limited in scope and duration.

D. Interoperability

Policymakers should impose interoperability requirements to end the chokehold over the flow of commerce.

Interoperability requirements for tech platforms would be a mechanism to organize pro-competitive regulations to reduce the market power of any specific choke point for information flow. The National Institute of Standards and Technology (NIST) is a branch of the Commerce Department designed to organize standards. It has promulgated standards recently on fingerprinting technology, SMART grid interoperability frameworks, industrial control system security, and cybersecurity. NIST and the FTC could jointly serve as a convening body for the development of interoperability standards for platform.

Interoperability requirements would allow competitors to emerge by reducing entry barriers to competition. Such requirements were imposed by both regulators and antitrust enforcers against AT&T and by antitrust enforcers in *US v. Microsoft*.[38]

E. Data Privacy Rules

Policymakers need to restore the bargaining leverage of publishers and the ability of individuals to protect their right not to be tracked.

Since the late 1990s, consumer groups and technologists have been proposing various mechanisms to enable more consumer control. One popular idea is a Do Not Track list, a global list maintained by the Federal government barring collection of personalized data across the web by companies whose business model is largely studying, monitoring, or analyzing user behavior. Such a Do Not Track list would mean a single toggle switch for a citizen in which that citizen could prevent third-party tracking of their data or use of that data by an intermediary whose business model is oriented around behavioral manipulation or targeting.

Such a law, if structured and implemented well, could reorient bargaining power and protect privacy towards institutions that build trusted relationships with users by creating useful content. Each entity in the market – whether an entertainment website or the New

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38 The Wilson Department of Justice "endorsed the interconnection of Bell and non- competing independent operating companies and ordered Bell to devise protocols necessary to give these noncompeting independents access to Bell's long-distance network." See John, Network Nation, p. 360; "The Microsoft Settlement: A Look to the Future," Statement of Charles A. James, Assistant Attorney General Antitrust Division before the Committee on the Judiciary, United States Senate. December 12, 2001. p. 8; "And Microsoft will be required to license any intellectual property to computer manufacturers and software developers necessary for them to exercise their rights under the proposed decree, including, for example, using the middleware protocols disclosed by Microsoft to interoperate with the operating system." p. 8

York Times – would have to compete with each other with only the data they have on each user from a first-party relationship.

A related concept would simply bar the tracking of individuals for personalized behavioral ad targeting and the combination of personalized third-party data for such targeting. Individually targeted ads would be legal when the user has a first-party relationship with a publisher, but that targeting can only use data acquired from that relationship.

For instance, the New York Times can segment and target its readers with ads, but only based on their use of the New York Times apps and website. Facebook, however, could not individually target users with ads based on their purchase of Mastercard data, or their acquisition of data through social plug-ins on third-party sites, or their use of the Facebook Audience Network. Such a market structure would prohibit publishers from using data not acquired in that direct relationship with the publisher.

Implementing either policy would end up protecting the rights of publishers to control their subscriber and user data, because publishers have a first-party relationship with their audience. Publishers would be allowed to engage in granular targeting, but the use of third-party user-specific data to engage in ad targeting would be significantly restricted. In this framework, you can only target your own readers. This would restore the power imbalance in the market and reduce intermediaries to their rightful place of matching ad buyers and publishers.

VI. Conclusion

At the Open Markets Institute, we believe the American people have both a right and a duty to use government to ensure the independence and financial viability of both national and locally based news organizations. As a country, we have been here before. We have stood up to powerful tech monopolists. Each time, we were better for it. We unleashed new waves of innovation. We dispersed opportunity. We restored our markets and removed gatekeepers. But if we don't act now to change the structure of our markets, titans will continue to control speech, journalism will continue to suffer, and so will our democracy.

Mr. CICILLINE. Thank you, Ms. Hubbard.
The chair now recognizes Mr. Schruers for 5 minutes.

TESTIMONY OF MATTHEW SCHRUERS

Mr. SCHRUERS. Thank you, Mr. Chairman, members of the committee. On behalf of the Computer and Communications Industry Association, an association of technology, Internet, and communications firms, I appreciate the opportunity to appear today.

Let me begin by acknowledging that success brings scrutiny. Digital technology and the Internet has revolutionized the U.S. economy and the global economy. The industry leaders are names recognized around the world. Some of the most prominent brands we know. We welcome an evidence-driven conversation and examination of this transformation and the firms that are leading it.

But declining newspaper prospects are an independent phenomenon. Firms that date, at the oldest, from the 1990s did not start this trend in the 1980s. Technology has challenged some news publishers business models in part by ushering in extensive new competition, globalizing the advertising market, and disrupting the dominant local advertising position that many publishers once had.

Because journalism is important to any democracy, we share the goal of ensuring that it continues. Digital services play an important role in doing that. In fact, digital services provide benefits to three separate constituencies, users, news producers, and advertisers.

We know users attribute thousands of dollars in value to free-of-charge online services and turn to them for answers, entertainment, education, connection, and communication, and commerce.

These services also provide users with access to a range of news content across multiple devices and formats in a way that enables participation which surveys tell us increase civic engagement and interest in news producers content. News producers, in turn, receive 10 billion viewers a month from digital services, traffic which they can monetize with digital tools.

Many publishers have embraced the Internet using technology to better engage their audiences. Numerous digital native news outlets have appeared, and the Bureau of Labor Statistics estimates that 13,000 employees worked in these digitally enabled newsrooms in 2017.

Digital services also enable and benefit advertisers. As the saying goes, an advertiser knows half his ad budget is wasted. He just doesn't know which half. With technology, advertisers can now figure out where their budget is best optimized and where their money actually is, in fact, wasted and direct funds accordingly. This is increasingly important for small firms who now have a global reach regardless of the size of a business.

So how does antitrust law fit into this? U.S. antitrust law focuses on maximizing consumer welfare, enforcement, seeks lower prices, higher quality, more innovation. Separate policy goals are usually pursued elsewhere through legislative means, and this ensures consistent and apolitical application of the law.

The law doesn't punish success. Instead, it applies additional obligations when successful firms possess market power in a defined market. But these markets aren't defined ad hoc by arbitrary line

drawing. We use economics. We see if consumers respond to changes in prices given factors like competition and substitutes. Enforcers then assess whether a firm can unilaterally raise prices or decrease quality.

I note that some digital firms are sometimes subjectively identified as, say, being in the search or social media market. But this is not necessarily a relevant market. Economic analysis would show us that news publishers and digital services fight fiercely for ad dollars. And, indeed, that is one reason why we are here today.

This intense intermedium competition is generally healthy. And undermining it with antitrust exemptions is unlikely to achieve the goal we all share. If competitors collude, prices will be higher, quality will decrease, and innovation will slow.

And the U.S. experience with antitrust exemptions for newspapers specifically is not encouraging. Before the Internet, when broadcast threatened newspapers, which led to the Newspaper Preservation Act of 1970, we tried this. And it is widely regarded as having been unsuccessful. Some argue the MPA actually fostered press monopolies.

So in conclusion, let me remind us all that the Antitrust Modernization Commission of 2007 looked at many of these issues and considered them at length. They, as well as antitrust enforcers from both parties, have criticized antitrust exemptions.

Now, that being said, we do share the objective of promoting diverse robust economically sustainable news production. Proposed alternatives, which are discussed in our testimony, include tax incentives and deductions, grants, new nonprofit categories. All of these options deserve consideration, and CCI welcomes the opportunity to participate in that conversation.

Thank you.

[The statement of Mr. Schruers follows:]

Statement of

Matt Schruers
Vice President for Law and Policy
Computer & Communications Industry Association

"Online Platforms and Market Power, Part 1: The Free and Diverse Press"
Committee on the Judiciary, U.S. House of Representatives
Subcommittee on Antitrust, Commercial and Administrative Law

June 11, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and Members of the Subcommittee, thank you for the opportunity to discuss these issues with you today. My name is Matt Schruers. I serve as Vice President of Law and Policy for the Computer and Communications Industry Association, an international trade association which represents Internet, technology, and communications firms. Since 1972 CCIA has promoted competition in the technology and communications industry. Today, our member companies created hundreds of thousands of jobs in states and districts across the country, with the digital economy as a whole contributing $1.35 trillion to U.S. GDP and generating a trade surplus of $172.5 billion each year.

My remarks today address four items. First, I will discuss how online digital services offer extensive benefits and opportunities to multiple groups, including users, content and media producers, and advertisers. Second, I acknowledge that success brings scrutiny. CCIA welcomes the examination of how the industry's successes have affected aspects of the economy, including news publishing. Third, I note that antitrust law is a specific tool for a specific goal: protecting consumer welfare through lower prices, higher quality, and greater innovation. Historically, attempts to exempt certain industries from complying with these protections have negatively affected consumers and the economy as a whole. Providing another antitrust exemption to news publishers in addition to the existing exemption—which is widely regarded as unsuccessful—is not advisable. My testimony concludes by observing that CCIA nevertheless supports the objective of encouraging the production of diverse public interest news content, and identifies other strategies that have been proposed to achieve this goal.

I. Online digital services benefit users, media and content producers, and advertisers

The availability of online digital services has provided enormous benefits and opportunities to Internet users, media and other content producers, and advertisers.

A. Benefits for users

Consumers greatly value the access to information and functionality that modern digital services provide. This includes providing a means for accessing news, but these services are not limited to—or even primarily focused on —providing news content. Economists have found that users attribute thousands of dollars in value to these free-to-the-user online services and turn to them for answers, education, entertainment, to engage in commerce, and to keep up with friends and family.[1]

Digital services also provide Internet users with ready access to a broad range of choices of news media content, in convenient formats, on multiple devices, in a way that enables

[1] *Erik Brynjolfsson, Avinash Collis & Felix Eggers, Using massive online choice experiments to measure changes in well-being*, 15 Proceedings of the Nat'l Academy of Sciences 7250 (Mar. 2019), https://www.pnas.org/content/116/15/7250. The study's findings show that the median user would require compensation of $17,530 to forgo search engines, $8,414 to lose access to email, and $3,648 to forgo digital maps for a year, among other services analyzed.

participation.[2] Unlike other media, users can easily engage with news online by sharing, commenting, and participating in communities of interest.

Internet-enabled distribution of news has fostered an ecosystem of communities that share and comment. Research suggests that the news sharing behavior increases readers' involvement and interest in news topics.[3] The contribution of social media to news consumption and informal discussion networks has been found to promote civic engagement and individual participation in public affairs.[4]

Beyond the distribution and consumption of news, digital services have enabled individual Internet users to generate, disseminate, and commercialize their own content. In 2017, individual creators earned $6.8 billion by posting their creations on nine popular digital platforms, including services like Amazon Publishing, eBay, Etsy, Instagram, and YouTube.[5] Revenue sharing models have enabled independent content creators to convert followers and fan bases into revenue, thus contributing to aggregate growth in earnings and output in the creative industries. Digital services have further empowered individual entrepreneurs to build online and offline businesses. Small and medium-sized enterprises (SMEs) across the United States have leveraged online services to engage in global trade. These services have increased economic opportunity by erasing distances, enabling micro-enterprises to reach multiple foreign markets.[6]

B. Benefits for content and media producers

Content and media producers have used digital services to build and engage their audiences, to monetize content, gather information, and build informed communities.

These services enable publishers, journalists, and other content producers of all sizes to reach a larger, global audience at a fraction of the cost of traditional formats. This has permitted traditional publishers and media outlets to greatly expand their audience through their websites,

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[2] *See* Elisa Shearer, *Social media outpaces print newspapers in the U.S. as a news source*, Pew Research Center (Oct. 10, 2018), https://www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-s-as-a-news-source/.

[3] *See, e.g.*, Anne Oeldorf-Hirsch & Shyam Sundar, *Posting, Commenting, and Tagging: Effects of Sharing News Stories on Facebook*, 44 Comp. in Human Behavior 240 (2015). Observing other people's news sharing activities also leads to more news exposure and exposes segments of the population to news who might not have gotten it otherwise. *See, e.g.*, Annika Bergstrom & Maria Jervelycke Belfrage, *News in Social Media: Incidental Consumption & the Role of Opinion Leaders*, 6 Digital Journalism 583 (2018).

[4] *See, e.g.*, Gary Tang & Francis Lee, *Facebook Use and Political Participation: The Impact of Exposure to Shared Political Information, Connections with Public Political Actors, and Network Structural Heterogeneity*, Social Science Computer Rev. (Jun. 20, 2013), https://journals.sagepub.com/doi/abs/10.1177/0894439313490625.

[5] Robert Shapiro, *The Growth of America's New Creative Economy*, Re:Create Coalition (2019), https://www.recreatecoalition.org/wp-content/uploads/2019/02/ReCreate-2017-New-Creative-Economy-Study.pdf; Michael Masnick & Leigh Beadon, *The Sky Is Rising*, Copia Institute & Computer & Commc'n Industry Ass'n (Apr. 2019), https://skyisrising.com/TheSkyIsRising2019.pdf.

[6] *United States Small Online Business Trade and Inclusive Growth Report*, eBay Public Policy Lab (May 2019), https://www.ebaymainstreet.com/unitedstates. The transactions data from the eBay Marketplace in 2017 revealed that 96% of eBay's small businesses (sellers with sales of $10,000 or more annually) export goods, and that these small business reach on average 17 different countries annually.

apps, and social sharing. Newspaper website traffic continues to grow. The average monthly unique visitors for the top 50 newspapers rose from 8.2 million in 2014 to 11.5 million in 2017, an increase of 40%.[7]

Publishers and journalists use digital services to engage with their audience to distribute better content. Social media platforms in particular have offered unique functionalities and features which have redefined user involvement.[8] Users may share and amplify the reach of news stories, and help "road-test" journalists' story ideas.[9] Journalists and reporters may also solicit information from the news audience, crowdsource information, and involve them in the process of news construction. Newsrooms can use digital services to monitor their competition's coverage, audience-posted feedback, and topics trending on social media to find stories they might have missed. Digital services have also empowered news audiences to provide immediate feedback, improving accuracy by holding publishers more accountable for their content.[10]

Digital services also offer new opportunities for news content monetization. Before the advent of modern advertising networks, the Internet introduced significant competition for media organizations. Many had enjoyed decades of profits stemming from the previously limited channels available to local advertisers (*e.g.*, one local paper and a few local broadcasters). New websites like Craigslist disrupted publishers' classic revenue models (such as lucrative classified listings), at the same time readers could obtain any news content online from around the world. This naturally led to a decline in local publishers' revenues as advertising prices fell to more competitive rates.

In the face of these challenges, however, many publishers have embraced the opportunities provided by the Internet. A range of business models are available to today's news publishers, including subscription-based, ad-based, and hybrid models. Many traditional publishers have opted for the subscription model, offering digital subscriptions that leverage many readers' willingness to pay for high-quality journalism and premium content by specialists. Online targeted advertising provides news publishers significant revenue,[11] while high-priced display advertising is popular on digital-only publishers' webpages that attract the most traffic.[12]

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[7] *Newspapers Fact Sheet*, Pew Research Center (June 13, 2018), https://www.journalism.org/fact-sheet/newspapers/ ("According to the independently produced reports from The New York Times and The Wall Street Journal, however, both companies saw large gains in digital circulation in the past year: 42% for the Times and 26% for the Journal, on top of gains in 2016. If these independently produced figures were included in both 2016 and 2017, weekday digital circulation would have risen by 10%.")

[8] *See* Arne H. Krumsvik, *Redefining User Involvement in Digital News Media*, 12 Journalism Practice 19 (2018), https://www.tandfonline.com/doi/abs/10.1080/17512786.2017.1279025.

[9] Andrea Carson & Denis Muller, *The Future Newsroom*, Univ. Melbourne (Sept. 2017) (noting publications' use of Twitter to "road test" story ideas, where high engagement was taken as a sign to publish a story).

[10] Terry Flew, Fiona Suwana & Lisa Tam, *Digital Platforms and Australian News Media: Report*, QUT Creative Indus. (Apr. 2018). ABC political reporter Annabel Crabb describes the stark contrast between writing offline versus online, and how receiving feedback on news stories posted online holds journalists more accountable.

[11] According to the Pew Research Center, 31% of newspaper advertising revenue came from digital advertising in 2017, an increase from 17% in 2011. *Percentage of newspaper advertising revenue coming from digital advertising*, Pew Research Center (June 13, 2018), https://www.journalism.org/chart/sotnm-newspapers-percentage-of-newspaper-advertising-revenue-coming-from-digital/.

[12] *Id.*

Even when these monetization opportunities are facilitated by digital services, the intermediaries typically share the revenues with news publishers.[13]

News services are also experimenting with native advertising, selling access to databases, memberships and public donations, and crowdfunding. Content providers can also use online data analytical services to monitor web traffic, measure performance, and optimize timing and placement of news stories to drive revenue.

Digital technology has also permitted many new online-only news publishers to enter the market. Young digital-native news outlets now contribute to the reporting of political news, and can target niche audiences and underserved demographics, thus broadening the range of topics that are covered and the range of voices that are published.[14] According to the Bureau of Labor Statistics, roughly 13,000 employees worked as reporters, editors, photographers or videographers in the newsrooms of these digital-native outlets in 2017.[15] The existence of these digital-native news publishers has created new opportunities for journalists and readers, but has also engendered fierce competition for attention and advertisers.

C. Benefits for advertisers

As noted above, Internet advertising offers advertisers a new and effective medium through which to connect with audiences.[16] Even as digital services have increased users' access to information, they have lowered costs for advertisers and provided many with a significantly higher return on investment (ROI). At the same time, advertisers can leverage the improved feedback available from ad technology to more accurately reach interested audiences.

Lower costs, higher return: With digital advertising services, entrepreneurs and small- and medium-sized businesses can reach interested national and global audiences to whom their content may be relevant. This is achieved through a large array of competing intermediaries and service providers, including ad networks, exchanges, and demand- and supply-side platforms. These intermediaries are essentially matchmakers working at scale, connecting advertisers, who bid for impressions, with publishers, who seek to maximize the value of their advertising 'stock.' Previously, most of these businesses would have been unable to afford the national print or television placements needed to achieve the same reach. Today, small businesses can effectively target focused groups of potential customers, worldwide. Of course, these services are only an

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[13] *See, e.g.*, Richard Gingras, *Proposed copyright rules: bad for small publishers, European consumers and online services*, The Keyword, Dec. 6, 2018, https://www.blog.google/around-the-globe/google-europe/proposed-copyright-rules- bad-small-publishers-european-consumers-and-online-services/ (stating that 70% of ad revenue generated by Google ad services is retained by publishers).

[14] *Id.* For example, sites such as *HuffPost* have focused content produced by and for LGBTQIA communities.

[15] *Digital News Fact Sheet*, Pew Research Center (June 6, 2018), https://www.journalism.org/fact-sheet/digital-news/.

[16] Due to the overall growth of digital advertising opportunities, the global advertising market grew by a record 17% in 2018 to reach a total of $552 billion across 70 countries. Non-digital advertising segments have not lost out to the growth of digital, holding steady at approximately $300 billion. MAGNA, *Press release: MAGNA Advertising Forecasts (Winter 2018 update)* (Dec. 3, 2018), https://magnaglobal.com/magna-advertising-forecasts-winter-2018-update/.

option; news publishers and advertisers continue to strike direct deals for ad placement without the use of intermediary services.

Both news publishers and advertisers can mix-and-match services throughout the ad tech "stack," switching or "multi-homing" between competing providers. One study shows that advertisers will use, on average, more than four different demand-side platforms per month to buy inventory for advertising campaigns.[17] Content publishers use roughly six different supply-side platforms per month to sell their advertising inventory.[18] At the recent DOJ workshop on TV and digital advertising, one panelist observed that advertising media platforms have converged over time, such that advertisers can now place the same ads, to the same audiences, across local broadcast TV, cable, digital ad exchanges, and streaming video sites.[19]

Improved feedback: To paraphrase the observation of 19th century marketing pioneer John Wanamaker, an advertiser knows half his ad budget is wasted—he just doesn't know which half. For the first time in the history of advertising, technology now enables advertisers to immediately assess how effective their message is and where their efforts are wasted. The availability of digital tools that allow advertisers to identify advertising channels with the best ROI and quickly steer advertising budgets accordingly has implications for innovation. Instantaneous feedback on an advertisement's performance provides an easy, low-cost way for advertisers and marketers to evaluate the performance of a given service. Advertising networks and exchanges must therefore compete constantly to attract and retain customers—who can easily switch to other providers—whether it is by enhancing their ability to target specific groups of consumers, presenting the ads in ways that are more valuable to viewers, or improving metrics to measure ad performance.[20]

II. Scrutiny of successful firms is appropriate

None of this encouraging information around the positive impact of digital services is to suggest that America's leading technology firms are above scrutiny. We appreciate that large and successful businesses will receive additional examination by regulators and policymakers. In less than a generation, the Internet sector has become a significant part of the U.S. economy, a considerable portion of our exports and GDP growth, and the leaders of that industry are among the most admired brands in the world.[21] Policymakers should want to examine these

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[17] Ross Benes, *Five Charts: The State of Programmatic Bidding*, eMarketer (June 5, 2018). https://www.emarketer.com/content/five-charts-the-state-of-programmatic-bidding.

[18] Ross Benes, *Publishers Are Using Fewer Sell-Side Vendors*, eMarketer (July 17, 2018). https://www.emarketer.com/content/publishers-purged-one-fourth-of-their-ssps-over-two-years

[19] Comments of Dave Lougee, President and CEO of TEGNA. https://www.justice.gov/atr/public-workshop-competition-television-and-digital-advertising (panel 3).

[20] Catherine Tucker, *ACCC Digital Platforms Inquiry Submission* (Nov. 27, 2018). Today, there are many competitive software options for cross-channel marketing campaigns, including Adobe Campaign, IBM Watson Marketing, Oracle Marketing Cloud, and Salesforce Marketing Cloud.

[21] *See, e.g.*, Daniel Roth, *Top Companies 2019: Where the U.S. wants to work now*, LinkedIn (Apr. 3, 2019), https://www.linkedin.com/pulse/top-companies-2019-where-us-wants-work-now-daniel-roth/; *The World's Most Admired Companies*, Fortune (Jan. 2019), http://fortune.com/worlds-most-admired-companies/; The *Axios Harris*

developments, and we welcome evidence-driven discussions about the economic transformation that is happening and the firms that are driving it.

Nevertheless, CCIA believes that the primary subject of discussion in this hearing is not, at its root, the technology industry. Rather, as noted above, technology has challenged the business model of some news media producers, mainly by globalizing the advertising market and disrupting the dominant local advertising position that many publishers had held for decades. CCIA agrees that the production of objective and diverse public interest news coverage is important to a democracy, and discussion of how to ensure that continues is warranted.

III. Competition law and policy in the context of digital content

A. Objectives and approach of U.S. antitrust law

U.S. antitrust has evolved over time to focus on maximizing consumer welfare. As the legal regime has matured, enforcement actions have been guided by the metrics of lower prices, higher quality, and promotion of innovation. Separate public interest concerns are generally addressed through other legislative means. Firewalling off policy goals other than consumer welfare from the antitrust analysis has ensured a consistent application of the law by courts and enforcement authorities, limiting political considerations in the decision-making process. This characteristic of the U.S. competition system has benefited consumers and the economy as a whole, and should be preserved.

The approach of U.S. competition law is to preserve incentives for companies to become successful. It includes obligations that only apply in specific situations to successful firms that possess market power in a defined market. For antitrust law purposes, relevant markets are not defined on a subjective, ad hoc basis, or by arbitrary line-drawing. Rather, a relevant market is defined using economic analysis of the elasticity of demand -- that is, how significantly consumers respond to price changes in light of factors like competitors and substitutes. Enforcers and courts then assess whether or not a firm has the power to unilaterally raise prices in the relevant market. This economic analysis is crucial to understanding complex market dynamics, including those occurring in the digital sector.

A good example of these complexities are zero-price services, such as free digital services or free online news sites. These services are not excluded from antitrust analysis. As the Assistant Attorney General for antitrust recently observed, "[t]raditional conduct that is unlawful under the antitrust laws is still unlawful in the zero-price models more prevalent in today's digital economy."[22]

Poll 100 reputation rankings, Axios (Mar. 6, 2019), https://www.axios.com/axios-harris-poll-corporate-reputations-bcc0c03d-0bb5-4eb1-b591-4622bb4b01ed.html.

[22] Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Justice Antitrust Division, Silicon Flatirons Annual Technology Policy Conference at The University of Colorado Law School (Feb. 11, 2019), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-silicon-flatirons.

Digital services are often structured as what economists call "multi-sided business models," meaning that they unite at least two different groups of customers in a match-making function, with one or more sides being charged a price for accessing the service, thus supporting the cost of service at no charge to the other sides. This business model, which has become popular in the digital sector, is not new. It can be observed elsewhere in the economy, including in free broadcast radio and television, credit cards, and shopping malls.

Understanding market definition is important to the question of market power, and when discussing competition dynamics among digital services this should not be misconceived. Many successful digital services are closely identified with a particular function they provide, such as search or social media. However, this function is not necessarily coterminous with a "relevant market" when the robust economic analysis described above is applied. An economic analysis of the advertising sector, for example, would show that ad-supported online news publishers and digital services compete against each other for advertising dollars.

Online services also compete with broadcast and cable. Television industry representatives state that there is "no doubt that national traditional TV is converging with digital video",[23] and acknowledge "relentless competition for viewers and advertising" between television and digital platforms.[24] Thus, offline ads provide a competitive check on digital advertising companies, further incentivizing lower prices and higher quality across the board.

The intense competition taking place in the advertising sector is generally healthy and benefits the U.S. economy. It has given people more access to information at lower costs. But some traditional news publications have struggled to compete in the face of changing consumer habits and a new media environment. Policies to address this effect may be appropriate, but should tackle directly the news production problem, and not impair competition in the broader advertising market.

B. U.S. experiences with previous antitrust exemptions for news publishers

Antitrust exemptions generally have had limited success in achieving their stated goals, and are frequently criticized.[25] These exemptions or immunities typically invite competitors to cartelize, engage in price fixing, or collusive bargaining. These exemptions distort the free

[23] *Id.* "[T]his starts with the consumer and how she is consuming content across all different devices. So, what used to be traditional TV being consumed on one device in the household, now it's being consumed on a number of devices—a connected TV, the set-top box, the mobile device, etc. And even actually different OTT apps, different app experiences where from the delivery standpoint it looks very fragmented, but for a consumer it's a unified and single experience." (remarks of Christina Beaumier (Vice President Product, TV Platform, Xandr), panel 4 video, at 45:17).

[24] Public Workshop on Competition in Television and Digital Advertising (May 2-3, 2019), *available at* https://www.justice.gov/atr/public-workshop-competition-television-and-digital-advertising (presentation of David Morgan, CEO, Simulmedia, Inc., p.7).

[25] AM. ANTITRUST INST., WORKING GRP. ON IMMUNITIES & EXEMPTIONS, COMMENTS OF THE ANTITRUST INSTITUTE 2 (2005), available at http://www.antitrustinstitute.org/files/433.pdf (noting that many antitrust exemptions are unnecessary, harmful to competition, and the "product of special interest pressure").

market and impair its efficiency.[26] When competitors collude to collectively set prices or agree on terms in negotiations against other relevant market players, consumers lose. Prices tend to be higher, and quality decreases for lack of a competitive incentive to improve.

The Journalism Competition and Preservation Act of 2019, H.R. 2054, proposes such an exemption to the U.S. antitrust laws. It would allow competing news publishers to collude in negotiations with digital services with large user bases. Although these negotiations cannot be limited solely to price, price can nevertheless be a focal point.[27]

Attempting to preserve public interest news with another antitrust exemption for news publishers is unlikely to succeed. Permitting favored businesses to cartelize runs counter to U.S. antitrust norms and would disrupt an otherwise functioning market economy.

Moreover, the U.S. experience with preserving newspaper diversity through antitrust exemptions is not encouraging. The Internet is not the first new communications medium to challenge print news publishers. Arguably, it is the third, following broadcast radio and then broadcast television, which could provide news instantaneously and at zero marginal cost to an entire locality. The competitive threat of broadcast news prompted previous proposals to exempt the newspaper industry from antitrust norms. This was eventually implemented with the Newspaper Preservation Act (NPA) of 1970, 15 U.S.C. §§ 1801-04, which exempted from antitrust scrutiny certain agreements between otherwise competing newspapers in the same geographic vicinity. The goal was to keep competing newspapers publishing in areas where readership was declining by allowing them to reduce costs by eliminating overlapping costs, including non-editorial/reportial personnel and facilities. Unfortunately, the Act failed to achieve the stated goal of Congress to maintain independent competing voices. In fact, historians and journalists have argued the NPA fostered monopolies and chains instead of producing independent voices.[28] Given the cautionary history of the previous exemption for local newspapers, another would be ill-advised.

Due to experiences with the NPA and other antitrust exemptions, the 2007 report of the Congressionally chartered Antitrust Modernization Commission criticized existing exemptions

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[26] ANTITRUST MODERNIZATION COMM'N, REPORT AND RECOMMENDATIONS 335–37 (2007), https://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf ("Typically, antitrust exemptions create economic benefits that flow to small, concentrated interest groups, while the costs of the exemption are widely dispersed, usually passed on to a large population of consumers through higher prices, reduced output, lower quality, and reduced innovation.").

[27] H.R. 2054, § 2(b)(1)(A).

[28] Felicity Barringer, *A 1970s Act to Preserve Faltering Newspapers Seems Only to Delay the Inevitable End*, The N.Y. Times (Aug. 16, 1999), https://www.nytimes.com/1999/08/16/business/media-1970-s-act-preserve-faltering-newspapers-seems-only-delay-inevitable-end.html; Daniel Gross, *JOA DOA: It's time to kill the antitrust exemption that allows rival newspapers to act like partners*, Slate (May 8, 2003), https://slate.com/business/2003/05/the-folly-of-joint-operating-agreements.html.

and cautioned against new ones.[29] Similarly, antitrust enforcers in this Administration and the previous Administration have criticized antitrust exemptions.[30]

IV. Potential policy solutions for promoting public interest news reporting

Given the widely shared objective of preserving news media production, how can we meet these challenges, consistent with existing U.S. policy? While CCIA has not endorsed any one particular strategy, studies have suggested other policy options that may be considered. In fact, U.S. policymakers have previously devoted attention to this subject. A 2009 FTC staff discussion draft on this topic explored various measures to promote public interest news reporting in the Internet era.[31] The proposed measures included options that have since been proposed or implemented in other jurisdictions, such as federal tax deductions and grants to universities to conduct investigative journalism.

For example, the recent Cairncross review requested by the United Kingdom Department for Digital, Culture, Media & Sport, suggests that tax incentives for news productions and news subscriptions could help the news business.[32] Another possible point of reference is the recent Canadian tax benefits package. Last year, the Canadian federal government introduced a CAN$595 million tax package to bolster the country's journalism market over 5 years, including a temporary tax credit allowing news subscribers to deduct a portion of eligible digital news media subscriptions, a new tax category for qualified non-profit journalism organizations,[33] and a refundable tax credit for qualifying news organizations that "produce a wide variety of news and information of interest to Canadians."[34]

Several EU Member States also have state aid programs that directly subsidize news or media producers, particularly to promote diversity of independent news producers in small

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[29] *Id.*, *supra* Antitrust Modernization Comm'n, at 337.

[30] Christine A. Varney, Assistant Att'y Gen., U.S. Dep't of Justice Antitrust Division, Remarks for the Newspaper Association of America on Dynamic Competition in the Newspaper Industry (Mar. 21, 2011), https://www.justice.gov/atr/speech/dynamic-competition-newspaper-industry ("The antitrust laws are flexible and adaptive, and do not stand in the way of procompetitive solutions to the challenges facing the newspaper industry. At the same time, it is important to note that government needs to tread lightly when dealing with newspapers because a news industry free from government management is important to our democracy."); Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Justice Antitrust Division, Remarks at the Antitrust Division's First Competition and Deregulation Roundtable (Mar. 14, 2018), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-antitrust-division-s-first.

[31] Public Workshops and Roundtables: From Town Crier to Bloggers: How will Journalism Survive the Internet Age? Fed. Trade Comm'n (Dec. 2009), https://www.ftc.gov/sites/default/files/documents/public_events/how-will-journalism-survive-internet-age/091030mediaworkshopnotice_1.pdf.

[32] Dame Frances Cairncross, *The Cairncross Review: A sustainable future for future of journalism* (Feb. 12, 2019), https://www.gov.uk/government/publications/the-cairncross-review-a-sustainable-future-for-journalism.

[33] Christine Schmidt, *Canada introduces a $595 million package in support of journalism*, NiemanLab (Nov. 26, 2018), https://www.niemanlab.org/2018/11/canada-introduces-a-595-million-package-in-support-of-journalism/. This package aims to help digital news organizations achieve a "more financially sustainable business model."

[34] The tax credit will apply to the labor costs associated with producing original content and will be open to both nonprofit and for-profit news organizations. The measure will allow outlets to claim a portion of their labor costs.

geographic and language markets.[35] CCIA cautions against a European-style "link tax," however, which was piloted unsuccessfully in Germany and Spain and resulted in lost traffic for local publishers.[36] Such a tax was nevertheless incorporated in the controversial Digital Single Market Copyright Directive earlier this year. This new Directive is more expansive than German and Spanish laws, and appears to violates international commitments and treaty obligations.[37]

V. Conclusion

In conclusion, the value that digital services provide to users, content publishers, and advertisers is considerable, but have also affected some traditional business models, including news producers. While antitrust exemptions have proven to be an inadvisable solution to the business model challenges of news publishers, other potential solutions remain.

Thank you for the opportunity to provide an industry perspective today. CCIA welcomes the opportunity to work with the committee in its ongoing inquiry.

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[35] 2013 O.J. (C 371) 56—Production and innovation aid to media in DK; 2013 O.J. (C 077) 56—Slovenia Promotion of publishing industry in Slovenia; 2016 O.J. (C 369) 59—Spain Aid to local media published in the Basque language. This is a non-exhaustive list of examples from EU Member states.

[36] Joe Mullin, *New study shows Spain's "Google tax" has been a disaster for publishers*, Ars Technica (July 30, 2015), https://arstechnica.com/tech-policy/2015/07/new-study-shows-spains-google-tax-has-been-a-disaster-for-publishers/; Greg Sterling, *German Publishers To Google: We Want Our Snippets Back*, Search Engine Land (Oct. 23, 2014), https://searchengineland.com/german-publishers-google-want-snippets-back-206520.

[37] By imposing a levy on quotations, these entitlements violate quotation rights under the Berne Convention, including Berne Article 10(1)'s mandate that "quotations from a work . . . lawfully made available to the public" shall be permissible, and Berne Article 2(8)'s exception for "news of the day" and "miscellaneous facts having the character of mere items of press information."

Mr. CICILLINE. Thank you, Mr. Schruers.
Mr. Pitofsky is recognized for 5 minutes.

TESTIMONY OF DAVID PITOFSKY

Mr. PITOFSKY. Chairman Cicilline, members of the subcommittee, thank you for inviting me to speak with you today.

My name is David Pitofsky and I am the general counsel of News Corp, the proud home of news publishers like the Wall Street Journal and HarperCollins book publishers.

I am here today because the marketplace for news is broken. Healthy markets incentivize risk, investment, and effort by rewarding companies that develop superior products. Unfortunately, in the news business, free writing by dominant online platforms, which aggregate and then re-serve our content, has led to the lion's share of online advertising dollars generated off the back of news going to the platforms.

Many in Silicon Valley dismiss the press as old media failing to evolve in the face of online competition. But this is wrong. We are not losing business to an innovator who has found a better or more efficient way to report and investigate the news. We are losing business because the dominant platforms deploy our news content to target our audiences to then turn around and sell that audience to the same advertisers we are trying to serve.

The erosion of advertising revenue undercuts our ability to invest in high quality journalism. Meanwhile, the platforms have little, if any, commitment to accuracy or reliability. For them, a news article is valuable if viral not if verified.

To address these challenges, we need meaningful dialogue. It is, therefore, dispiriting when the platforms claim that their products only help consumers and publishers ignoring the mounting facts clearly showing the harms they have inflicted on the news industry. The fact is news publishers have been busy innovating online expanding our reach to digital audiences while the dominant platforms have benefited from our innovation and premium content.

In part, this is made easier by the platform's control over the Internet ad tech space. They control the tech infrastructure, the data, and the tools used to sell and serve ads online. And at the same time, they also compete against news publishers for those same ad dollars.

News publishers have no good options to respond to these challenges. Any publisher that tried to withhold its content from a platform as part of a negotiating strategy would starve itself of reader traffic. In contrast, losing one publisher would not harm the platforms at all since they would have ample alternative sources for news content.

To escape this prisoner's dilemma, news organizations need to act collectively, but this is prohibited by antitrust law.

So what is the solution? First, we need more dynamic and modernized antitrust enforcement. We are hopeful that reinvigorated antitrust is on the horizon. After a generation of obsession with price effects without adequate consideration of the other aspects of consumer and social welfare, including quality, innovation, and choice, some very recent encouraging signs of reexamination have occurred.

Second, and in the meantime, news publishers need a fighting chance. The Journalism Competition and Preservation Act is well designed to help restore the proper balance between content generators and distributors on the Internet. This bipartisan legislation is narrowly tailored both in scope and duration.

I would like to close by sharing a quote from my late father, Robert Pitofsky, who you mentioned earlier, Mr. Chairman. He was a giant in the antitrust law. In academia, in private practice, and in government where his service culminated in his term as chairman of the FTC from 1995 to 2001. He recognized the need for antitrust regulators to give a higher degree of scrutiny to competition matters implicating 1st Amendment concerns. Because of the implications for Democratic values.

In a November 2000 newspaper article on the topic, he was quoted as saying, Antitrust is more than economics. And I do believe that if you have issues in the newspaper business, in book publishing, news generally, entertainment, I think you want to be more careful and thorough in your investigation than if the same problems arose in cosmetics or lumber or coal mining.

In a Seminole Law Review article from 1979 that has been happily rediscovered, he wrote, quote, "It is bad history, bad policy, and bad law to excluded certain political values in interpreting the antitrust laws," closed quote.

Informed by history, policy, and the political values, the antitrust laws should protect the pillars both of our economy and our democracy. And there is no industry more central to our democracy than the news media.

Thank you.

[The statement of Mr. Pitofsky follows:]

U.S. House of Representatives Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law

Hearings on "Online Platforms and Market Power,
Part 1: The Free and Diverse Press"

Remarks of David Pitofsky, General Counsel, News Corp

Chairman Cicilline, Ranking Member Sensenbrenner, and members of the subcommittee: Thank you for inviting me to speak with you today.

My name is David Pitofsky. I am the General Counsel and Chief Compliance & Ethics Officer of News Corp, a global media and information services company that creates and distributes authoritative and engaging content to consumers and businesses around the world. The company, which came into existence in 2013 when it split from what was formerly known as 21st Century Fox, comprises businesses across a range of media, including but not limited to: news and information services such as *The Wall Street Journal*, book publishers such as *HarperCollins*, and digital real estate services, including *realtor.com*.

It is a privilege for me to contribute my views today, as the subcommittee kicks off these important hearings. A small number of online platforms act not only as gateways, but often gatekeepers to the Internet, and their impact on today's economy cannot be overstated. I commend the subcommittee for beginning its inquiry by focusing on the impact these dominant platforms have on a free and diverse press.

I am here today because the marketplace for news is broken. Healthy markets should incentivize investment, risk and effort by rewarding companies that actually develop superior products. When it comes to news, the companies that invest in original journalism should reap the financial rewards of their creations. Unfortunately, free-riding by the dominant online platforms has resulted in a massive siphoning off of profits, such that the lion's share of online advertising dollars generated off the back of news content goes to the platforms, not to the content creators. As a result, while the tools consumers use to find news on the Internet may continue to develop, there is less and less reliable, quality news for consumers to find.

Throughout our history, Congress has recognized that news publications are not just consumer products but also part of the infrastructure of our democracy. Few private industries are referenced in the Constitution, but the press is; for good reason. And at appropriate moments, this institution has enacted legislation to enable the press to

overcome some of the economic difficulties associated with providing a public good.[1] This is one of those moments.

We commend the subcommittee for these hearings, which begin the hard work of shining a light into dark, critical corners of 21st century commerce. And we thank Chairman Cicilline and Ranking Member Collins for introducing the Journalism Competition Preservation Act, which is an important step toward re-establishing marketplace conditions that allow publishers to meaningfully negotiate with the dominant platforms.

News organizations are under siege by the dominant online platforms

Many in Silicon Valley assert that members of the press are nothing more than a relic of the "old media," displaced by the "new media" thriving in the digital world. That is not the case. Dominant online platforms have not invented a better way to gather or report the news. And news publishers have not failed to adapt to the digital world. Only 2% of the U.S. population regularly went online to get news in 1995, but as of last year 93% of U.S. adults accessed at least some news online.[2]

Instead, online platforms are placing news organizations under siege through massive free-riding. They deploy *our* highly engaging news content to target our audiences, then turn around and sell that audience engagement to the same advertisers news publishers are trying to serve. Dominant platforms take the overwhelming majority of advertising revenue without making any investment in the production of the news, all while foreswearing any responsibility for its quality and accuracy. As a result, one of the pillars of the news industry's business model, advertising revenue, is crumbling.

Part of the problem is that news content traditionally has thinner protections under intellectual property law. This is a reflection of the fact that no one creates the "news" and that it is important—and sometimes critical—that news be disseminated quickly. Despite this, in the pre-Internet era, content was protected to some degree because it took time to copy, rewrite, print, and distribute follow-on articles, giving the original publisher a vital, valuable period of exclusivity.[3] But now, in the digital era, stories are copied, republished, and distributed within minutes.[4] And, as I will explain, the platforms

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[1] For example, the Post Office Act of 1792 permitted newspapers to distribute their papers through the mail at extremely low rates, and the Newspaper Preservation Act of 1970 relaxed antitrust laws to authorize the formation of joint operating agreements among competing newspaper operations within the same market area.

[2] *News Audiences Increasingly Politicized*, PEW RES. CTR. (June 8, 2014), https://www.people-press.org/2004/06/08/i-where-americans-go-for-news/; *Digital News Fact Sheet*, PEW RES. CTR. (June 6, 2018), https://www.journalism.org/fact-sheet/digital-news/.

[3] These limits initially met public policy objectives to encourage the widespread diffusion of information by allowing others to build upon news output without jeopardizing the incentives of professional news organizations to profit from their investments and efforts.

[4] The issues facing the professional news industry are rooted in *competition*, regardless of the applicability of copyright. Copyright alone does not and cannot address the broad use of dominance by online platforms to induce consent or engage in bias and discrimination. The damage is profound. Publishers across the

actually facilitate and promote the copycat articles over the originals. All of this has led to the commoditization of news and the flattening of brand identities. As economists can explain, commoditized industries lower incentives to invest and innovate because it is extremely difficult to realize a fair return on investment. Although stronger intellectual property protection for news may be necessary to address fundamental changes resulting from the mass distribution and copying of news on the Internet, the industry will continue to decline so long as dominant platforms maintain and exercise monopoly power over distribution and advertising.

In the so-called "ad tech" space, where publishers and advertisers buy and sell digital advertising inventory, a dizzying array of acquisitions and other anticompetitive conduct has eliminated any meaningful competition. By some accounts, only 30 cents of each advertising dollar reaches publishers (as opposed to 85 cents in the pre-Internet era).[5] The other 70 cents is eaten up by the opaque, multilayered algorithmic software products that make up the ad tech infrastructure. Dominant online platforms control the infrastructure, data, and tools for news publishers to sell and serve online ads, while simultaneously competing against those publishers for the very same ad dollars. This presents a significant conflict of interest.

Many news publishers have responded by trying to shift to a business model more reliant on subscription revenue. To boost subscriptions, news publishers must invest in generating high-quality content that will be a compelling product to subscribers. But the dominant platforms have thwarted these efforts by, for example, demoting in their search results news websites that charge for access on the grounds that this is a "bad user experience" for search users, who prefer free content. Consider this for a moment: consumer choice has been all but eliminated by a false and fateful decree that all search users prefer free news, not quality news.

This is obviously a bad deal all around for publishers, but the absence of competition denies us other options. In a competitive marketplace, we would seek fairer terms from the search and social media providers that surface our stories, and we would take our digital ad inventory to other ad tech providers, who would need to compete for our inventory by offering better terms. But there is no competition, and as a result we are powerless to negotiate a fair price, either for our news content or for our digital ad inventory.

Dominant tech platforms dispute the allegation that they have obtained or maintained their dominance through means that violate the antitrust laws, but one cannot reasonably argue about the *existence* of their dominance, and its effect on news publishers. Many of the key facts about the mysterious operation of their algorithms, and in particular whether they are designed to advance consumer interests or to unfairly block competition, reside

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world, including News Corp, are laying off professional journalists and editors at alarming rates. Publishers are diverting scarce funds to pay for search engine optimization (SEO) and other click-generation strategies and writing news to appeal to algorithms rather than readers.

[5] David Pidgeon, *Where did the money go? Guardian buys its own ad inventory*, MEDIATEL (Oct. 4, 2016), https://mediatel.co.uk/newsline/2016/10/04/where-did-the-money-go-guardian-buys-its-own-ad-inventory/.

with the platforms themselves. But we look forward to these hearings and other enforcement efforts to surface the relevant facts and thereafter take appropriate enforcement or legislative action.

News organizations are now financially dis-incentivized to invest in high-quality reporting

High-quality news reporting, especially investigative journalism, is expensive and requires the expertise of experienced, professional journalists and editors. The value of such reporting extends far beyond its ability to sell news content. Journalism has played a pivotal role in our Nation's most trying moments and greatest achievements. By serving as a forum for national debate and faithfully reporting the facts necessary for an informed citizenry to hold its leaders accountable, the news industry plays a crucial role as the Fourth Estate.

But for the reasons I outlined above, news publishers are increasingly dis-incentivized to invest in high-quality journalism, because the costs cannot be recouped. Reader attention and user data, the life-blood of the Internet, is spirited away by the platforms and by the copycat publishers they have enabled.

Let me give a concrete example from *The Wall Street Journal*. Last November, the *Journal* published an important investigative piece regarding payments to Stormy Daniels. Five reporters and multiple editors and lawyers worked on the story for months, at significant expense. Within a few hours of its publication, however, the Internet was full of rewrites by online sites that made no investment in the story. The dominant platforms benefited from the *Journal*'s hard work because the large majority of online readers access their news through these platforms. And copycat publishers also enjoyed an outsized and unearned benefit by investing in copying rather than original reporting. Because the *Journal* has a subscription paywall, search results demoted the original, *Journal* version of the article below scores of copycat rewrites—on a mobile device, it was the equivalent to scrolling down through five pages. Because of the press convention of citing original sources, the demoted search result for the *Journal* story did note that it was "highly cited," meaning the search engine knew it was the original, authoritative source, but demoted the *Journal* story anyway.

There is no comprehensive data examining the phenomenon I just described. But a study we did on a different, high-profile story published in our flagship Australian newspaper last year indicated that rewrites earned approximately *22 times* the traffic (*i.e.*, readers) of the original story. And these examples do not touch on the even larger problem that fake and fraudulent news stories have found a profitable place on the Internet.

Publications that used to pride themselves on producing investigative, hard-hitting journalism now compete to see how quickly they can free-ride off each other's stories and optimize to the top of search results pages. Other, less scrupulous, entities resort to publishing fake news and sensationalist, polarizing stories that are rewarded with high placement. In other words, clickbait.

Dominant platforms have deep conflicts of interest

In their initial incarnations, the dominant online platforms acted more like matchmakers, connecting users with content and *vice versa*. But increasingly, publishers' relationships with the platforms are not complementary; instead, the platforms act as substitutes. The platforms have configured their pages so that customers seeking news are increasingly "satisfied" by search results or news feeds without the need to click through to the underlying source. The platforms are creating walled gardens that tighten their stranglehold over advertising dollars and consumer data.

And because, under current law, online platforms—unlike news publishers—cannot be held legally responsible for any harm caused by inaccurate reporting, the platforms have little if any commitment to accuracy or reliability. When it comes to dominant online platforms, a news article is valuable if it is viral, not if it is verified. Keep in mind this key difference between platforms and publishers: they provide news—both false and real—to readers, but they do so without having any reporters who verify the facts, without having any editors to check the reporters' work, without having any publishers to whom people can complain, without having any op-ed page or letter to the editor or correction column for public recourse. Power without responsibility, without accountability, is a recipe for disaster.

The shuttering of news publishers does not negatively affect the online platforms. So long as platforms have sources of news to serve to their users, the clicks and resulting advertising dollars will flow. But the silencing of editorial voices, particularly at the local level, is having profound negative effects on media plurality and the news media's ability to play its constitutionally-enshrined role. Although most of our publications are national or international in scope, we still care deeply about the vibrancy of local journalism; just as a rising tide raises all ships, a tide in ebb eventually puts all ships at risk of running aground. The depletion of local press is also a problem for democracy itself.

In the ad tech space, the dominant platforms control the algorithmic decision-making software that matches ad inventory and ad spend. But they are also a critical source of ad inventory themselves, with a clear incentive to direct ad money toward their own products and services.

To be clear, we do not seek to demonize the dominant online platforms, nor to deny the innovations they have made and the many benefits they have brought to consumers. Dominant online platforms have designed businesses that exploit actual or perceived weaknesses in the enforcement of the antitrust laws, particularly as they relate to vertical integration. They have exploited these weaknesses because doing so has served their shareholders through the generation of immense profits. We suggest the focus needs to be on reinvigorating antitrust enforcement, reconsidering narrow precedents, and assessing whether new legislation is needed to fill blind spots exposed by modern market dynamics.

News Corp has embraced technological change

I would like to dispel the myth that somehow the news industry has been slow to innovate. The news industry at large is marked by innovation. The reason so many people access news content through search engines and social media products is because news organizations are investing in the production of immersive and informative online experiences. Speaking for News Corp, we have long viewed the Internet as an opportunity to reach wider audiences and connect with readers in new ways. Digital content and products have been at the core of our business for over a decade.

We invest in developing online experiences for our audience. For example, News Corp has been at the forefront of developing immersive experiences for the consumption of news on phones and tablets. *The Wall Street Journal* was among the first companies to develop immersive news experiences for Apple's iOS. Even today, *The Wall Street Journal* app is among the most popular and highest ranked apps available on Apple's App Store.

We also invest tens of millions every year to monetize our products through online advertising and subscription services. Indeed, News Corp was an online advertising pioneer and among the first — if not the first — customers of a fledging online ad serving company called *DoubleClick*, which Google eventually acquired.

And we invest in reporting and creating innovative news content. News Corp has modernized its newsrooms to deliver high-quality, up-to-the-minute journalism across the world in milliseconds. We have reporters stationed across the world covering important world events in real-time with the rigor and precision of professional journalism.

All of these investments have contributed to News Corp's success in creating content for the new digital era. Popular and trusted mastheads at News Corp in the U.S., U.K., and Australia are profitable, though not at a scale commensurate with their quality and the demand for premium news.

Platform concentration has forced news organizations into a classic prisoner's dilemma

Although publishers technically have a choice to withhold their content from online platforms, that choice is not a meaningful one. The online platforms are simply too dominant. Withholding content unilaterally would starve the publisher of access to traffic sourced through the platforms. Platforms have no incentive to negotiate a fair deal in return for access to news content. It is therefore no surprise that dominant platforms engage with the press from a position of overwhelming strength and with a degree of indifference and impunity that would offend the consciences of the Founders who sought to protect the press for the benefit for the public.

The only way out of the prisoner's dilemma is to act collectively. If publishers could band together they might be able to use their collective leverage to bring the platforms to the negotiating table. But doing so is made impossible by the antitrust laws.

We are hopeful that reinvigorated antitrust enforcement is on the horizon. After a generation of obsession with price effects, without adequate consideration of the other aspects of consumer and social welfare, including quality, innovation, and choice, some very recent, encouraging signs of regulatory re-examination and re-energization have emerged. However, that road will be long. The complexity of the facts will likely require years of investigation and litigation, and it will take work to get the judiciary to update its application of the antitrust laws for the 21st century. If current laws prove unable to support healthy competition, Congress will need to consider new statutes, which also requires a lengthy process.

In the interim, news publishers need a fighting chance. The Journalism Competition and Preservation Act is well-designed to help restore the proper balance between content generators and content distributors on the Internet. This bipartisan legislation is narrowly tailored, both in scope and duration, to balance the dual policy goals of ensuring that news organizations have sufficient resources to generate high-quality content while allowing for widespread distribution. The Act establishes a limited safe harbor for publishers—which ends after 48 months—so they can cooperate and coordinate before negotiating with the online platforms. The safe harbor is designed to encourage negotiations that improve the development and distribution of high-quality and original journalism.

The Act requires that all news organizations will benefit from collective negotiations with the dominant online platforms. The benefits of any collective negotiation extend to all news content creators, not just those directly involved in the negotiations. So, whatever terms *The Wall Street Journal* and *The New York Times* negotiate with a platform, local media outlets seeking to distribute their content across that platform may also benefit from those terms should they wish to do so.

The Journalism Competition and Preservation Act is consistent with the underlying policy goals and values expressed by the Founders in the First Amendment and consistent with the antitrust laws.

Concluding remarks

Through my engagement with these issues, I have had a chance to reconnect with the work and scholarship of my late-father, Robert Pitofsky. As you may know, he was a giant in antitrust law—in academia, in private practice, and in government, where his service culminated in his term as chairman of the Federal Trade Commission from 1995 to 2001.

He was acutely aware of and sensitive to the need for antitrust regulators to give a higher degree of scrutiny to competition matters implicating First Amendment concerns. In a November 2000 newspaper article on the topic, he was quoted as saying:

> "Antitrust is more than economics. And I do believe that if you have issues in the newspaper business, in book publishing, news generally, entertainment, I think you want to be more careful and thorough in your investigation than if the same

> problems arose in cosmetics, or lumber, or coal mining. I mean, if somebody monopolizes the field of cosmetics, they're going to take money out of consumers' pockets, but the implications for democratic values are zero. On the other hand, if they monopolize books, you're talking about implications that go way beyond what the wholesale price of the books might be."[6]

In a seminal law review article from 1979 that has been happily and appropriately rediscovered, he wrote: "[i]t is bad history, bad policy, and bad law to exclude certain political values in interpreting the antitrust laws."[7]

Informed by history, policy, and political values, the antitrust laws should protect the pillars of both our economy *and* our democracy. And there are few industries more central to our democracy than the news media.

Thank you.

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[6] Alec Klein,*A Hard Look at Media Mergers*, WASH. POST, (Nov. 29, 2000), https://www.washingtonpost.com/archive/business/2000/11/29/a-hard-look-at-media-mergers/d8380e2d-92ee-4b1b-8ffd-f43893ab0055/?utm_term=.8c4ac8503319.

[7] Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051, 1051 (1979).

Mr. CICILLINE. Thank you, Mr. Pitofsky.

Mr. Riley is recognized for 5 minutes for his opening statement.

TESTIMONY OF KEVIN RILEY

Mr. RILEY. Chairman Cicilline and members of the subcommittee, thank you for inviting me here today. I am Kevin Riley, the editor of the Atlanta Journal Constitution.

A few years ago, journalists at the Atlanta journal Constitution established that 80 doctors in Georgia had sexually abused patients, including patients under anesthesia, and those doctors were still licensed. The newspaper investigated and found a nationwide problem. Hundreds of doctors were abusing patients and getting away with it.

The investigation prompted reforms. It was a finalist for the Pulitzer Prize. And of equal importance, readers of that investigation told us that is what they want from their newspaper, that kind of coverage. The victims of those doctors called our reporters and thanked them for telling their stories.

About a year before that story, dozens of educators in the Atlanta public schools had been found guilty of altering students standardized test scores in the largest cheating scandal in the Nation's history. The convictions culminated a year's long journalistic effort by the Atlanta Journal Constitution.

AJC reporters had noticed that student scores on Georgia's standardized tests showed extraordinary improvement. They analyzed the scores. The improvements in some schools defied statistical possibility. The reporting triggered a State investigation that found systemwide cheating in 44 Atlanta public schools; 178 teachers and administrators participated. The test cheating inflated the scores of thousands of students giving the false impression of progress. It cheated those students.

The story would never have been uncovered without the AJC. Educators would never have faced justice. The system would not have been fixed. And most important of all, students wouldn't have been offered the chance to gain the knowledge that they had been denied.

No other news organization in Atlanta has the capacity for such deep reporting. No other organization could have withstood the relentless pressure to back off unleashed by the school district and the business community. No other news organization would have stuck with the story for 5 years.

This kind of investigative reporting is hard. It is upsetting. It is important. It has real impact. And we are proud of it.

But newspapers do other important stories too. I was reminded of one last week as I prepared for this testimony.

Let me tell you about the woman Congressman Collins mentioned. Her name is Shirley Sessions. She is the widow of a World War II veteran they lived in Carrollton, Georgia. She had spent decades trying to unearth the story behind her reticent husband's service. I had been able myself to discover many details about our husband's time in combat, and I had written about it.

After her husband died, Ms. Sessions still hungered to know about his service. She was so enthralled that she journeyed to France for a reunion of her husband's military unit. I joined her.

Bearing witness while a widow paid an inspiring tribute to her husband.

And the story I wrote about brought AJC readers along on her emotional journey. She literally retraced the steps of that young private, the man who would later be her husband, through combat in tiny French towns during World War II.

It was the unknown story of a local hero and one that only the Atlanta Journal Constitution could tell. It would be lost to history without us.

Ms. Sessions sent me a text as I prepared for this testimony. She said, in part, Your stories have become a touchstone in my life. I watched the coverage of D–Day, cried a lot. But I am more grateful than ever.

We invested a lot of time, money, and effort in these stories I mentioned. That is what newspapers do. We use our resources to tell our community stories, the good ones and the hard ones. Telling them makes our community better.

I share these examples because they illustrate the everyday challenge faced by local journalists. We must be vigilant to tell important, well-reported, and thoughtful stories. We must care that they get wide distribution. That is our job and crucial to our communities. We are accountable to people like Ms. Shirley and her neighbors in Carrollton, Georgia.

Almost always, the debate about media and tech is framed within the discussion of international news brands. But the greatest peril for our Nation lurks at the local level where a regional or community newspaper must cope with fast-changing, technological, and financial matters.

We are the ones who are concerned with our communities, their government, and their well-being. Our staffs live in our community. They have a big stake in informing the public. Social media and technology companies have enormous influence on the distribution and availability of news. But we should be worried about losing newspapers. The fountainheads within the local news ecosystem. It is worth considering stories that would go untold.

Thank you.

[The statement of Mr. Riley follows:]

U.S. House Committee on The Judiciary

Subcommittee on Antitrust, Commercial and Administrative Law

"Online Platforms and Market Power, Part 1: The Free and Diverse Press"

Testimony of Kevin G. Riley
Editor
The Atlanta Journal-Constitution

June 11, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and members of the Subcommittee on Antitrust, Commercial and Administrative Law: thank you for inviting me to testify at today's hearing.

My name is Kevin Riley, and I am the Editor of The Atlanta Journal-Constitution (AJC), a position I have held since 2011. I have been a professional journalist for 36 years and was a judge for the 2019 Pulitzer Prizes. In short, I have spent a career in the business, and I'm passionate about what I believe it takes to provide quality local journalism, the core to any successful paper. The Atlanta Journal-Constitution is the largest newspaper in Georgia. We have a rich 150-year history, and members of our staff have won 11 Pulitzer Prizes. The AJC has always been a watchdog for Georgia's citizens and the home of journalists who shaped our city's history – and that of our state and nation. I am responsible for the AJC's news coverage in print and in digital formats.

About four years ago, in a downtown Atlanta courtroom, a Fulton County jury convicted 11 educators in one of the longest trials in Georgia history. With those convictions, 32 educators had been found guilty of altering students' standardized tests in the largest school cheating scandal in the nation's history. The reading of that verdict culminated a heroic journalistic effort by The Atlanta Journal-Constitution.

AJC reporters had noticed that Atlanta Public School student scores on Georgia's standardized tests showed extraordinary improvement. They decided to analyze the scores and set off down a remarkable path. Their analysis showed that some schools had improved so much that it raised questions about cheating on the tests. Their first story showed the gains of some schools defied statistical possibility.

Later, after many more stories, an investigation ordered by the governor as a result of the AJC's reporting found system-wide cheating in 44 Atlanta public schools, with 178 teachers and principals routinely erasing incorrect answers on standardized tests and replacing them with correct ones. The cheating inflated the scores of thousands of students, giving the false impression of their -- and the school district's -- success.

The story would never have been uncovered without the AJC. And the educators would have never faced justice, the system would not have been fixed, and most important of all, students wouldn't have been offered the chance to gain the knowledge they had been denied.

No other news organization in Atlanta has the capacity and expertise to do that kind of work. No other organization could have stood up to the relentless pressure to back off, unleashed by the school district and the business community. No other news organization would have stuck with the story for years, as the AJC did. It would be impossible to even put a cost estimate on the work.

That story illustrates the vital importance of today's hearing. Preserving local journalism means that these kinds of stories will be reported. Too often, the debate about media and tech platforms is framed within a discussion of international news brands. But the greatest peril for our nation lurks at the local level, where a regional or community paper must cope with a fast-changing technological and financial landscape.

Social media has forever altered the local news ecosystem and changed the way people consume news. In the sea of fast-moving, 24-hour news, newspapers provide deeply reported, authoritative local news amidst the frenzy. Local newspapers employ reporters and have a very real stake in a local community's well-being and economy. Only a local newspaper would commit to telling an important story like the Atlanta Public Schools cheating scandal. Only a local newspaper would make the years-long commitment. Only a local newspaper could document the impact on a community's children.

It's important to note that newspapers spend money to appear in news feeds and create stories specifically designed to gather online audience. Besides the expense of creating our content, we must attract users to our web site to expose them to the important, reliable, well-reported local journalism we've created. In fact, at the AJC we have numerous staffers assigned to monitor social media, create content for social media and search engines, and to evaluate its performance. Remaining viable and visible on these important platforms is a constant, expensive challenge for news organizations like the AJC. Fortunately, the AJC can afford to fund these positions. Smaller newspapers have a bigger challenge.

Social media and technology companies have enormous influence on the distribution and availability of news. But we should be worried about losing newspapers, the fountainheads within the local news ecosystem. It is worth considering what will be lost – those things only a local newspaper does:

- **We produce in-depth local journalism that lets the community know what's really going.** The Atlanta community deserved to know why those test scores were improving in defiance of logic.
- **We protect the public's right to know.** Newspapers demand public records be available on behalf of citizens.
- **We document our communities' moments, milestones and people.** What do people want when their team wins the Super Bowl or World Series? A copy of the front page.

We produce journalism that is distinguished by its depth, accuracy and originality. That costs money and is expensive, but if the system works correctly, it also makes money that the paper uses to investigate and develop the next story or cover the next local event. If others repackage our journalism and make money off it, yet none of that money makes its way back to the local paper, then it makes breaking that next story or exposing the next scandal more challenging. If that cycle continues indefinitely, quality local journalism will slowly wither and eventually cease to exist.

It's worth noting what ingredients and qualities make up the journalism of a newspaper.

Newspapers dig for original, often hidden information. At The Atlanta Journal-Constitution, journalists pursued a long investigation into public records abuses by the former Atlanta mayor's administration. Reporters showed that spending and other records, which should be available to the public, were hidden and obscured. The Georgia Attorney General stepped in, based on our reporting, and filed criminal charges. That action was a first under the Georgia Open Records Act.

Newspapers constantly monitor local and state institutions with beat reporting. Newspaper reporters are often experts at what they cover and monitor their beats to assure that they are the first to discover news of value. For example, The Atlanta Journal-Constitution has a reporter who covers the state budget and has for decades. It's hard to find anyone in Georgia with a better understanding of the state's finances.

Newspapers take the time to get it right. Our journalists might spend many months developing an important original investigation or analysis and know they can invest the time many stories need to develop. For example, in the case of the school cheating case, a team of reporters stuck with that story for years, using computerized analysis and meticulously working on accuracy and fairness in the reporting.

Newspapers master the details. Because we know our topics with depth and context, we are able to report with clarity and certainty. The format and mindset of newspaper journalists allows for thoughtful explanations of important stories – like the controversial financing of a new development in downtown Atlanta.

Newspapers hold officials and politicians accountable. We devote the resources, time and expertise needed to develop and produce high quality investigations that shape the community we live in. The Atlanta Journal-Constitution produced the most extensive review of police shootings ever undertaken in Georgia and cast doubt on claims by police that deadly force was always justified. Working with a local TV station as a partner, the newspaper showed that nearly half the 184 Georgians shot and killed by police since 2010 were unarmed or shot in the back. The year-long investigation exposed flaws in the way the state handles police shootings and led to grand jury reform. Reporters analyzed thousands of pages of records and conducted more than 100 interviews with prosecutors, police, grand jurors, family members and others.

Newspapers master public records laws. We have the highest level of expertise in the state on the public's access to documents and other information that is important to how the state and local governments operate. The AJC was an active participant in Georgia's 2012 revision of its public records laws. We retain an attorney to counsel us on these laws – while we advocate on behalf of the public.

In conclusion, a final anecdote.

Each year during Georgia's legislative session, I spend a day at the Capitol with our statehouse reporting staff. The Atlanta Journal-Constitution maintains the largest staff in the state to cover Georgia's government. Much has been written about how statehouse bureaus have shrunk around the nation, and that's true in Georgia. At times, the AJC's reporters appear to be among the only journalists covering the bills, the lobbyists and the political developments. It's an enormous responsibility to know that Georgia's citizens are so dependent on us. But as other newsrooms have been unable to commit to the cost of traveling from Macon, Savannah, Columbus or Valdosta, I recognize how that hurts our state. We miss those competitors and would welcome them as the competition makes us all better and is better for the citizens we serve.

Every day, we take on the job to inform and empower our readers who value credible, in-depth journalism. By providing this important public service, we help build a better Atlanta and Georgia for generations to come. All newspapers pursue similar missions.

Original journalism is difficult, time consuming, expensive and complicated. And perhaps not well understood.

But it's crucial to our democracy.

Thank you, and I welcome your questions.

Mr. CICILLINE. Thank you, Mr. Riley.

We will now proceed under the 5-minute rule with questions. And we will begin with the gentleman from Georgia, Mr. Johnson.

Mr. JOHNSON. Thank you, Mr. Chairman. And thank you, witnesses, for being here today. And I would like to extend a particularly warm welcome to the editor of my hometown paper, Mr. Riley, from the AJC.

The purpose of this hearing is to face an important problem head on, the media, from local newspapers to major publishers to online innovators is dying. This is, in some part, because of a shift in how we consume our news, but it is also because of the mass availability of information on digital platforms.

While the news media's market presence is increasing, their revenue is decreasing. This is untenable. No business can prosper this way and no reasonable investor would want to get involved. We cannot continue to rely on the good grace of concentrated wealth to do the right thing.

A free market approach as applied to the duopolistic online platform gateway and its relationship to a free and diverse press is not working. Moreover, it poses a direct and pressing threat to our republic and, therefore, to our freedom. Something must be done to level the playing field, and I am looking forward to talking with all of you about potential solutions to this problem. And I thank the chair for hosting this very important hearing.

Lastly, I will note that a free press—or that free press content has a cost, and that price is profoundly expensive and could price freedom out of the fragile marketplace for freedom.

Mr. Riley, according to a recent Pew study, Americans have shifted from traditional media sources for local news to the television and Internet. Interest in local print news in particular has declined resulting in massive downsizing at newspapers. In fact, newsroom staff declined by 45 percent from 2008 to 2017.

How has the AJC worked to overcome this challenge?

Mr. RILEY. Well, thank you for that question, Congressman Johnson. And I think that one important point to make about the statistics that you cite in terms of preference of news sources is this: We are typical, I think, of most newspapers of our size and in a market similar to ours in this way, our audience has never been larger than it is now. When you can combine the people we have who read the printed newspaper and that audience that we can garner online in our markets, we have more people reading the Atlanta Journal Constitution than at any other point in our history.

The challenge here is sort of simple, which is in what kind of world do you grow your audience, reach a bigger market, and somehow face even greater financial challenges than you did before? Something is out of whack in that equation, and it is just counterintuitive to how American business works where, when you invest and you succeed, you reap the benefits of that investment. That is the missing piece for newspapers.

Mr. JOHNSON. Thank you.

What are your projections for the AJC? And how has your digital platform presence—well, you have explained that. Let me move to my next question.

Mr. Chavern, how many local papers does your organization represent?

Mr. CHAVERN. Approximately 2,000, sir.

Mr. JOHNSON. Is there any requirement that local newspapers be prioritized on general—on digital platforms?

Mr. CHAVERN. Prioritized in terms of the search, sir?

Mr. JOHNSON. Yes. In any respect.

Mr. CHAVERN. Yeah. They are—there is no requirement that they be prioritized. But the digital audience, as was noted, is exploding across the board.

Mr. JOHNSON. Mr. Pitofsky, one of the major issues in market dominance today is the ability to use individual's data in targeted advertising.

How do you—how do the online giants control user data? And why is this such a powerful phenomenon?

Mr. PITOFSKY. Thank you, Congressman.

Advertising has changed profoundly so that rather than reaching an audience, advertisers now reach individuals. And to the degree that they are able to get more and more detailed data about those individuals, they can send them targeted data.

So the more data a company has, the more it can segment the market, the more it can deliver targeted ads. And the dominant platforms are light years ahead of other competitors in terms of the amount of their data, thus their dominance in the digital ad space.

Mr. JOHNSON. Thank you.

I yield back.

Mr. CICILLINE. I thank the gentleman.

The chair now recognizes the ranking member of the full committee, Mr. Collins, for 5 minutes.

Mr. COLLINS. Thank you, Mr. Chairman.

Mr. Chavern, one of the interesting things—that I have been asked this question a good deal since we actually introduced it. And I think it is—but I think it is vitally important, because sometimes we can put things out there. But at the end of the day, if it is not actually a workable solution, then, simply, we are just talking about things and, you know, generating a lot of, you know, basically hype that doesn't actually end up in solving something. I am not a member of Congress who believes that we ought to just, you know, simply throw ideas out there but actually find ideas that can actually work.

So the question that has come up a great deal about that is how can we be sure that any agreement that the news publications negotiate with the online platforms under what we are proposing in this legislation will be adequate and flexible enough to endure for a long time in this quickly evolving market. I believe it is more than just right this minute. How does it play out 10, 15 years down the road?

Mr. CHAVERN. Well, thank you, Representative.

Obviously there is never going to be guarantees about infinite solutions. But I think what there is a real chance for us to develop an enduring partnership with the platforms.

Again, at the end of the day, the platforms, I view them as a solution, a potential solution for news and journalism rather than a problem. And I think the issues are well understood and pretty

well defined. We have issues about revenue. We have issues about data. We have issues about algorithms and our brand.

But these are all things that I think are solvable, achievable. And that I am confident that we could develop a solution that would greatly support journalism for some significant period of time. I don't think this is one of those issues that is not solvable. I think it is imminently solvable.

Mr. COLLINS. Would you also agree that this is an issue that both parties, really, in a lot of ways need each other? That this is not really one upset at the other and the other upset at—you know, that there is not mutually exclusive positions here. That the online platforms need the local content spoken of by others and at the same point in time they all wind in the local and also need, you know, to have this, you know, divergent technology, disruptive technology that has been good in many, many ways.

Do you see that as a symbiotic kind of relationship that should be instead of an adversarial relationship?

Mr. CHAVERN. Yeah. Absolutely. I mean, these are amazing wonderful distribution platforms that, by the way, have allowed us to grow our digital audience larger than it has ever been in terms of any audience. And they need good content to engage their users, and we need access to those users. It is just in this world where we can't act collectively. That means that we have this problem of any one publisher really doesn't get a say in how its content is distributed to those users.

Mr. COLLINS. One of the things that we came up with last year in this committee worked, and my friend Hakeem Jeffries and I worked this for a long time, and that was the Music Modernization Act, which actually had a very similar kind of issue where you had the content owner and the disruptive technology, which has been great for many segments, but there was a disconnect of many of our rules and many other things going forward where the content—and I think this is something that I have emphasized in this committee for years is that spark, that original idea, that content which both tech platforms have and also the local platforms do as well, is something worth protecting.

You can't sort of kill the goose with the golden egg. You can't go and say the one producing the content is bad and we're just going to keep taking, keep taking, keep taking, because one of these days they are not going to exist anymore.

My hometown paper that I have grown up with for years, it was a 7-day-a-week paper. It had—you know, just 20 years ago, had, you know, 25-, 30,000 on it. It is down to now only a 5-day-a-week paper. It could possibly, unfortunately, may go further.

Most of the district—my district is a one paper per county. But yet, at the same time, we do have Internet. We do have broadband issues. That is because of a very terrible carrier. But there are some other issues that we have there.

But as we look at that, you know, we need to make sure that both are involved in this. And I think that is the concern that I have.

I think as we go further in this process, knowing that there is the online capability, knowing what we have heard so far in this, this—I want this to be understood. And, unfortunately, I have had

to do a lot of interviews where it came at me as if this was an adversarial—these whole hearings are adversarial. Not really. They are just simply saying from my perspective what do we need to do in a perspective now.

I appreciate all the witnesses here giving this directive, because when we engage, people win. When we start talking about this, we win. And I think that is the biggest win that we have going forward here.

With that, Mr. Chairman, again, thanks for this and thanks for the partnership on this bill. And let's look forward to continuing to work together.

I yield back.

Mr. CICILLINE. I thank the gentleman for yielding back.

I now recognize the gentlelady from Washington, Ms. Jayapal, for 5 minutes.

Ms. JAYAPAL. Thank you, Mr. Chairman. And thank you all for being here.

I represent a district that includes Seattle. And, you know, we used to have a number of papers in Seattle. We are down to one now. And so—and I am also somebody who read the morning paper, like the actual paper for a very long time.

But digital technology is amazing. And I am continually astounded by the proliferation of information that feels like it is at our fingertips. I have watched my child grow up immersed in the digital world. They know no other world. And they have access to a breadth of information that I think could never have been imagined several decades ago.

My district is a hub of innovation. We have a lot of the tech companies right there in the district. And there are these exciting new ways that I think we are finding to use technology and share information.

However, I will tell you that many of my constituents who work for those very tech companies want us to make sure that we are utilizing that technology with appropriate regulations.

A very small number of companies exert a great deal of control over what news and information each of us sees when we go online or we use our phones. And those companies do have sophisticated systems that track what we do, where we are located, what we are interested in. It never ceases to amaze me if I go to a shopping site and I plug in something, and then the very next day I have five of that same thing constantly coming back at me to see if I will buy it.

So we know that our information is being monetized, that these companies are selling access to our attention to advertisers and using their own proprietary algorithms to determine what information and articles we see and what we don't see. And it is easy to forget that when we do a very quick Google search for news about a particular topic or we click on an article and our Facebook feeds. It is easy to forget that when we go online or into our phones looking for good information, we are actually being controlled by those corporations and the algorithms that are being used.

So, Ms. Hubbard, let me start with you. You were an assistant attorney general for New York State's antitrust division. You have also worked as a journalist.

Which online platforms would you say are most impacting the public's access to trustworthy sources of journalism and why?

Ms. HUBBARD. Thank you for the question, Congresswoman.

I think in terms of disinformation, the platforms are having the most impact are Facebook and YouTube. And that is because of their business models which are to prioritize engagement, engaging content because of the human nature that, you know, survival instinct. We tend to tune in to things that much us fearful or angry.

And so by prioritizing engagement, these platforms are actually prioritizing disinformation as well. It serves their profit motives to keep people on the platforms as long as possible to show them ads and collect their data. And because they don't have any competition, they are free to pursue these destructive business models without having any competitive constraint. They have also lacked regulation. Normally, corporations are not permitted to just pursue profits without regard to the consequences.

Ms. JAYAPAL. So let's go to that question of regulation. The Federal Trade Commission has repeatedly declined to interfere as Facebook and Google have acquired would-be competitors.

Since 2007, Google has acquired Acquired Semantics, Double Click, and AdMob. And since 2011, Facebook has acquired Instagram and WhatsApp.

What do these acquisitions mean for consumers of news and information? I think sometimes antitrust is seen, and In regulation is seen as something that is out there. But this has very direct impact for consumers.

Can you explain what that means as these companies have acquired more and more?

Ms. HUBBARD. Sure.

So in my view, those—all of the acquisitions that you just mentioned were illegal under the Clayton Act which prohibits mergers that may lessen competition.

Looking back, it is clear that all of those mergers did lessen competition. And when you lessen competition, the harms to consumers are not just high prices, which are harder to see in the digital age. But it is loss of innovation. It is loss of choice and loss of control.

So when we approve antitrust mergers, consumers are harmed.

Ms. JAYAPAL. And do you think that the FTC—what do you think about the FTC's current work around these? Do you think the FTC should be doing more and how?

Ms. HUBBARD. I definitely think the FTC should be doing more. I think there is a possibility of unwinding some of the mergers that are now obviously illegal now that we have the evidence, particularly Facebook's acquisition of WhatsApp. There have been public documents showing that Facebook had identified WhatsApp as a competitive threat using its VPN technology. And that it also deceived the European commission and likely—I don't know if it told anything different to U.S. regulators, but it has been fined for deceiving the European Commission saying it couldn't share data from what—between WhatsApp and Facebook.

So I do think that the FTC needs to do much more in this regard.

Ms. JAYAPAL. Thank you.

I see my time has expired.

I yield back.

Mr. CICILLINE. I thank the gentlelady.

I now recognize the gentleman from North Dakota, Mr. Armstrong, for 5 minutes.

Mr. ARMSTRONG. Thank you, Mr. Chair. And I especially appreciate Mr. Riley talking about small town papers, because if large publishers are having this problem, you can about imagine how adversely affected smaller publishers that do business in North Dakota are by this issue.

And my first grown-up job was coaching our summer American Legion baseball team. And I learned two things very early in life when dealing with the press and dealing with the kids of parents. One, you never get in trouble for what you don't say. And, two, you should always criticize in private and praise in public. So I have carried those with me for a long time, and so I appreciate that.

But just earlier we had heard—so Mr. Chavern and Mr. Pitofsky and Mr. Kimmelman talked about antitrust. And so we assume that we know there is—that there exists a competition problem in the market. But we already have longstanding remedy, and that is antitrust enforcement, if necessary. And I think there might be a little disagreement about whether that is actually sufficient. So supporters of this bill will argue that we need an exemption from antitrust laws which allows them to come together to negotiate terms.

Why should we enact the Journalist Completion Act as opposed to just enforcing antitrust law? And I will just start with Mr. Chavern.

Mr. CHAVERN. Thank you very much.

You know, the current antitrust laws protect Google and Facebook from us, interestingly, which is both wrong and ironic from our perspective.

What we are suggesting is, really, what we view as the lightest touch option on the table in terms of giving us the power just to stand up for ourselves.

And also, I have to note, there is a real urgency in the industry currently. This is an industry that really can't wait years and years for antitrust solutions. We are at a crisis point now. And what we are asking for is relatively simple, relatively straightforward. We are not asking the government to regulate anyone or tax anyone. We are just really asking to be left alone to defend ourselves.

Mr. ARMSTRONG. Thank you.

Mr. Kimmelman.

Mr. KIMMELMAN. So I do think antitrust can help. I think we have had a lapse in antitrust. Ms. Hubbard referred to it. I don't know about the specific cases. It is always easier in hindsight to say something was anticompetitive. Hard to tell at the time. But there is no doubt that we have had underenforcement and we need stronger enforcement.

I do not believe it solves this problem. It certainly doesn't solve an immediate crisis. But I do worry that you should look very carefully at whether the kind of negotiation that Mr. Collins was talking about and the way it would happen is what would actually happen in the marketplace. I am not at all sure that is how it would work. I am not at all sure who is a news content creator. You have wonderful news creators here in front of you today. There are tab-

loids. There are a lot of purveyors of mis—there are a lot of bad people out there too.

So I just think this is very complicated. You ought to take a very careful look at what would actually create a better marketplace dynamic. I actually believe there are better ways to do this, but it requires a different approach.

Mr. ARMSTRONG. And Mr. Pitofsky.

Mr. PITOFSKY. Yes. I would say that antitrust has been interpreted relatively narrowly for the last 40 years. And these markets are presenting new challenges, that it is going to take time. And this committee's investigation is helping move in that direction of understanding how these new markets work.

So, for example, when some of these mergers were approved, some of the people objecting raised privacy concerns. But the regulators felt that privacy was not an area that antitrust could cover.

I think as we have had experience with these platforms, we understand that privacy is an aspect of product quality. All of the users of these tools have expectations that those tools carry privacy that is in their interest. And antitrust just hasn't really stretched its muscles in a long time to understand those kinds of quality issues. And it is going to take a while. The facts are complicated. The law is complicated. Judicial precedence need reexamination. And so the bill is a good short-term remedy while the larger issues are tackled.

Mr. ARMSTRONG. Ms. Hubbard, do you want to talk?

Ms. HUBBARD. I agree with Mr. Pitofsky. I caution what—I worry about what Mr. Kimmelman is saying, that sometimes when we say things are too complicated, it is a way of not doing anything. And that is what we have been saying in this space for a long time where we have seen regulators around the world and enforcers around the world address this problem.

And we have just been sitting back worrying it is too complicated. And I think it is important to take action quickly and not keep kind of viewing complication as a reason to do nothing.

Mr. ARMSTRONG. And I agree with that. I don't think too complicated is ever an answer. But I would also say, and this is not an apples-to-apples comparison. But we are going to get to watch this play out a little bit, because the EEU just adopted really strict Internet rules. And one of the goals was to increase and remove barriers entry.

But by holding the platforms themselves liable for copyright violations, they may have—the cure may actually be worse for them than the disease. And time will tell. But automatic filter programs and scrubber programs that—such as YouTube uses, because you mentioned YouTube earlier, are incredibly expensive to run. And so—and plus—I mean, least in the EEU, it is not quite the same.

And I am sorry for going over.

Mr. CICILLINE. That is okay.

Mr. ARMSTRONG. I didn't do an opening statement.

Mr. CICILLINE. I am not trying to gavel you down yet.

Mr. ARMSTRONG. But, I mean, while they pass the rules, each member country is going to have promulgate their own laws in association with those rules which can cause all kinds of problems in that companies are going to have to operate in that patchwork of

different laws or just follow the most strict laws of any of those countries. Or probably the worst-case scenario is not do business in some of those countries.

So when you come from a small State and knowing that States like California and New York will dictate a marketplace, you always get concerned about that.

So I agree with you. But we are going to get to watch it.

Ms. HUBBARD. Can I respond really quickly that we do have a tool that we have had for a very long time, which is the antitrust laws. So before you were looking at kind of different solutions that Europe is pursuing, we used the antitrust laws against Microsoft, it led to innovation. Many people say if it weren't for our antitrust enforcement against Microsoft, Google would never actually have been able to come onto the scene.

So it is not actually a novel problem or novel tool, so we have these tools.

Mr. ARMSTRONG. No. And I agree, which is why I asked the antitrust question to start the questioning process.

Sorry about that.

Mr. CICILLINE. No. No.

I now recognize the gentlelady from Florida, Mrs. Demings, for 5 minutes.

Mrs. DEMINGS. Thank you so much, Mr. Chairman, and thank you to all of us—all of you for being here with us today.

Mr. Chavern, we talked about many newspaper publishers have seen significant growth in digital subscriptions, but yet they continue to struggle, and many have shut down which is truly unfortunate. Would you please talk a little bit about why the news industry continues to struggle despite the increase in online readership and digital subscriptions?

Mr. CHAVERN. Certainly. Thank you. Again, the audience—our audiences both growing and moving very quickly to online spaces, and those spaces are dominated by just a few companies that take the vast bulk of the advertising revenue, determine everything about the experience you get with your news publisher.

Again, I call them our regulators because they get to decide what news is delivered to who and when. How the news is delivered to me is different than the news delivered to you, and whether we can monetize it and on what terms.

Mrs. DEMINGS. I think it is so important for everyone to hear your words on that topic. Please go ahead.

Mr. CHAVERN. They are incredible and powerful advertising engines that do great targeted advertising often around our content, and they take the bulk of the digital advertising revenue. So, really, the rules of the game for online engagement of news are set up against content creators, publishers, and—but again, one of the things we do know is that people love news. The audience is bigger than ever. It drives a lot of engagement, and certainly the platforms know this.

Mrs. DEMINGS. Interesting what we define as news these days, but please go ahead.

Mr. CHAVERN. The platforms know this. They know that people go online to consume that product, and then they get to make money monetizing them to our detriment.

Mrs. DEMINGS. Thank you.

Ms. Hubbard, some researchers have estimated that for every dollar an advertiser spends on digital ads, only $0.30 go to the publisher meaning that ad tech mediaries could be capturing around 70 percent of all digital ad spending. What, if anything, does the 70 percent figure tell us about the market? I would love to hear from you about that.

Ms. HUBBARD. Yeah. As an enforcer, I would say—as a former enforcer, I would say that 70 percent cut shows that there is extraction that is happening, and it is not—there is not fair bargaining power between the press and the tech platforms because that is not, you know, a fair price. It is a monopoly rent, really.

Mrs. DEMINGS. And why is the fair bargaining power so important to this industry and to the consumers?

Ms. HUBBARD. Right. So as I said, you know, throughout the economy, when you don't have—when you have such concentrated markets, there is a lack of bargaining power. That means that everyone else has to play by the terms of the dominant companies, and we are talking about the press here which is so critical to our democracy. We do not want them playing by the terms of dominant companies. It is, you know, critical that they have bargaining power and can have a fair deal with getting this important content to the world.

Mrs. DEMINGS. And finally, Mr. Riley. You know, the 20-second sound bites are fine, and being able to click on a lot of different things which many times, they really don't have the same effect as a headline does, but there is just something about reading the newspaper. I believe you get not half of the story, you get more of the whole story. And I heard an editor say once and the other big benefit is that you may bump into another story that you had no intentions on reading. I think an informed America is a better equipped and a smarter America.

Could you tell me what is lost when a local or regional newspaper goes out of business, and what effect does that have on the local community? You have shared two very powerful stories with us today, but when a newspaper goes out of business, what is that effect on a local community?

Mr. RILEY. Well, let me try to explain it this way. You know, there were several references to the engagement of citizens and voting and that sort of thing, but let me give a real world Georgia example, you know. We cover the State. We have a big group of reporters who cover the State legislature in Georgia when it is in session. And I try to go down there each year and spend a day with our reporters and editors who do that so that, you know, I can meet the legislators and really get a good idea of the work.

Well, I have been down there, and sometimes it feels like we—our reporters are the only ones there, and what is happened is it has gotten too expensive to send reporters from Macon or Valdosta or Columbus, Georgia. And what kind—that is not good. That is not good for our democracy. That is not good for Georgia. That is not good for any of those communities because of what is happening in the industry. And I'll be honest you with you. It is not good for us because the competition, we like to see them around, and it would make us better, and we would all be better. The state

would be better, and all those local communities would be better. And that is a kind of real world example. And all of this discussion about these complicated issues, that's how it really plays out.

Mrs. DEMINGS. Thank you so much. I am out of time.

Mr. Chair, I yield back.

Mr. CICILLINE. I thank the gentlelady.

I would just advise the witnesses on the panel they have called votes. We only have two. So we are going to have Mr. Gaetz, the gentleman from Florida, do his questioning and then we'll briefly adjourn, go vote quickly and come right back, and I apologize for the inconvenience. Mr. Gaetz is recognized for 5 minutes.

Mr. GAETZ. Thank you, Mr. Chairman. And I believe that we are presented with an historic opportunity here where right wing populists and left wing populists have joined together under Chairman Cicilline's leadership to attempt to change the way consumers interface with major technology platforms. In a committee that so often sees division, it is nice to be working towards such an important goal, and it truly is historic that we are working together.

Mr. Chairman, it seems as though there are three ways that the consumer experience can be altered. Initially, technology companies can voluntarily choose to be more transparent with consumers about their data and information, and they could choose to act in better faith with partners in the news industry.

The second way is that through investigations and hearings like this, we would be able to animate the Department of Justice to engage in a more rigorous enforcement of existing antitrust laws.

And then the third option would be a legislative option. So obviously someone's voluntary action is self-evident, but Mr. Pitofsky, if our goal here were the second of sort of the three legs of the stool I outlined, to animate the Department of Justice in their antitrust enforcement, what specific guidance would you give in that light?

Mr. PITOFSKY. I think that the committee's goal of investigating is a very good first step. There is a lot of opacity in these markets. There is a lot that is not understood about fees that are taken out through the ad tech stack, about how the algorithms work, about how they are structured, if they are, in fact, structured to benefit consumers as the platforms say, or if they are structured with the intent of blocking competition. So I think the most important first step is for the committee to really dig into the facts and bring some transparency.

Mr. GAETZ. That transparency objective is a virtuous one, one that I believe in. What specific types of allegations would you want the Department of Justice to lay out to achieve that outcome?

Mr. PITOFSKY. Well, to coin a phrase, I think I would follow the money at this point. The engine of these platforms is the advertising that they sell, and the amount, the paucity of competition, the fact that they are able to extract so much from that ad tech stack suggests something fundamentally broken in the lack of competition in those markets which are the key profit generators of the business, so I think I would go with the ad tech first.

Mr. GAETZ. That is very helpful.

Mr. Chavern, I am going to ask you about the third leg of the stool, the legislative options that we have available to us. And I know we can enforce our antitrust statutes, but another element of

the Communication Decency Act applies to major technology platforms and doesn't apply to the people you represent, Section 230.

Section 230, as I understand it, and I am happy to be corrected by others, would say that if a technology platform is a neutral public platform that they enjoy certain liability protections that newspapers don't enjoy, that Newscorp doesn't enjoy with its assets. And so does it make the anticompetitive posture of technology platforms more pronounced that they have access to this special liability protection that the people you represent don't have access to?

Mr. CHAVERN. Absolutely. There is a huge disparity, frankly, when our content's delivered through these platforms. We get the liability, and they get the money, so that is a good deal from that end. You know, we are responsible for what we publish. Publishers can and do get sued. On the other hand, the platforms are allowed to deliver and monetize this content with complete lack of responsibility. I think that is a disparity that will have to be addressed. I think Section 230 had a reason, a raison d'etre at the beginning. I think—particularly with regard to the massive platforms, I think it is time to relook at that.

Mr. GAETZ. Thank you.

And Mr. Chairman, that is very instructive testimony, I think, because as we look at the ways to rebalance the scale, there is legislation that you have introduced with Mr. Collins to give the people before us the ability to band together in that negotiating practice.

But I hope we wouldn't exclude from our gaze the other statutory advantages that are baked into these business models that, as Mr. Chavern says, shift liability to one particular segment of the industry while at the same time giving others liability protection in absence of the transparency that Mr. Pitofsky noted that would demonstrate that they are worthy of that liability protection.

And so I am not—I agree with Mr. Chavern that I am sure there was a virtuous reason for Section 230. There is likely an incarnation of Section 230 that would fulfill that initial obligation. But in the absence of the transparency that requires these platforms to show that they are a neutral platform, that they are not putting their thumb on the scale either in the way they operate their business or in the way they can control content, I just think that is an important part of the legislative function.

And I would finally add I am grateful that the President has tried to enhance the voluntary actions of some technology platforms by pointing out where he sees bias in that. And so again, among those three things, I look forward to our great work, and I yield back to the chairman.

Mr. CICILLINE. You are doing very well with that final comment, Mr. Gaetz. No. You are absolutely right, and I want to assure you that this investigation is intended to look at a broad range of practices on these platforms and a broad range of remedies, so I look forward to working with you on that as well.

And we will just stand in recess very briefly.

[Recess.]

Mr. CICILLINE. The meeting will come to order. I now recognize the gentlelady from Georgia, Mrs. McBath, for 5 minutes.

Mrs. MCBATH. Thank you so much, Mr. Chairman. I would like to say to everyone that is here testifying today, thank you so much. We really appreciate you being here. And because I do represent Georgia's 6th Congressional District, I would like to give a warm welcome, a special thank you to a fellow Georgian, Mr. Riley.

Mr. Riley, your written testimony examines the decline in competition in the Georgia press. What has that meant for the information that Georgians are going to receive, Georgian citizens, about their government at all levels?

Mr. RILEY. Thank you for the question, Congresswoman. And in a way, I guess you could probably answer it after that spirited campaign in the 6th District. I think it was clear that, you know, the Atlanta Journal Constitution—we devoted an awful lot of our folks to covering that.

And I mention that because, see, I think that is what can be lost, you know, crucial elections where other news organizations may not be in a position in different parts of Georgia to exhaustively cover a campaign, to vet the candidates, to deal with the controversies, to sort through potentially misleading television ads, that sort of thing.

And I also think that it creates a situation where we are not competing with each other as news organizations as much. And as has been acknowledged, I mean, everyone is better off with true competition, and I mention that as well because that is what has made the American press such a powerful part of our democracy for our country's existence. We have always had a healthy, vibrant press, and I think that we can point to that and recognize it is part of the reason our country has enjoyed so much success.

Mrs. MCBATH. Thank you. So, Mr. Riley, I heard from editors and journalists that they really value their brand reputation, and I understand a lot about brand, and that leaders can trust their content. And, of course, we all know that in our online world, misinformation is always a click away.

What are some of the ways that online platforms could help the AJC maintain that relationship with its readers and help readers know that they are getting information from a reliable source?

Mr. RILEY. Well, I am going to offer you a brief answer to that and then suggest Mr. Chavern jump in because he has spent a lot of time on this issue. But one of the things that is important to us as a media organization is that it is clear when users of any service come to our content that it is clear to them that it is from the Atlanta Journal Constitution and all that that means to people in terms of its accuracy, its fairness, and how well presented that it is. And when it is confusing to anyone about the source of content, we do invite that idea of misinformation and people struggling to get to the truth.

Mrs. MCBATH. Thank you.

And would you like to add to that, please?

Mr. CHAVERN. Sure. There has always been crazy conspiracy theories. They usually were delivered to us by a crazy uncle over the dining room table, and you knew that was different than what was in the newspaper and what was on TV. And the internet platforms, often these—all the indicators about brand are suppressed, and that is not only bad for my members and the publishing busi-

ness because we are in the trust business. It is bad for the public because they lose signals about where information is coming from. So brand suppression is a serious issue that we—that does need to be addressed with the platforms.

Mrs. MCBATH. Thank you.

And Mr. Pitofsky, some have argued that reforms to preserve local journalism could have the effect of causing higher prices for advertisers, including small businesses. Do you buy that argument? Why or why not?

Mr. PITOFSKY. I don't buy that argument. I think the lack of competition in the ad tech space for digital advertising is raising prices for advertisers. And if there was more competition in the space, the various platforms competing with each other would need to give—offer better deals to one another.

I don't know if you have seen—if you have it here that Uber and Lyft are constantly sending notifications to their riders of special deals, and that is healthy competition. That is them having to give better deals to their customers to get their business. I think that is what we would see if we introduced more competition into the ad tech space.

Mrs. MCBATH. Thank you.

And for any of you, are there reforms that could preserve and promote journalism, also ensuring that small businesses have access to affordable advertising, and any one of you I would love to hear from.

Mr. SCHRUERS. If I may, Congresswoman. So as my testimony notes, leaders in industry have already committed hundreds of millions of dollars to supporting advertising initiatives and provide tools that are currently allowing news publishers to monetize their content.

The rate at which that revenue is usually split is 70/30. I know that was cited previously in the hearing, saying that news publishers are receiving 30 percent. The figure is right. Who is getting the amount is wrong. The split is traditionally 70 percent going to the news publishers, and that is substantiated by a U.K. government report cited in my testimony as well as a number of other publicly available sources.

All that being said, we recognize that more can be done to promote news journalism, and as our testimony suggests, there is a variety of sources, of solutions including tax treatment for incentives, deductions as well as non-profit status, and, of course, grants beyond what our industry has been providing to various programs for journalism promotion.

Mrs. MCBATH. Thank you so much.

I yield the balance of my time.

Mr. CICILLINE. I thank the gentlelady, and I recognize the gentleman from Colorado, Mr. Neguse.

Mr. NEGUSE. Thank you, Mr. Chairman, and thank you for hosting this bipartisan hearing. I certainly appreciate the bipartisan nature of the questions and certainly appreciate the witnesses testifying today on such an important topic.

A thriving and diverse press, as we all know, is the gateway for so many of our communities to learn about and participate in our political discourse. In a world in which three out of four Americans

now access their news online through two platforms, multiple newspapers are being forced to merge or shut down. Local newspapers have seen the biggest negative impact as we have heard from many of our witnesses today. Since 2007, we have lost nearly 1800 newspapers, 500 from rural communities. One of those was my State's very own Rocky Mountain News, Colorado's oldest newspaper, which closed down in 2009.

And we also know from empirical studies that when communities are left with no local newspaper, there is a direct correlation to lack of communication and government accountability. So that is why again today's hearing is so important, and certainly the testimony and the questions that have been posed underscore that fact.

Mr.—is it Sures?

Mr. SCHRUERS. Schruers thank you.

Mr. NEGUSE. Mine is a tough one. It is Neguse.

Mr. SCHRUERS. I feel your pain.

Mr. NEGUSE. Thank you for being here. I have a couple questions for you, sir.

First, I want to talk about your comments regarding antitrust exemptions. I reviewed your testimony. My sense, based on your testimony, I will quote you, note a couple of things. You say attempts to exempt certain industries from complying with these antitrust protections have negatively affected consumers and the economy as a whole.

You later talk about the fact that while you agree that there need to be potential solutions that antitrust exemptions have been proven to be, quote, an inadvisable solution to the business model challenges of these publishers.

So I take it from your testimony, you are not a fan of antitrust exemptions. Am I safe in presuming that you would then agree also that the firms you represent, the companies you represent, that they are also are subject to the antitrust laws because obviously, a variety of them have made arguments in the past that they were not. Is that a fair——

Mr. SCHRUERS. The firms we represent are subject to antitrust enforcement just like any other that doesn't benefit from an exemption.

Mr. NEGUSE. And I presume you would oppose any effort legislatively to try to draw up an exemption for those firms. Fair to say?

Mr. SCHRUERS. CCIA has never supported antitrust exemptions of any kind. In fact, we argued against them during the antitrust monetization commission that I cite in my testimony.

Mr. NEGUSE. Thank you. The second point I would like to follow up on was regarding the ad revenue piece because I just want to clarify for my own understanding and the record, and I missed the exchange regarding the 70/30 split. My understanding from your testimony is the example they are citing relates to Google. Does that same ratio apply to the other companies, or is that——

Mr. SCHRUERS. Thank you for the question, Congressman. So Google has publicly stated that on a few occasions. The Cairncross report that I identify cites revenue splits between other major internet services that are at 70 and above, depending on the particular product that is being used by different platforms. And in

some case, it is 85 or even 100 percent of the revenue is retained by the news publisher, so it varies greatly by the platform.

I know of no revenue split whereby the news publisher only receives 30 percent. I am not saying there aren't some, but these reports that are cited——

Mr. NEGUSE. I have limited time, and I appreciate your answer. I would be interested, and perhaps we can follow up on this after the hearing, in getting a detailed breakdown of the revenue sharing across firms because I just—it is painting with a broad brush. Citing one single example I think is not advisable.

The last piece. I would just—so on page 3 of your testimony, your written testimony, you talk about the benefits. The fact that social media platforms in particular have offered unique functionalities and features which have redefined user involvement. Quote, users may share and amplify the reach of news stories and help, quote, road test journalists' story ideas, and you talk about that in a favorable sense.

The footnote—and I went up because I was struggling to understand who would promote this idea that road testing journalists' ideas or journalists' stories, I should say, is a good approach to journalism. You cite a study that was called The Future Newsroom, University of Melbourne, September 2017. It is on page 3, footnote 9.

And in the parenthetical, you state this study essentially stands for the proposition noting publications use of Twitter to road test story ideas where high engagement was taken as a sign to publish a story.

Mr. SCHRUERS. Yes.

Mr. NEGUSE. Do you know who commissioned the study?

Mr. SCHRUERS. I do not, no.

Mr. NEGUSE. So I would encourage you to look it up—Facebook commissioned the study. I Googled that and found on page 2 that it was commissioned, and I am not—I say that only because a lot of the discussion we have had in this committee over the course of the last several months, as you may well know, has been around election interference by a foreign adversary in 2016. And so much of that related to social media disinformation and precisely these types of actions where engagement on Twitter is used to proliferate or even propagate stories that happen to be false.

And I guess what I would just—I would caution that I don't—I think there is reason to be concerned about this notion that road testing and using the engagement on Twitter as a sign as to whether or not the stories should be further published, that that is the true test of success or a barometer of success I just think is not a tenable position, in my view, and I am happy to give Mr. Riley and Mr. Pitofsky a chance to respond to that question.

Mr. CICILLINE. The time of the gentleman has expired, but the witnesses may answer the question.

Mr. RILEY. I am not familiar with the study, and I do know that a lot of times in some of the social media platforms, on the same story, people will experiment with different headlines or invite users to make suggestions. To me, that is sort of a tangent to the core thing that we really worry about with local journalism which is getting out there, finding out what is really going on, digging

deep into it, and making sure we get it to an audience. But again, I am not familiar with the study.

Mr. PITOFSKY. I would just add that some of your earlier questions pointed out a factual dispute in the room which is the percentage of fees that goes to the publishers versus the platforms which is a critical fact. I would encourage the committee as part of its investigation to look there because it is a profound question, and there is a lot of disagreement. I think you are going to find the statistics are closer to the ones cited by the Congresswoman earlier in the proceedings.

Mr. CICILLINE. I thank the gentleman. I now recognize myself for 5 minutes.

Mr. Schruers, I want to start with you. Google captures 88 percent of the U.S. online search market, 94 percent of all searches on smartphones, 78 percent of the search ad tech market, and 59 percent of the third party display ad market. I take it you agree that these don't, at least on their face, appear to be competitive markets?

Mr. SCHRUERS. Which precise market are we talking about?

Mr. CICILLINE. Well, let's start with searches on smartphones, 94 percent of the market controlled by one platform. You would agree that is not competitive under any definition?

Mr. SCHRUERS. Well, I think I would say 94 percent of a relevant market would be something worthy of considering, but I think——

Mr. CICILLINE. The mobile search ad market is not a relevant market?

Mr. SCHRUERS. I think the relevant market in that case would be what economists would tell us compete with that. And I know that searching on my phone in the browser, I can also search on my phone by asking Siri. I can search talking to the digital assistant smart speaker in my room.

There are a lot of places that users today can go to get answers that extend beyond the browser search experience, and these are increasingly pageless tools that don't require a search engine. And so, you know, I think economists might not agree that desktop search is a discrete market.

Mr. CICILLINE. I don't actually know any economist who doesn't agree that that is not a competitive market. I guess I am asking you. Do you agree that that is not a competitive market when it is operating at 94 percent of the market share?

Mr. SCHRUERS. I think 94 percent of the market share, of a market, of a relevant market is something worth consideration. I guess is question is whether that is a market.

Mr. CICILLINE. International competition authorities have found that Google has given preferential treatment to its own services in the online shopping and online search markets. Do you see or do you at least acknowledge a risk of self-preferential treatment in the digital ad market?

Mr. SCHRUERS. So the—well, let me start by saying I think that is a reference to the European case, and obviously, European antitrust law is not the same as U.S. antitrust law, and as I understand it, is actually stricter on the question of self-preferencing.

Mr. CICILLINE. I am asking whether or not the kind of self-preferential treatment, whether or not that, in fact, is—there is a risk

of that in this market and whether there currently is any way for a publisher to identify this self-preferential treatment?

Mr. SCHRUERS. So I don't have sufficient information about the internal decision-making of any of our companies to speak to precisely that issue, but I would be concerned about a rule that says, for example, that the grocery store can't put its own grocery store brand products at eye level in the store because that is where they find more things——

Mr. CICILLINE. I don't think I was contemplating a rule that does that. It would be helpful, though, as this investigation is undertaken that we, at least, agree to a common set of facts. And we will discuss solutions later on in the process, but I think sort of the fact finding and evidence gathering is really important.

You encouraged caution when enforcing antitrust against big tech platforms, but in many ways I think caution is what we have had for the last decade which I think has resulted in the emergence of advertising monopolies, and I think many of us think it is time to try something different, in any event.

But Ms. Hubbard, I would ask you. The Press Gazette recently reported that a single algorithm change at Google resulted in Google directing traffic to the mail online that caused it to fall by 50 percent. Nick Thompson, the editor of Wire, shared that a single tweek by Facebook caused Facebook-based traffic to Wire to drop by 90 percent.

How does this power dynamic, the fact that a platform can effectively shut off a publisher's traffic, affect the independence of the press, and you know, the ability of people to access trustworthy and reliable news?

Ms. HUBBARD. Well, clearly it is a monopoly problem because no one company should have the ability to decide which publications can exist and which ones can't. And this ability to turn off basically the traffic to any publisher is hugely problematic from a democracy standpoint because it basically is a shield from criticism. There are a lot of people who are never—a lot of journalists are not even going to have the courage to speak out and criticize big tech in the first place knowing that this can be done.

Mr. CICILLINE. Thank you.

Mr. Kimmelman, several media leading economists have commented that antitrust enforcers have been too permissive of mergers that involve a loss of competition among nascent rivals of potential competitors. For example, Dr. Carl Shapiro of the University of California Berkeley has noted that Google's acquisition of Double Click in 2007 and Facebook's acquisition of Instagram in 2012 are examples of mergers that involved the loss of competition.

Do you agree? And if so how can merger enforcement be tightened to address these concerns? And also, you note in your written testimony that we can't rely on antitrust alone to adjust the problems of platform power, and I wonder if you would share what tools you think Congress has traditionally used to promote competition in communication markets and what we ought to be thinking about as we confront these challenges?

Mr. KIMMELMAN. So Mr. Chairman, I do think that potential competition is an area of dramatic underenforcement. When I was at the Justice Department, we did raise concerns about Comcast's

purchase of NBCU at the time and raised the question of impact on online video distribution. It was not the first time, but it was very seldom that that tool was used. I think antitrust enforcers need to use it much more aggressively.

I think going back and looking at those transactions, there probably are some that ought to be reviewed now to determine whether they were rightly decided, whether there is a basis under antitrust law to revisit those, but potential competition is critical.

And I would say most importantly in the marketplace of ideas where you have communication platforms that are the most critical way in which we get content for our news and information, we ought to be most careful to be promoting as many entrants, as much potential competition as possible.

Mr. CICILLINE. Thank you. I just want—excuse me.

Mr. Chavern, I just have one final question. You know, I think you made reference to the increasing number of people that obtain their news from digital services. You know, participation by subscription, lots of interesting engagement in news, so a huge increase in consumer and in customer use of your product but declining revenues. But I think Mr. Schruers has said that is just the way it is. That is just the market. That is just sort of the moment we are in. What is your response to that?

Mr. CHAVERN. Present trends can't continue. If we continue on this path, we are going to lose vast amounts of quality journalism, particularly in communities all around the country. That is not just a bad business outcome. That is utterly destructive through our civic society and can't be allowed to happen. And what we have asked for is a chance, a chance for a different kind of future, and we need that future collectively.

Mr. CICILLINE. Thank you, Mr. Chavern.

I would like to ask unanimous consent to allow a member of the—not a member—a member of the full Judiciary Committee but not a member of the subcommittee who has joined us, the gentlelady from Texas, be allowed to ask a question.

Without objection, so ordered.

Ms. JACKSON LEE. Mr. Chairman, let me thank you for the journey that you have started this subcommittee on, and out of your courtesies, I hope to be able to join you as you make this journey. Forgive me for my delay, but I was in the Rules Committee which is a long process dealing with ongoing amendments.

I have served on the full committee for a pretty long time and have served on this committee in the past, and my recollection might serve me. I might have even been ranking member at some point in time, but it is an important committee, but there is important work as we speak. And so I will try to be focused in my questions but to read a statement that I think will guide my questioning.

A small number of digital platforms appear to have outsized control over access to trustworthy news online. And I am a partaker of the National—the NNPA which is the Association of African American Newspapers, newspapers that have an enormous history back to reconstruction periods after slavery as the vehicle of information for many. I am familiar in a diverse community like Houston that speaks 98 languages that there are many papers that re-

flect different communities, newspapers, maybe online as well, but they seem to be adhering to newspapers.

So—and then in the last election, of course, and 2018 and 2016, we know the conspicuous invasion of the foreign adversaries who utilize online tools to mislead voters, to utilize Russian bots which we expect to occur in the coming 2020 elections. So we are putting ourselves in a very difficult challenge if we don't look at the source of news.

And then as I see the gentleman from the Atlanta Journal Constitution, I know that the paper newspapers are online. We understand that. But I think I would ask this question of everyone, and I think—was that Mr. Chavern who as I came in said that we can't last this way. And so I am going to ask the question as we begin this journey of how do we deal with online digital.

I know that Mr.—Chairman Cicilline who I compliment will also have some overlapping digital privacy issues which we are dealing with in Homeland Security. But I want to have everyone answer if they would, the Achilles heel of dealing with online truth and a correction that they would want to see this committee engage in.

And Mr. Chavern, are you the first because I can't see your placard there. And if everyone would take that question, maybe the Atlanta Journal might want to comment on what it is doing to newspapers even though I know you may be online as most are.

Go ahead, sir. Thank you.

Mr. CHAVERN. Just briefly, the answer is more quality and more responsibility. My members produce quality journalism for which they are responsible. If the platforms have a problem with quality information, and they do, the answer is more content from quality publishers. We need a sustainable partnership. We could have one. We can have one. It is achievable, but the platforms have been unwilling to do that to date, and that is why we are here.

Ms. JACKSON LEE. Thank you.

Sir.

Mr. KIMMELMAN. Congresswoman, I totally agree that we need quality content. I think that we have a problem both in online platforms that comes from every user of those platforms and every media company that is not doing careful, trustworthy curation of information. It comes all across the marketplace with the same incentives for the most salacious material.

I would urge you to consider as you do your fact gathering and investigation to consider whether you need legislation to recreate some public service duty for everyone online, whether it be a news media company, a newspaper, or a platform to deliver trustworthy information and create the financial incentives to produce that. That would give the marketplace better information, better signaling of what is fact and what is fiction, and hopefully it would create the kind of money that we are hearing from local newspapers they need to sustain themselves.

Ms. JACKSON LEE. Thank you. Is it Ms. Hubbard?

Ms. HUBBARD. Yes. Thank you.

Ms. JACKSON LEE. Thank you.

Ms. HUBBARD. Thank you, Congresswoman.

So as I said earlier, I think competition is—would help with this disinformation problem because consumers right now don't have an

option of choosing a platform that doesn't boost disinformation with its engagement algorithms.

Facebook and YouTube both use these engagement algorithms that actually boost the propaganda and disinformation. So consumers need to be able to vote with their feet, and the same with publishers so that Facebook—so that YouTube and Google actually have a risk of losing profits. And they are motivated to fix this problem by not losing profits.

And the other thing I would like to add quickly is privacy regulation would also help because it is this 360-degree view of users collecting their data across the web that allows this information agent to then precisely target people based on the data collected about them.

So if we collected less data about people, especially not in ways that they would never expect, there would be less ability to hypertarget them with this information.

Ms. JACKSON LEE. Thank you.

Mr. CICILLINE. Thank you. The time of the gentlelady has expired.

I am now going to ask unanimous consent to add a number of letters and statements to the record regarding the subcommittee's recently announced investigation into major technology firms' potential anticompetitive behavior. A statement from Consumer Reports expressing their support of the investigation. Without objection. A joint statement from Laura Basset and John Stanton, two journalists who were laid off by the Huffington Post and Buzzfeed respectively, without objection, and a letter from EPIC, the Electronic Privacy Information Center, without objection.

[The information follows:]

MR. CICILLINE FOR THE RECORD

Written Statement for the Record

by

Laura Bassett and John Stanton

for a hearing before

The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law

titled

Online Platforms and Market Power, Part I: The Free and Diverse Press

Rep. David Cicilline, Chair
Rep. James Sensenbrenner, Ranking Member

Tuesday, June 11, 2019

Thank you, Chairman Ciclline and Ranking Member Sensenbrenner, and full Committee Chair Jerry Nadler and Ranking Member Collins, for your critical leadership in launching this investigation into the monopolistic power of the tech giants and for convening this hearing on the crucial subject of the impact the tech giants have had on the journalism industry. And thank you for accepting our written testimony on the existential threat that the journalism industry faces from the tech giants' monopolistic control of the online marketplace. This has impacted us personally, as it has many others in the industry. But it is also affecting hundreds of entire communities across the country as they lose access to high-quality journalism and local news. This is a crisis for our democracy.

We are among the roughly 2,500 journalists and media staffers in the United States who have lost our jobs in the first few months of 2019.

Laura was laid off in January, after nearly a decade in the newsroom. *The Huffington Post* had hired her in November 2009 to write what about the stories of the impact of the financial crisis—people losing their jobs, plunging underwater on their mortgages, hocking their wedding rings to put food on the table. Her first beat was economic suffering. Little did she know at the time that journalism was staring down its own Great Recession. Nobody, it seems, was on that beat.

The staff at *HuffPost* knew the cuts were coming. They'd been the subject of happy-hour chats for weeks. Verizon, *HuffPost's* parent company, had declared our website essentially worthless in late 2018 and directed staff reductions across the board. Even so, Laura's layoff still came as a shock. As a senior politics reporter for the site who represented it on cable news every weekend, Laura's job had felt like an integral part of her identity.

In a brief, surreal phone call, Laura's boss told her she'd had to make some tough choices and that Laura's job had been eliminated. She had five hours to clean off her desk, turn in her laptop, phone, and badge, and say goodbye to the newsroom that had been a second home.

John spent more than 20 years covering Congress, the White House, federal agencies, and federal courts before also being laid off in January. He'd even served as the first bureau chief of BuzzFeed's Washington office, and played a pivotal role in establishing the company as a legitimate, hard news organization.

News of the impending layoffs came not through management, but a tweet from the Wall Street Journal, which announced them two days prior. Like Laura, the entire experience was surreal: the company was not only laying John off, he was told, but the entire national affairs desk, the national security desk, and the LGBT desk were being eliminated entirely.

The reason was simple: while those desks had combined for some of the biggest news stories BuzzFeed had ever covered, there simply wasn't enough money to go around anymore. And the sorts of stories these desks produced, which led to changes in state and federal law, the jailing of criminals, and the exposure of corruption and wrongdoing, cost money. Money that is increasingly gobbled up by Google and Facebook.

In the days that followed, what was harder than losing our jobs was having to watch the whole industry crumble along with us. Layoffs at *Vice* came soon after ours at *HuffPost* and *BuzzFeed*. Gannett, the largest newspaper publisher in the country, cut 400 jobs from local papers. In April, more job cuts hit the Cleveland *Plain Dealer*, which has shrunk to less than a tenth of its former size over the past few years, leaving just 33 journalists to cover a metro area of two million people. And in May, the New Orleans *Times-Picayune* was folded into a competitor, ending a 182-year run, with its entire staff, including 65 editors and reporters, let go.

Tom Feran, a 66-year-old reporter at the *Plain Dealer* who heroically volunteered to be laid off to save the job of a younger staffer, aptly described the feeling as that of "a cartoon character running off a cliff into space and then looking down and noticing I'm not standing on solid ground anymore. Or like the end of 'She's So Heavy,' by the Beatles, which just suddenly ends."

When we were working at *HuffPost* and *BuzzFeed*, we never paid much attention to the financial side of journalism. But since being laid off, we've made it our mission to understand how the digital marketplace works and how Big Tech is killing the journalism industry. That's why we launched the Save Journalism Project last week to educate our colleagues about the very real and dismal future that awaits if they don't get organized and start fighting back against the tech giants.

Companies like Apple, Facebook, and Google are using their tech muscle to monetize news for their own profit, but at the expense of the journalists and news publishers who produce the content. The numbers are staggering.

In the year 2000, when the internet was still relatively new, traditional news publishers made an estimated $48.7 billion in advertising revenue, according to a study by the Pew Research Center on Journalism and the Media. News publishers earned an estimated $10.5 billion from subscriptions and circulation at that time. By 2017, subscription and circulation revenue was basically flat—$11.2 billion—despite substantial population growth during this time, while total advertising revenue collapsed to $16.5 billion, a 67 percent reduction. The economic sustainability of the journalism industry is in real doubt.

The reason advertising revenue has fallen so steeply is that Google and Facebook dominate the digital ad market, consuming more than 60 percent of all revenue. And their share is growing, because Google and Facebook devour nine out of every ten new dollars that are spent on digital advertising. Apple is leveraging its iPhone and Mac users to roll out its own news subscription product, Apple News+. Sadly, this product undercuts the subscriptions sold by existing publishers while Apple takes 50 percent of the revenue.

This has had a crippling effect on the journalism industry. Newspapers slashed 32,000 jobs in the decade between 2008 and 2017, a loss of 45 percent. More than 1,700 newspapers have closed since 2004. The loss of so many newspapers has created "news deserts" across the country. Daily newspapers are vanishing, leaving nearly two thirds of America's 3,143 counties without one. And 1,300 communities across have lost all local news coverage.

This is not just a story about the death of the newspaper. Previously successful digital outlets are shedding jobs and news coverage at an alarming rate. The stranglehold that Google and Facebook have on the digital ad market has severed the link between increasing readers and increasing revenue. *BuzzFeed* increased monthly visitors to its site by more than 400 percent but still experienced major revenue shortfalls and it was forced to cut staff. All told, 15,500 media professionals lost their jobs in 2018.

The dominance of the tech giants gives them too much power over the online marketplace. Google's Chrome browser has nearly two-thirds of the market share for web browsers. Apple's Safari browser is a distant second, but the two combined have roughly 80 percent of the browser market. This incredible reach means that these companies can make small changes to their browsers that without warning can have sweeping consequences for entire industries.

Google announced at its developer conference in May that it was changing the way Chrome treats third party cookies. Just last week, Apple declared at its own annual conference that it was requiring apps in its app store to offer a sign in with Apple capability if the app offers a sign in with a social media account option. These changes to Google's and Apple's platforms could have major effects on the ability of news publishers to monetize their content online and sustain their business.

Both Google and Apple framed these changes in terms of online privacy—a real and important concern for Americans. Google's CEO Sundar Pichai wrote an op-ed for the *New York Times* declaring that "privacy should not be a luxury good." He is right, privacy is indeed high in the minds of many Americans and should not be the preserve of the wealthy. But it is a bit rich to read Google's CEO extoll the virtues of his company's initiatives to protect privacy when it collects more data on Americans than any other company, even Facebook.

These changes are not about whether data on users will be collected. Rather, they are about who does the collecting. In these instances, the changes simply consolidate more data in the hands of the tech giants. That would likely increase their already dominant position in the digital advertising marketplace and squeeze out more revenue that should be going to content producers like news publishers.

Should one or two companies, on their own and without warning, be able to make changes to their products that could potentially destroy an entire industry? Especially when that industry is one of the foundations of our democracy? Those questions are why the investigation undertaken by this Committee to examine the monopolistic power of the tech giants and the impact on the journalism industry is so important. Nothing less than one of the foundations of our democracy is at stake.

Tech companies are well aware of their negative impact on journalism and have pledged $600 million toward efforts to support it. That's a lot of money, but this is a drop in the bucket compared to the $35 billion lost annually in advertising revenue for news publishers. And it's a small price to pay to ensure publishers become more reliant on the data Google and Facebook harvest from users across their multiple platforms. It would be far more helpful for them to facilitate a flow of digital advertising dollars back to the publishers who hire the journalists and create the content.

A robust and well-funded news media is vital to a healthy democracy. The public should be aware of Big Tech's death grip on publishers and the power they have over the online marketplace. Congress should be discussing legislative solutions to regulate or break up the tech giants and restore fairness to the digital ad market.

It's uncomfortable for journalists to talk or write about ourselves, or to elevate an issue that's in our own self-interest. We're taught not to be the story. But as tech monopolies siphon off our revenue streams, it's never been more necessary for us to link arms to fight for the health and future of our industry. One or two companies should not have the power to cripple the free press in the United States.

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June 11, 2019

The Honorable David Cicilline, Chair
The Honorable F. James Sensenbrenner, Ranking Member
House Committee on the Judiciary
2138 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

We write to you regarding the hearing on "Online Platforms and Market Power, Part 1: The Free and Diverse Press."[1] We appreciate your interest in this important issue. EPIC was also the first organization to examine the structure of internet-based advertising.

Over the past two decades, an absence of privacy regulation has led to a growing concentration of internet services. Privacy rules could help level the playing field. And the states must continue to have the freedom to respond to new privacy challenges as they emerge.

There are many problems today caused by a lack of regulation – increasing concentration of providers (Google and Facebook), profiling and tracking of Internet users, the loss of support for editorial content, and preferencing the advertiser's products over competitor's. All of these issues require careful examination by this Committee. The threats to innovation and competition are real.

It didn't have to be this way. More active regulation by the government could have sustained online platforms and digital advertising models that were good advertisers and businesses, big and small, and good also for consumers.

In the early days of the commercial Internet, EPIC favored the development of digital advertising techniques and explained that online advertising could both safeguard privacy and promote new forms of revenue.[2] We expressed support for the digital advertising firm DoubleClick when it first announced that it would develop an advertising model that did not require the collection of personal information.[3] Among the first privacy policies on the Internet were those developed by

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[1] *Online Platforms and Market Power, Part 1: The Free and Diverse Press*, 116th Cong. (2019), H. Comm. on the Judiciary, Subcomm. on Antitrust, Commercial, and Administrative Law, https://judiciary.house.gov/legislation/hearings/online-platforms-and-market-power-part-1-free-and-diverse-press (June 11, 2019).
[2] Marc Rotenberg, EPIC Executive Director, Testimony before the Senate Commerce Committee, *On Internet Privacy and Profiling* (June 13, 2000), https://epic.org/privacy/internet/senate-testimony.html.
[3] Marc Rotenberg, EPIC Executive Director, Testimony before the Senate Commerce Committee, Subcomm. on Communications, *Hearing on S. 809, The Online Privacy Protection Act of 1999* (July 27, 1999), https://www.epic.org/privacy/internet/EPIC_testimony_799.pdf.

websites that partnered with DoubleClick. They assured users that no personal data would be collected.[4] As DoubleClick explained in 1997:

> DoubleClick does not know the name, email address, phone number, or home address of anybody who visits a site in the DoubleClick Network. All users who receive an ad targeted by DoubleClick's technology remain completely anonymous. Since we do not have any information concerning names or addresses, we do not sell or rent any such information to third parties. Because of our efforts to keep users anonymous, the information DoubleClick has is useful only across the DoubleClick Network, and only in the context of ad selection.[5]

But then, in 1999, DoubleClick proposed to merge with Abacus, a large customer database firm that collected detailed information of Internet users' offline purchases. EPIC immediately objected and launched a national campaign to block the Abacus-DoubleClick merger.[6] We filed one of the first privacy complaints with the FTC.[7] Many agreed that the proposed merger was unlawful and deceptive, and the case also provided one of the first opportunities for the FTC to address new challenges to consumer privacy.[8]

Eventually, DoubleClick backed off the deal, stating that it had made a "mistake by planning to merge names with anonymous user activity across Web sites in the absence of government and industry privacy standards."[9] But the message was clear: Internet advertisers, even those who began with good business models, would seek to expand their reach and build their profiles of Internet users.

And when a Google later proposed to acquire DoubleClick, EPIC went to the FTC with an extensive complaint and warned of the danger to online privacy, competition, and innovation if the leading search engine also became the Internet's primary advertiser.[10] Much of what we predicted happened. Google broke many of the agreements to protect privacy that DoubleClick had established.[11] And then in 2009, Google took a dramatic step with online advertising that has diminished journalism and contributed to the growth of fake news. Google moved from contextual

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[4] *Id.*

[5] In the Matter of DoubleClick, Inc., EPIC Complaint, Request for Investigation, Injunction, and Other Relief (Feb. 10, 2000) at 4, https://epic.org/privacy/internet/ftc/DCLK_complaint.pdf [hereinafter "EPIC DoubleClick Complaint].

[6] EPIC, *DoubleTrouble*, https://epic.org/privacy/doubletrouble/.

[7] EPIC DoubleClick Complaint, *supra* note 5.

[8] *Privacy advocates rally against DoubleClick-Abacus merger*, CNET (Jan. 2. 2002), https://www.cnet.com/news/privacy-advocates-rally-against-doubleclick-abacus-merger/.

[9] *Statement of DoubleClick CEO Kevin O'Connor re: Online Privacy Practices* (Mar. 2, 2000), *available at* http://techlawjournal.com/privacy/20000302.htm.

[10] *In the Matter of Google, Inc. and DoubleClick, Inc.*, EPIC, Center for Digital Democracy, and U.S. Public Interest Research Group Complaint, Request for Investigation, Injunction, and Other Relief (April 20, 2007), https://epic.org/privacy/ftc/google/epic_complaint.pdf.

[11] Press Release, Federal Trade Comm'n, Google Agrees to Change Its Business Practices to Resolve FTC Competition Concerns In the Markets for Devices Like Smart Phones, Games and Tablets, and in Online Search (Jan. 3, 2013), https://www.ftc.gov/news-events/press-releases/2013/01/google-agrees-change-its-business-practices-resolve-ftc.

advertising to behavioral advertising, a change it said it would not make and which its founders knew could bring great damage to the Internet.[12] And it has.

In most simple terms, contextual advertising is the advertising that is placed in the newspaper or magazine or the TV show. It is the ad in the radio show. It is the ad on a website that reflects the content of the site. It is tied to content and it is targeted toward individuals not because of data about them, but rather because of their interest in a particular magazine, tv show, or web site. Contextual advertising allows the advertiser to reach the customer without the deep intrusion into private life. It is effective. And a new, small business can offer it without the troves of customer data currently consolidated into a handful of tech giants.

The original DoubleClick model relied on contextual advertising to provide revenue to support websites. And it was a good model. The behavioral model is entirely different. It targets the consumer directly. It relies on deep profiles. It provides no benefit to content providers, such as news organizations. In fact, the behavioral models attack the revenue model that has sustained news organizations in the United States since the early days.

The internet advertising system today is not healthy. Advertising should provide consumers with information about products. Instead the big Internet firms – Google and Facebook -- are providing advertisers information about consumers who have become the product. The problems are growing worse. As *The Boston Globe* recently explained:

> Along with Facebook, Google owns sites and services that, by some estimates, influence 70 percent of all Internet traffic. Not coincidentally, the two companies also form a duopoly that gets 73 percent of all digital advertising in the United States, and virtually all the growth in ad spending, on the Internet. Once the lifeblood of a vital free press, and later of a vast array of independent sites serving every possible interest, ad dollars increasingly flow to two tech giants that organize information produced at other people's expense.[13]

The Right to Access Information

Algorithms that rank and index search results must be scrutinized for distorting web users' access to information with limited transparency and accountability. Virtually every search engine, social media company, and web operator develops its own unique algorithm to curate content for individual users to control how information is fetched and displayed from search queries.[14]

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[12] Scott Gilbertson, *Google's New Ad Network Knows Where You've Been, What You Do*, WIRED (Mar. 11, 2009), https://www.wired.com/2009/03/googles-new-ad/.; Letter from the Founders, N.Y. Times, Apr. 29, 2004, https://www.nytimes.com/2004/04/29/business/letter-from-the-founders.html ("founders Larry Page and Sergey Brin. The letter is located in Google's registration statement filed with the Securities and Exchange Commission.")

[13] Editorial, *Break Up Google*, Boston Globe (June 14, 2018), https://apps.bostonglobe.com/opinion/graphics/2018/06/break-google/.

[14] *See*, Jaap-Henk Hoepman, *Summary of the CPDP Panel on Algorithmic Transparency* (Jan. 26, 2017) (summarizing remarks of Marc Rotenberg, EPIC President), https://blog.xot.nl/2017/01/26/summary-of-the-cpdp-panel-on-algorithmic-transparency/.

There are many dangers with these information-mediating techniques:

- Filtering algorithms can prevent individuals from using the Internet to exchange information on topics that may be controversial or unpopular;
- Content may be labelled and categorized according to a rating system designed by governments to enable censorship and block access to political opposition or specific keywords;
- ISPs may block access to content on entire domains or selectively filter out web content available at any domain or page which contains a specific keyword or character string in the URL;
- Self-rating schemes by private entities will turn the Internet into a homogenized medium dominated by commercial speakers;
- Self-rating schemes will embolden and encourage government regulation on access to information on the Internet; and
- The majority of users are unaware of how algorithmic filtering restricts their access to information and do not have an option to disable filters.

Several years ago, EPIC encountered the problem of opaque algorithms deployed by a dominant platform. At the time, EPIC, an organization whose mission is to educate the public about emerging privacy issues, provided several videos that were among the top-ranked search results on YouTube for a search on "privacy. At the time, YouTube's search results were organized by the objective criteria of "hits" and "viewer rankings." Both of these are objective criteria and easy to verify.

But after Google acquired YouTube, EPIC's search rankings fell. Google had substituted its own subjective, "relevance" ranking in place of objective search criteria. Google's ranking algorithm was opaque and proprietary. And significantly, Google's subjective algorithm preferenced Google's video content on YouTube concerning "privacy" over that of EPIC and others. Suddenly, the Google videos rose in the rankings.

At the time, we prepared a detailed report for the FTC when it undertook its investigation of anti-competitive behavior of Internet companies.[15] The FTC took no action on EPIC's complaint. But last year, after a seven year investigation, the European Commission found that Google had abused its dominance as a search engine by rigging its search results to give preference to its own shopping service.[16] The Commission required Google to change its algorithm to rank its own shopping comparison the same way it ranks its competitors.

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[15] Letter from EPIC to Commissioners of the Federal Trade Commission (Sept. 8, 2011), https://epic.org/privacy/ftc/google/Google_FTC_Ltr_09_08_11.pdf.

[16] Press Release, European Commission, *Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service* (June 27, 2017), http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

Facebook's recent release of its community guidelines is a good example of what transparency can look like.[17] It is a step in the right direction, but more must be done. For example, Twitter could make public its search algorithm to make clear that it is not preferencing accounts affiliated with certain views.

EPIC recommends legislative solutions based on the Universal Guidelines for Artificial Intelligence (UGAI).[18] The UGAI "are intended to maximize the benefits of AI, to minimize the risk, and to ensure the protection of human rights."[19] These principles can provide the framework for any successful legislative efforts. Broadly, the guidelines address the rights and obligations of AI systems to ensure 1) fairness, accountability, and transparency; 2) autonomy and human determination; 3) data accuracy and quality; 4) safety and security; and 5) minimization of scope. Congress should enact legislation, based on the Universal Guidelines for AI, to address concerns about bias and establish accountability for companies who collect personal data.

Conclusion

The consolidated market power of online platforms today is not healthy. Two companies dominate the market. The privacy of Internet users is under assault. The revenue model that sustained journalism and allowed small businesses to break into the market is broken. The current model is not sustainable. Privacy rules can help level the playing field.

We ask that this letter be entered in the hearing record. EPIC looks forward to working with the Committee on these issues of vital importance to the American public.

Sincerely,

/s/ Marc Rotenberg
Marc Rotenberg
EPIC President

/s/ Caitriona Fitzgerald
Caitriona Fitzgerald
EPIC Policy Director

[17] Facebook, *Publishing Our Internal Enforcement Guidelines and Expanding Our Appeals Process* (Apr. 24, 2018), https://newsroom.fb.com/news/2018/04/comprehensive-community-standards/.
[18] The Public Voice, *Universal Guidelines for Artificial Intelligence*, https://thepublicvoice.org/AI-universal-guidelines.
[19] A full list of endorsers is available at The Public Voice, *Universal Guidelines for Artificial Intelligence: Endorsement*, https://thepublicvoice.org/AI-universal-guidelines/endorsement.

Mr. CICILLINE. This concludes today's hearing. I want to say thank you again to our very distinguished witnesses for their testimony.

Without objection, all members will have 5 legislative days to submit additional written questions for the witnesses or additional materials for the record.

This hearing is adjourned.

[Whereupon, at 5:09 p.m., the subcommittee was adjourned.]

APPENDIX



June 10, 2019

The Honorable David N. Cicilline
Chairman
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

Consumer Reports is pleased that the Subcommittee is embarking on this examination of the threats posed to our marketplace and to our society by the growing power of giant online platforms over commerce and communications.

A handful of big tech corporations have come to dominate the online marketplace, shaping what we buy and how we communicate. While they bring benefits, their market power, and their increasingly pervasive reach into all aspects of our interactions, threaten to restrict and diminish our choices, and the pathways for all who seek to reach us – including manufacturers, service providers, content creators, and other voices. At the same time, they have unprecedented insight into our everyday lives, and are tailoring ads and information through opaque and unaccountable artificial intelligence systems.

To restore a balance of power and control to consumers in the marketplace, we must ensure that the power of these corporations is reined in where it is being abused. Not just tech giants like Facebook, Google, Amazon, and Apple, but likewise internet service providers who control our online access and also face few – if any – competitors who can offer alternatives. Vigorous antitrust enforcement needs to play a key role, along with strong privacy laws and other consumer protections.

Over the years, our antitrust laws have been instrumental in keeping our marketplace open and vibrant. On several occasions, Congress has found it necessary to strengthen those laws to better ensure their continued effectiveness. This may prove to be another such occasion. Meanwhile, a renewed commitment to ensuring that the existing laws are vigorously enforced is needed, along with substantial additional resources for strapped enforcers.

Ultimately, all options need to be considered, both antitrust enforcement and additional measures. In the competition policy realm, those measures might be something relatively simple, like requiring interoperability among platforms; or they might be more far-reaching, like regulating aspects of platform operations like common carriers, potentially even separating ownership and control of the platform from using it to compete in providing products and services.

Your Subcommittee's investigation is an important and welcome catalyst to this effort. We look forward to working with you to ensure that the antitrust laws can and will continue to play their essential part in making the marketplace work for consumers, and for everyone.

Sincerely,



George Slover
Senior Policy Counsel
Consumer Reports



Justin Brookman
Director, Privacy and
Technology Policy
Consumer Reports



Jonathan Schwantes
Senior Policy Counsel
Consumer Reports

cc: Members, Subcommittee on Antitrust, Commercial and Administrative Law



George J. Stigler Center for the Study of the Economy and the State
The University of Chicago Booth School of Business

Committee for the Study of Digital Platforms

Market Structure and Antitrust Subcommittee

Report

DRAFT
15 May 2019

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Subcommittee members

Fiona Scott Morton (chair), Theodore Nierenberg Professor of Economics, Yale School of Management

Pascal Bouvier, Managing Partner, MiddleGame Ventures

Ariel Ezrachi, Slaughter and May Professor of Competition Law, The University of Oxford

Bruno Jullien, Senior Researcher, CNRS, Toulouse School of Economics

Roberta Katz, Senior Research Scholar, Center for Advanced Study in the Behavioral Sciences, Stanford University

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We thank Luigi Zingales and Guy Rolnik for inviting us to spend our time on this interesting and complex project, and all the wonderful staff at the Stigler Center for the Study of the Economy and the State. We particularly thank Rachel Piontek for her logistic and document skills, and Filippo Lancieri for guiding the intellectual work along from the very start. Many thanks for outstanding help with content go to students Doni Bloomfield, Rachel Cheong, and Steffi Ostrowski of the Yale Law School. We are grateful to the reviewers at other institutions who took time to give wise and helpful comments. We additionally want to thank our colleagues in other nations whose reports came out before ours and provided stimulating ideas and frameworks. We particularly build on the "*Unlocking digital competition: Report of the Digital Competition Expert Panel*" chaired by Jason Furman for the Government of the United Kingdom and the European Commission's Special Advisors' report "*Competition Policy for the Digital Era.*"

DISCLAIMER:

The purpose of these preliminary reports is to identify what are the new challenges digital platforms pose to the economic and political structure of our countries. These reports also try to identify the set of possible tools that might address these challenges. Yet, there is potential disagreement among the members of the committees on which of these problems is most troubling, which tools might work best, whether some tools will work at all or even whether the damage they might produce is larger than the problem they are trying to fix. Not all committee members agree with all the findings or proposals contained in this report. The purpose of these preliminary reports, thus, is not to unanimously provide a perfect list of policy fixes but to identify conceptual problems and solutions and start an academic discussion from which robust policy recommendations can eventually be drafted.

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I. Introduction

When the global, interactive, many-to-many communications network called the internet became available for broad public use in 1995, people were overjoyed with the new power at their fingertips. It is easy to forget that in the early years of the internet, that power was limited to visiting shops and getting news from the relatively small number of enterprises that had built websites on the World Wide Web. Over the past 25 years, that power has exploded with head-spinning velocity: Today, there is no area of human life that has not been affected by the technological innovations made possible by the internet. We now buy goods and services, do banking, pay bills, find information, and talk with multiple groups of friends and acquaintances on the web. The speed, scale, and scope of the internet, and of the ever-more powerful technologies it has spawned, have been of unprecedented value to human society.

History teaches us that social institutions must adapt after major technological advances. In just the past century, we saw this after the introduction of the automobile, the airplane, radio and television, and cell phones, to name but a few examples. New occupations—for example, bus drivers—arise to replace others—for example, buggy whip producers. At the same time, new behavioral norms and expectations replace those associated with past technologies—consider the social and economic changes wrought by the automobile, or the changes in both the rules and norms of the workplace in the age of mobile devices. As unintended and unforeseen social problems and harms arose, society responded with governance mechanisms aimed at addressing the problems or harms without impeding the clear benefits associated with the advances. These have ranged from the adoption of new social norms to the creation of new laws and regulations. Examples abound, encompassing everything from crosswalks and traffic lights to legal remedies addressing unfair competition in the marketplace. Ideally, the goal is to steer technological advances to ensure widespread benefit without attendant widespread harms—to protect and preserve innovation and advancement while minimizing harms so that all of society reaps net benefits. Such a goal often involves government intervention and always involves tradeoffs as society wrestles with the prevalence and cost of harms and how to balance them against the prevalence and size of benefits. While often messy, this is a healthy and desirable debate.

This working group came together to address specific problems arising from the digital platforms' reach, scale, scope, and use of data. We were asked to examine concerns stemming from the market structure contemporary platforms have created, and to investigate their competitive behavior, including the consequences of network effects that can create barriers to entry for new innovators and entrench incumbents. The global nature of many of today's platforms, a result of their scale, scope, and business models, creates novel complexities and considerations, particularly a concern that the digital platform may be a unique combination of economic forces that require both new analysis and new public policy. Regulatory authorities throughout the world are now turning their attention to these same questions. This report

contributes to this international analytical project by providing some of the necessary frameworks and inputs. We intend it to be a complement to other recent work, as experts across the world wrestle with how to ensure that markets remain open and healthy, allowing beneficial technological and social advancements to continue. Many of our conclusions and suggestions echo the findings of reports that have come out in the past year, and we hope they will be helpful to those reports not yet released. The list of antitrust experts and agencies working on this problem includes Australia, the United Kingdom, Germany, the European Commission, France, Israel, and Japan.[1]

The issues are global in their scope, and these various jurisdictions are all engaged in analyzing how best to ensure that societies in general, and competition in particular, continue to thrive in the Digital Age. Our charge was restricted to market structure and competition, while other committees considered the equally important topics of the impact of digital platforms on politics, the media, and the nature of privacy. We note that monopolies can concentrate political power, reduce media plurality, and provide insufficient competition on dimensions such as privacy. In this way the findings of this report and the others are linked and quite consistent. Digital markets and platforms have already delivered great benefits to consumers, and the global concerns that have surfaced relating to actual or potential consumer harms may require action to ensure that the benefits are not undermined. Our report concludes that with deliberate government action to protect competition and consumers, the benefits from innovative firms could be even greater and more equitably spread, ensuring that the public is not short-changed in firms' pursuit of profit. Accordingly, this report is offered in the spirit of ensuring a future of continued technological and economic progress and social well-being as we move further forward into the Digital Age.

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[1] *See* JACQUES CREMER, YVES-ALEXANDRE DE MONTJOYE, & HEIKE SCHWEITZER, EURO. COMM'N, DIRECTORATE-GENERAL FOR COMPETITION, COMPETITION POLICY FOR THE DIGITAL ERA (Apr. 4, 2019), http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf [hereinafter EC COMPETITION REPORT]; JASON FURMAN ET AL., H.M. TREASURY (U.K.), UNLOCKING DIGITAL COMPETITION: REPORT OF THE DIGITAL COMPETITION EXPERT PANEL (March 13, 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf [hereinafter U.K. COMPETITION REPORT]; AUSTL. COMPETITION & CONSUMER COMM'N, DIGITAL PLATFORMS INQUIRY: PRELIMINARY REPORT (Dec. 2018), https://www.accc.gov.au/system/files/ACCC%20Digital%20Platforms%20Inquiry%20-%20Preliminary%20Report.pdf [hereinafter AUSTRALIA COMPETITION REPORT]; Japanese Ministry of Economy, Trade, & Industry, Fundamental Principles for Rule Making to Address the Rise of Platform Businesses Formulated, (Dec. 18, 2018), https://www.meti.go.jp/english/press/2018/1218_002.html; HEIKE SCHWEITZER ET AL., GERMAN BUNDESMINISTERIUM WIRSCHAFT UND ENERGIE, MODERNISING THE LAW ON ABUSE OF MARKET POWER: REPORT FOR THE FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY (Apr. 9, 2018), https://www.bmwi.de/Redaktion/DE/Downloads/Studien/modernisierung-der-missbrauchsaufsicht-fuer-marktmaechtige-unternehmen-zusammenfassung-englisch.pdf [hereinafter GERMAN COMPETITION REPORT SUMMARY]; L'AUTORITÉ DE LA CONCURRENCE [FRENCH COMPETITION AUTHORITY], PORTANT SUR L'EXPLOITATION DES DONNÉES DANS LE SECTEUR DE LA PUBLICITÉ SUR INTERNET [ON THE EXPLOITATION OF DATA IN THE INTERNET ADVERTISING SECTOR] (Mar. 6, 2018), http://www.autoritedelaconcurrence.fr/pdf/avis/18a03.pdf [hereinafter FRENCH COMPETITION REPORT]; Press Release, The Israel Antitrust Authority invites interested members of the public to submit their comments, towards an inquiry into competition issues in the digital economy, Reishut HaTachrut [Israel Antitrust Authority] (Apr. 9, 2018), http://www.antitrust.gov.il/eng/subject/177/item/35246.aspx.

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Executive Summary

a. Attributes

The market structure and antitrust report begins by discussing the characteristics of digital markets. These markets often have extremely strong economies of scale and scope due to low marginal costs and the returns to data. Moreover, they often are two-sided and have strong network externalities and are therefore prone to tipping. If so, the competitive process shifts from competition *in* the market to competition *for* the market. This combination of features means many digital markets feature large barriers to entry. The winner in these settings often has a large cost advantage from its scale of operations and a large benefit advantage from the scale of its data. An entrant cannot generally overcome these without either a similar installed base (network effects) or a similar scale (scale economies), both of which are difficult to obtain quickly and cost-effectively.

Additional barriers to entry are, ironically, generated by the very consumers who are harmed by them. Consumers do not scroll down to see more search results, they agree to settings chosen by the service, they single-home on one platform, and they generally take actions that favor the status quo and make it difficult for an entrant to attract consumers. In general, the findings from the behavioral economics literature demonstrate an under-recognized market power held by incumbent digital platforms.

The theme that runs throughout the report is the difficulty of entry into digital platform businesses once an incumbent is established. Whether the entrant is vertical or horizontal, has succeeded to some degree, is nascent, is a potential entrant, or is a large platform in an adjacent space, its existence improves consumer welfare. Either the entrant provides more choice, different features, and a chance of higher quality, or the threat of those outcomes spurs the incumbent to provide lower prices, higher quality and innovation, and to do so more quickly.

The role of data in digital sectors is critical. Personal data of all types allows for targeted advertising to consumers, a common revenue model for platforms. The report shows that the returns to more dimensions and types of data may be increasing, which again advantages incumbents. Consumer data in the United States is not regulated in any way that gives useful control or privacy to consumers; and additionally, most consumers have little idea what is being collected about them and re-sold. One way in which digital platforms often exploit their market power – and increase their profits – is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing, but which give the platform freedom to monetize consumers' personal data.

Digital platforms are characterized by free services. "Free" is not a special zone where economics or antitrust do not apply. Rather, a free good is one where the seller has chosen to set

a monetary price of zero and may set other, non-monetary, conditions or duties. It is possible that a digital market has an equilibrium price that is negative; in other words, because of the value of target advertising, the consumer's data is so valuable that the platform would pay for it. But the difficulty of making micropayments might lead a platform to mark up this negative competitive price to zero. As a result, barter is a common way in which consumers pay for digital services. They barter their privacy and information about what restaurants they would like to eat in and what goods they would like to buy in exchange for digital services. However, in principle, that information has a market price that can be analyzed.

b. Harms

Market power, consumer biases and an ad-supported platform model can generate significant consumer harms. First, market power in advertising markets will result in markups paid by advertisers. Secondly, while behavioral economists have studied consumer biases and firm responses in offline markets, these are swamped by what digital businesses can learn by using high-dimensional, large datasets to explore every nook and cranny of consumers' many behavioral shortcomings and biases in real time. Framing, nudges, and defaults can direct a consumer to the choice that is most profitable for the platform. A platform can analyze a user's data in real time to determine when she is in an emotional "hot state" and then offer targeted sales. These tactics reduce the quality of the zero-price content the user experiences on the platform.

In addition to *de novo* entry, platforms fear disintermediation by a partner or complement. If a platform's partner is able to directly access and serve the platform's customers, it might take them off the platform entirely, reducing the platform's profit. A platform that has total control of demand due to control over framing of consumer choices, policies for complements, and technical standards can steer customers to content and complements of most benefit to it. The most privately beneficial content might be owned by the platform itself rather than provided by independent firms that could extract rent or even challenge the platform's market power in the future. To the extent that consumers single-home, they may not be aware of such steering, or may not have competitive alternatives to which they can turn if they are aware.

Today's platforms understand that in some settings they can obtain higher margins if they either, make all of the necessary complements themselves, or, position themselves as a mandatory bottleneck between partners and customers. In particular, digital platforms are often very careful to maintain complete control over the user relationship so that they do not face any threat of disintermediation from a complement. These technological and policy choices can be used to reduce the possibility of successful entry by direct competitor. Other strategies such as exclusive contracts, bundling, or technical incompatibilities can also be used by platforms to restrict entry of competitors. Some of these strategies could be violations of existing antitrust law, as discussed below.

Insufficient competition and entry result in harms to investment and innovation. There is significant theoretical and empirical research that concludes that anticompetitive creation or maintenance of market power will cause a reduction in the pace of innovation. The lessening or blocking of innovative entry is of particular concern given its value to consumers. A VC will usually be wary of outright investing in an innovative startup that will implicitly or explicitly compete head-on with a tech giant. In that case, the best hope might be to be the preferred innovator of a complement and sell its business to the platform at an early stage. However, if entry barriers were reduced, the entrepreneur would not have to settle for a small fraction of the platform's profits, but could compete for all of them and try to replace the platform. This possibility would generate a much larger incentive to innovate.

c. Solutions

While some markets may self-correct, the findings of this report suggest that rapid self-correction in markets dominated by large digital platforms is unlikely.

While US antitrust law has long been flexible in combatting anticompetitive conduct, there is increasing concern that it has been underenforced in recent years. Antitrust law and its application by the courts over the past several decades have reflected the now outdated learning of an earlier era of economic thought, and they appear in some respects inhospitable to new learning. Antitrust enforcement better suited to the challenges of the Digital Age may therefore require new legislation.

Technology platforms present particular challenges for antitrust enforcement. Markets tip and the resulting market power is durable, so even effective antitrust enforcement is unlikely to generate fragmented markets. Nonetheless, enforcement that protects competition on the merits in the first stage and prevents exclusionary conduct in the second stage will help ensure that market-participants make unfettered choices among competing platforms and that entry and innovation are not inhibited by private rent-seeking.

Economists and lawyers will have to develop tools to explain to courts the role of behavioral biases in the creation of market power and in their effect on the quality of content. The existence of zero money prices means that measurement of quality will be critical. The law needs better analytical tools to take into account the impact of potential and nascent competitors and competition. Market definition will vary according to what consumers are substituting between, whether there is competition on the platform between complements, or competition between platforms, or competition between a platform and potential or nascent competitors regarding possible future markets. The need to identify the specific anticompetitive exclusionary conduct and analyze it may raise enforcement costs given all the possible variants of exclusionary conduct possible in digital markets.

This report details the particular areas where antitrust law will need reform in order to adequately deliver competition to consumers. The report also suggests the establishment of a specialist competition court to hear all private and public antitrust cases which would allow judges to develop some expertise. The committee believes that vigorously enforcing the antitrust laws under these conditions would be likely to increase entry in digital platform industries, competition, and consumer welfare. Moreover, such enforcement would likely result in remedies to restore competition that has already been lost, as well as serve as a deterrent to future anticompetitive conduct.

However, because technology platforms present the enforcement challenges detailed above, even effective enforcement may not be enough to generate competitive digital markets in a timely fashion. Therefore, the report suggests that Congress should consider creating a specialist regulator, the Digital Authority. The regulator could be tasked with creating general conditions conducive to competition. The committee also suggests separating out some types of regulation that will apply to virtually all market participants while other regulation will apply only to companies with bottleneck power. "Bottleneck power" describes a situation where consumers primarily single-home and rely upon a single service provider, which makes obtaining access to those consumers for the relevant activity by other service providers prohibitively costly.

The Digital Authority could routinely collect data on digital transactions and interactions, with an emphasis on data from businesses with bottleneck power. These data – made public to the extent possible – would allow policy makers and researchers to assess the performance of the sector. The DA could have a mandate to create "light touch" behavioral nudges when they will make markets more competitive. An example of a regulation that would enhance competition is data portability. The DA could set up rules that allow users to easily port their data from one service provider to another and monitor compliance. The DA may also promote open standards in such areas as micro-payments and digital identities. Should Congress request it, the DA could oversee a mandate for interoperability in any market where market power has become entrenched and threatens long term harm to competition. The Report also suggests that the DA could carry out a parallel merger review that would be set up to incorporate necessary antitrust reforms and modern standards.

Some regulations could apply only to firms that meet the DA's definition for bottleneck power. Because the cost of false negatives is high and there is uncertainty, the public interest requires the DA to take a more interventionist approach in these settings. The DA could have merger review authority over even the smallest transactions involving digital businesses with bottleneck power because nascent competition against these entities is very valuable for consumers. Non-discrimination rules could protect against a complement that is a potential competitor of the platform itself, or one that operates only on the platform as a rival provider of content.

When a company has been found liable for violating the antitrust laws, part of the current process is that antitrust authority devises a remedy to restore the lost competition. Data sharing, full protocol interoperability, non-discrimination requirements, and the unbundling of content from a platform are all tools that the regulator, in conjunction with the antitrust authority, could apply and monitor over time in order to restore competitive markets.

II. IMPORTANT FEATURES OF THE DIGITAL BUSINESS ENVIRONMENT

Digital technologies are a central driver of future prosperity, hopefully delivering waves of innovation, efficiencies, and consumer welfare. These technologies have revolutionized the way consumers shop and communicate, the way businesses deliver value, the way people work together in collaboration, and—the subject of this report—the overall dynamics of competition.

These transformative changes, while immensely beneficial, have also triggered growing concerns about the power of a small number of firms to control and influence billions of lives. As an increasing volume and range of commercial activities have been digitalized, society has witnessed the emergence of certain key platforms and gatekeepers and a shift in market dynamics.

This section outlines the key features of the digital environment to set the foundation for the discussion of problems and solutions.

a. The Structure of Digital Markets

i. An Economic Perspective on the Digital Market Structure

Despite the predictions of some early observers that the internet would create competitive—even perfect—markets,[2] certain digital firms have been able to acquire significant market positions and preserve them over time. Many of the most innovative internet-derived digital markets, such as search engines, social networks, network operating systems, ecommerce, and ride-sharing, are highly concentrated and have been dominated by one or a few firms for a number of years. The lack of entry of competitors in these important markets—despite high profits—suggests either barriers to entry or exclusionary conduct, or both. We first discuss the nature of entry barriers in digital platforms and why they are difficult for an entrant to surmount.

1) A Unique Setting Subject to Tipping

From an economic perspective, there is no single new characteristic that would make competition in digital platforms different from more traditional markets. Rather, it is the coincidence of several factors at a scale that has not been encountered before that makes the problem unique and requires new analysis of market structure and market power. In particular,

[2] *See, e.g.*, Erik Brynjolfsson & Michael D. Smith, *Frictionless Commerce? A Comparison of Internet and Conventional Retailers*, 46 MGMT. SCI. 563, 563 (2000) ("The conventional wisdom regarding Internet competition . . . is that the unique characteristics of the Internet will bring about a nearly perfect market."); Jeffrey R. Brown & Anstan Goolsbee, *Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry*, 110 J. POL. ECON. 481, 482 (2002) ("The traditional economic view suggests that . . . the Internet should reduce search costs for consumers and thereby reduce prices and make markets more competitive.").

the platforms with which this report is most concerned demonstrate extremely strong network effects, very strong economies of scale, remarkable economies of scope due to the role of data, marginal costs close to zero, drastically lower distribution costs than brick and mortar firms, and a global reach.

Markets with these combined features are prone to tipping—a cycle leading to a dominant firm and high concentration. Digital markets are prone to tipping for two primary reasons. First, because fixed costs play such an important role in digital markets, these markets feature especially large returns to scale. Second, many digital markets are driven by network effects that strengthen large incumbents and weaken new entrants.

When markets are prone to tipping, the competitive process shifts from competition *in* the market to competition *for* the market. In that case, consumers may only benefit from competition among several firms for the relatively short time period in which the firms compete to be the ultimate winner of very large economic profits. The winner's monopoly profits serve as the inducement for entry and investment. After a market has tipped, a potential rival for the market can only overcome the incumbency advantage of established networks through significant innovation. However, even an innovative entrant may not be able to create competition that benefits consumers in the presence of the factors that led to the tipping, leaving open a role for public policy to allow for competition for the market. Moreover, a competitor is even less likely to enter the market if the incumbent platform is able to leverage its powerful position to disadvantage or exclude potential entrants.

There are many well-known problems that follow from lack of competition, including higher prices, less innovation, and lower quality in all its forms. Policy may be needed to address the cause of such symptomatic problems. In the view of this committee, protecting entry for existing and potential competitors is the most important way to protect or improve consumer welfare in digital platforms. Initial competition for a market should be conducted on the merits without any anticompetitive practices, and later entrants should face a level playing field and no exclusionary conduct as they contest the market. Regulation may be required to prevent incumbents from erecting improper barriers to entry.

As it is traditionally recognized, the reward for the winner's innovative activity is the ability to extract rent from the platform through the exercise of market power.[3] However, we highlight three deviations from this principle. First, the winner must have "won" on the merits of its product, without the use of any anticompetitive conduct. Correcting illegal practices by dominant firms that have won in a tipped digital market can be difficult, but is necessary or the firm will earn profits from its illegal behavior—and harm consumers along the way. Second, the reward of the entire market that propelled the winner to innovate must be available to the next entrant. If

[3] *See* United States v. Alcoa, 148 F.2d 416, 430 (2d Cir. 1945) ("The successful competitor, having been urged to compete, must not be turned upon when he wins.") (Hand, J.).

the incumbent is able to withhold those rents by excluding the entrant, or reduce those rents by limiting the entrant's share, then the pace of innovation will slow. The economic literature demonstrates that vibrant innovation and entry is the most important source of consumer welfare over time—hence the focus of the report on ensuring that entry functions well both when a market is created and thereafter.[4] Third, there are sources of platform rents that society may determine through appropriate regulation should not be part of the winner's reward. For example, investments in complements offered on the platform may be best incentivized and encouraged to compete if the platform owner is not entitled to exclude them. (As used in this report, a complement is a good or service offered on or through the platform that increases the value of the platform to a consumer.) Digital markets at issue today may not have featured free entry and lack of anticompetitive conduct in the past. This report covers that case by describing how antitrust can be used to look backward, as well as forward, for antitrust violations. We also suggest regulation that can look forward to protect entrants, and thereby consumers, in these other cases.

2) Increasing Returns to Scale

Digital markets are used to exchange information goods and services. Typically, information goods involve increasing returns to scale because their production requires a fixed cost and no or little variable cost.[5] In other words, when an additional user is served, costs do not go up proportionately. For example, an eBook, once produced, can be distributed at almost no cost to all users with access to the internet. The same holds for information services that are subject to fixed design and development costs and fixed maintenance and updating costs; Google can update Google Calendar for 100 million users with similar fixed expenses as would be needed for only a fraction of such users.

In contrast to traditional media or cultural markets that have had to incur physical distribution costs, digital markets are largely able to avoid such costs. The fact that information services can be delivered to any geographic location with no or minimal cost is one reason for the abundance of such services. The capacity to reach a large scale at small cost changes the nature of business growth. While a traditional business often starts with local implementation followed by gradual expansion through investment as reputation and financial resources increase, many online businesses aim at rapid large-scale expansion. This rapid growth may reduce the length of the competition-for-the-market phase, as market winners can establish dominance and begin exercising their market power quickly. It took only five years for Facebook, the "move fast and

[4] *See, e.g.*, Joseph Farrell & Paul Klemperer, *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, *in* 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (Mark Armstrong & Robert Porter eds., 2007), https://www.sciencedirect.com/science/article/pii/S1573448X06030317; Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market*, (Harvard Business School Working Paper 18-036, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=284853.

[5] Increasing returns to scale occur when the average unit cost decreases when sales expand.

break things" company, to go from a million users in 2004, the year of its founding, to more than 350 million users in 2009, when it overtook MySpace for good.[6]

The implications for market structure are well known: increasing returns to scale lead companies to invest in fixed costs in order to have the best product to attract customers.[7] Then, with a larger customer base, the firm can enjoy lower average costs per consumer, allowing it to make an offer to consumers that is attractive in both quality and price. The increasing returns to scale create barriers to entry: New firms cannot offer the quality of the incumbent without the same large-scale operation to pay for the fixed costs. But the firm can only achieve a large scale if quality is high. Thus, a potential entrant, foreseeing that it will not be profitable at the smaller scale, will not enter the market to challenge the incumbent.

3) Economies of Scope

Platforms also have powerful economies of scope in the form of their relationships with users and brands. In digital markets specifically, scale offers an additional advantage. Firms can apply machine learning to extensive data sets to improve their products and expand their activities into new areas. Because machine learning yields better insights when it is trained on larger datasets, firms with access to large amounts of data can raise the quality of their services in ways that smaller firms cannot. This creates a form of dynamic economies of scale, allowing large firms with large amounts of data to raise product quality at lower costs than small firms. Firms may also be able to leverage the data, or the insights due to machine learning, that they receive from an existing service to enter into an adjacent market with a higher quality product, demonstrating a novel form of economies of scope. Combining mapping software in a platform that already offers email, for example, allows that platform to offer a higher quality restaurant recommendation product. Moreover, firms serving a larger customer base with a greater variety of products are able to generate more advertising revenue per consumer through more effective targeting.[8] The development of machine learning technologies and data analysis is a source of increasing returns to scale and scope that can contribute to digital market concentration.

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[6] *See* Chloe Albanesius, *More Americans Go to Facebook Than MySpace*, PC MAG. (June 16, 2009), https://www.pcmag.com/news/241432/more-americans-go-to-facebook-than-myspace; Ami Sedghi, *Facebook: 10 Years of Social Netoworking, in Numbers*, GUARDIAN (Feb. 4, 2014), https://www.theguardian.com/news/datablog/2014/feb/04/facebook-in-numbers-statistics. *See also* Steven Levy, *Mark Zuckerberg on Facebook's Future, From Virtual Reality to Anonymity*, WIRED (Apr. 30, 2014), https://www.wired.com/2014/04/zuckerberg-f8-interview (reporting Mark Zuckerberg noting that "[w]e've changed our internal motto from 'Move fast and break things' to 'Move fast with stable infrastructure'").

[7] *See generally* JOHN SUTTON, SUNK COSTS AND MARKET STRUCTURE (1991).

[8] Such economies of scope are leading to a rapid expansion of the capture and use of personal information by firms. For example, many large firms are starting to expand beyond internet platforms in order to collect more data from consumers. The rise of voice-assistant products (including Microsoft's Cortana, Apple's Siri, Google's Google Voice, and Amazon's Alexa) can enable firms to gather information from offline consumer behavior and then feed that information into online advertisement-targeting algorithms. One study estimates that major internet platforms, data brokers, credit card companies, and healthcare data companies derived nearly $76 billion in 2018 from selling personal consumer information directly or indirectly via targeted ads. Robert Shapiro & Siddhartha Aneja, *Who*

4) Network Effects

Most information services involve some form of positive network effects, in which consumer benefit grows as the number of users increases. The simplest network effects flow directly from interacting with other users, as in social networks or peer-to-peer services, such as eBay or Venmo, where the more users there are on the network, the richer the users' experience is likely to be. (In these examples the platforms choose not to be interoperable, so the network effects apply to a single firm, rather than an industry.) Multi-homing lessens network effects because a consumer can enjoy the size of both networks, rather than having to choose one. For example, a consumer that carries both Visa and American Express credit cards can shop at stores that accept either card, or both. Many other network effects are indirect, in that they are mediated by a "complement" to the network. A complement is a good or service that increases the value of another good or service to a consumer. For example, the ability to not only make calls, but also to play music on a handset increases the value of the handset to users. Complements today often come in the form of applications ("apps") or a specific type of content. The more complements a platform has, the more popular it is with users. Just as customers of a popular app store receive an indirect network effect when more and better developers are attracted to app stores with big customer bases, customers of a widely-used social media site benefit from the many games designed for that social media site, which in turn are driven by the large number of consumers. These network effects can also be seen in recommendation systems or driving directions that exploit larger datasets of users' purchasing behavior or travel paths to offer higher quality advice.

Markets with network effects are prone to concentration because consumers benefit from being on the same network as other users. No one wants to be on their own social media site. However, when network effects are exhausted relatively quickly (as can occur, for example, in messaging apps[9]) or when there is heterogeneity in preferences (e.g. teenagers prefer not to be on the same social network as their parents[10]), the market structure may be oligopolistic.

Owns Americans' Personal Information and What Is It Worth?, FUTURE MAJORITY (Mar. 8, 2019), https://assets.futuremajority.org/uploads/report-for-future-majority-on-the-value-of-people-s-personal-data-shapiro-aneja-march-8-2019.pdf.

[9] To send a message to someone, a user only needs that single person to be on a particular messaging app, rather than everyone they would want to send a message to. This explains why many messaging apps can live alongside one another—WhatsApp, Snapchat, SMS, and Facebook Messenger all have significant customer bases. *See Most Popular Mobile Messaging Apps Worldwide as of January 2019*, STATISTA (Jan. 2019), https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps.

[10] *See* Mark Sweney, *Is Facebook for Old People? Over-55s Flock in as the Young Leave*, GUARDIAN (Feb. 12, 2018), https://www.theguardian.com/technology/2018/feb/12/is-facebook-for-old-people-over-55s-flock-in-as-the-young-leave.

Some indirect network effects are multi-sided: A user of one type (e.g., a buyer) benefits from the participation of other types of users (e.g., sellers). For instance, in ecommerce platforms, which intermediate trade between sellers and buyers, a buyer does not directly benefit from the presence of other buyers but does benefit from the presence of more sellers—who are in turn attracted by the presence of the buyers. Multi-sided network externalities are prominent on the internet for two reasons. First, business models like ecommerce are plentiful. Second, and more importantly, a great deal of activity on the internet is financed by paid advertising on the relevant site. Advertising-financed services are platforms exploiting two-sided network effects between advertisers and consumers. Advertising can be more valuable when there are more consumers viewing a site, while consumers are attracted by content that may be of higher quality when financed by many advertisers competing for space.

On multi-sided platforms, one or more sides may be subsidized if their participation attracts paying customers on the other side. Thus, we may see a monetary price of zero in one part of a very lucrative business model. Shoppers on eBay can buy without paying fees because eBay understands that fees would drive them away, whereas their presence draws in sellers who can be charged fees. Users of Gmail pay a monetary price of zero but allow Google to read their email so that advertisers can market to them based on personal information. Google can then charge a high price for the ads. Payment platforms such as credit cards or PayPal similarly charge end consumers low or negative fees because a large group of consumers bring in retailers who pay the payment platform for access.

Network effects can lead to consumer-friendly competition at early stages. Economic theory and market observation indicate that during the phase when competitors are all trying to tip the market towards themselves, they compete intensely. This phase is characterized by vigorous competition between firms trying to build market shares and generate bandwagon effects. For example, Uber and Lyft have hotly contested the market for ride-sharing—and spent billions of dollars subsidizing riders' fares along the way.[11] One 2016 estimate suggested that payments from Uber customers covered only about 40% of the cost of their rides.[12] If network effects are

[11] *See* Shannon Bond & Nicole Bullock, *Uber IPO Prospectus Shows Ride-Hailing Revenues Stalled*, FIN. TIMES (Apr. 11, 2019), https://www.ft.com/content/c68d3662-5c76-11e9-939a-341f5ada9d40 (Uber "has lost $12bn from its operations in total since 2014"); *id.* ("'We will not shy away from making short-term financial sacrifices where we see clear long-term benefits,' wrote Dara Khosrowshahi, [Uber's] chief executive."); Megan McArdle, *Uber and Lyft Are Losing Money. At Some Point, We'll Pay for It.*, WASH. POST (Mar. 5, 2019), https://www.washingtonpost.com/opinions/uber-and-lyft-are-losing-money-at-some-point-well-pay-for-it/2019/03/05/addd607c-3f95-11e9-a0d3-1210e58a94cf_story.html (In 2018, Lyft "lost more than $900 million after expenses").

[12] *See* Izabella Kaminska, *The Taxi Unicorn's New Clothes*, FIN. TIMES (Dec. 1, 2016), https://ftalphaville.ft.com/2016/12/01/2180647/the-taxi-unicorns-new-clothes. Many of the paradigmatic firms of the dot.com bubble also followed this strategy of subsidizing for growth—often sending the firm to oblivion. *See* Greg Bensinger, *In Kozmo.com's Failure, Lessons for Same-Day Delivery*, WALL ST. J. (Dec. 2, 2012), https://blogs.wsj.com/digits/2012/12/03/in-kozmo-coms-failure-lessons-for-same-day-delivery.

strong, however, the market will tip in favor of one competitor, who then becomes the monopolist.

5) Low Marginal and Distribution Costs

Digital goods often have low to zero marginal costs of expansion to another user, as mentioned above. Distribution costs, one of the major expenses of expanding in a brick and mortar world, are largely also zero on the internet. Indeed, poor internet infrastructure in the United States and elsewhere may be the main distribution cost for many digital platforms.[13] Some digital platforms do have positive distribution or marginal costs such as a piece of hardware, ecommerce warehouses, or maintenance of scooters for example.

6) Global Reach

Lastly, many of the digital platforms we discuss in this report have a global reach. Those that are focused on licensed digital content, rather than user-generated content, must negotiate licensing and other legal issues in new jurisdictions. Reaching consumers in many languages is another cost of expanding globally, as is dealing with local transportation regulations. However, the total cost of expansion is generally lower than in traditional brick and mortar businesses.

ii. Barriers to Entry and Expansion

In this section, we explore the implications of the characteristics discussed above and the possible effects of the increased market power created by barriers to entry. Outlined below are some of the drivers that make market power more sustainable and disruption less likely in digital markets.

1) Cost and Benefit Barriers to Entry

As mentioned above, network effects and scale economies are two significant barriers to entry. The winner in these settings has a massive cost advantage from its scale of operations, and a massive benefit advantage from the scale of its data. An entrant cannot generally overcome these without either a similar installed base (network effects) or a similar scale (scale economies), both of which are difficult to obtain quickly and cost-effectively. It is possible for an entrant to arrive with scale and an installed base because it is a competing digital platform. Such entrants may create effective competition for an incumbent platform that benefits consumers.

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[13] *See, e.g.*, Drew FitzGerald, *Facebook Looks to Build Underwater Ring Around Africa*, WALL ST. J. (Apr. 7, 2019); Michael Sheetz, *Here's Why Amazon Is Trying to Reach Every Inch of the World With Satellites Providing Internet*, CNBC (Apr. 7, 2019), https://www.cnbc.com/2019/04/05/jeff-bezos-amazon-internet-satellites-4-billion-new-customers.html; Press Release, Think Big With a Gig: Our Experimental Fiber Network, GOOGLE (Feb. 10, 2010), https://googleblog.blogspot.com/2011/03/ultra-high-speed-broadband-is-coming-to.html.

Barriers to equivalent data resources, a side effect of not having the history, scale, or scope of the incumbent, can inhibit entry, expansion, and innovation.[14] The same effects that drive the quality of digital services higher as more users join—a positive feedback loop—makes the strong stronger and the weak weaker.[15] Data feeds the development of algorithmic and AI training processes that enables more profitable exploitation of consumer attention through advertising. A data advantage over rivals can enable a company to achieve a virtuous circle of critical economies of scale leading to network effects, and a competitive balance in its favor, leading to the gathering of yet more data. A new entrant is likely to experience this in reverse—a vicious cycle—as it fails to surmount the entrance barrier.

Choosing a business model that is scalable, and has strong economies of scale, is of paramount importance to creating entry barriers. A social media platform that chose to monitor harmful content might need to hire many workers to keep ahead of users that game the algorithms. Hiring workers is costly, slows down the ability to grow, and makes the platform less profitable both in the short run and in the long run by limiting economies of scale. A platform aiming to tip the market in its favor quickly will not choose this business model if it can gain consumers at lower cost.

Because cost and benefit barriers are so powerful, digital platforms have powerful incentives to pull slightly ahead of any rival. Due to the positive feedback loop described above, a small advantage can turn into a large one. This powerful incentive to disadvantage a competitor raises the possibility that some competitors will choose to violate the antitrust laws in order to stay ahead. In general, to maintain or improve their competitive advantage, incumbents have strong incentives to limit openness or interoperability and to be averse to data-portability policies. For example, in a recent case, the upstart ethernet switch firm Arista alleged that the incumbent Cisco encouraged openness and interoperability while it was dominant, but once a rival mounted a serious challenge, claimed copyright protection on the previously open user interface, thus cutting off the entrant from locked-in users.[16]

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[14] The key themes below are discussed in greater detail in ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM DRIVEN ECONOMY (2016). *See also* Ariel Ezrachi & Maurice E. Stucke, *Digitalisation and Its Impact on Innovation: Report Prepared for the European Commission* (DG Research & Innovation Working Paper, July 2018) (on file with authors).

[15] *See Data-Driven Innovation for Growth and Well-Being: Interim Synthesis Report*, OECD (Oct. 2014), http://www.oecd.org/sti/inno/data-driven-innovation-interim-synthesis.pdf, at 29 (citing CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY (1999)).

[16] *See* Jan Wolfe, *Arista to Pay $400 Million to Cisco to Resolve Court Fight*, REUTERS (Aug. 6, 2018), https://www.reuters.com/article/us-cisco-arista-settlement/arista-to-pay-400-million-to-cisco-to-resolve-court-fight-idUSKBN1KR1PL; Don Clark, *Arista Networks Files Antitrust Claims Against Cisco*, WALL ST. J. (Jan. 25, 2016), https://www.wsj.com/articles/arista-files-antitrust-charges-against-cisco-1453754642.

2) Barriers to Entry Created by Consumer Behavior

Market power is, ironically, generated by the very consumers who are harmed by it. Consumers do not replace the default apps on their phones, do not scroll down to see more results, agree to settings chosen by the service, and take other actions that may look like poor decisions if those consumers like to choose among options and experience competition. Often the actions needed to generate choice for the consumer seem trivial, such as a download and installation, opening another app, or a few clicks. Consumers make these "mistakes" because of inherent behavioral biases such as discounting the future too much and being too optimistic. The situation is worse when the information needed to counteract bias is hard to obtain. For example, consumers tend not to run the same search on a different search engine to compare the results, so they may never find out the relative quality of the default search engine they use.

Research into behavioral biases and their consequences is several decades old and has already produced ample and convincing evidence of the nature and existence of these biases on the part of consumers. In 2002, Daniel Kahneman received the Nobel Prize in Economic Sciences for his pioneering work on behavioral economics.[17] Fifteen years later, the Nobel Prize was awarded to Richard Thaler in recognition of the progress of research in this domain and of the huge amount of knowledge that has been produced.[18]

In his Nobel lecture, Thaler pointed to the key insight from Kahneman and Amos Tversky: people exhibit "bounded rationality," meaning that in a complex world they use consistent rules of thumb to make predictions and decisions. Thaler called on economists to use "psychological realism" to improve their understanding of human decision making.[19] That psychological realism combined with the economics toolkit produced the field of behavioral economics.

Behavioral economics has had a profound influence in the conduct of economic policy that will become even more prevalent as more knowledge is digested and applied.[20] It is of great relevance for our understanding of internet economics because, as information flows improve and some physical barriers are removed, human factors are more likely to provide the frictions that have increasing effects on market outcomes. These frictions in decision-making, and the fact that consumers can be manipulated to take advantage of their biases, render consumers sticky—

[17] *Daniel Kahneman – Facts*, NOBEL PRIZE (2019), https://www.nobelprize.org/prizes/economic-sciences/2002/kahneman/facts.
[18] *Richard Thaler – Facts*, NOBEL PRIZE (2019), https://www.nobelprize.org/prizes/economic-sciences/2017/thaler/facts.
[19] Richard H. Thaler, *From Cashews to Nudges: The Evolution of Behavioral Economics*, 108 AMER. ECON. REV. 1265, 1266-1267 (2018).
[20] *See, e.g.*, Cass R. Sunstein, *The Storrs Lectures: Behavioral Economics and Paternalism*, 122 YALE L.J. 1826 (2013); Richard H. Thaler & Cass Sunstein, *Libertarian Paternalism*, 93 AMER. ECON. REV. PAPERS & PROCEEDINGS 175 (2003).

that is, people are slower to move to a superior product than they would be absent the manipulation. This in turn makes demand less contestable and less favorable for an entrant.

One lesson from behavioral economics is that small differences (nudges) in how choices are presented can have large effects on what choices people make.[21] A nudge to use a particular browser as a default, for example, can entrench a platform's browser. Another lesson is that consumers overweight their immediate benefit relative to their welfare in the future. A consumer searching for a solution to a particular problem will be inclined to click or use the first result or recommendation, rather than searching on another page or scrolling down to examine many listings. The tendency to choose in this manner entrenches the market power of the platform that can control the display of content. Similarly, consumers' preference for instant gratification may lead them to sign away privacy rights they otherwise say they value.[22] This allows incumbent platforms to gather data from these consumers that further entrenches their market position. In general, the findings from behavioral economics demonstrate an under-recognized market power held by incumbent digital platforms.

A second way consumers create entrenched market power is by single-homing. A multi-homing user, for example, checks the price of a ride on both Uber and Lyft each time she needs a car. A user that single-homes bestows market power on the platform she uses exclusively because advertisers and other content providers *can only* get the user's attention by going through that platform. While users sometimes have the ability to employ multiple services, there is usually a convenience cost to doing so. Making multi-homing easier will be a key element in encouraging competition.

3) Barriers to Entry Created by an Incumbent Rival

Because platform market power is higher when users single-home, platforms try to get users to do so. Sometimes this results in higher quality services: A mapping service can alert a user that it will take 45 minutes to get to the airport when it sees a flight entry on the user's calendar. If the user buys those services from different platforms, she does not get the alert and experiences lower quality. However, it is often possible for the data from one service to be read by a rival, so platforms may also encourage single-homing by preventing interoperability.

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[21] *See* Thaler, *supra* note 19, at 1283.

[22] *See* Alessandro Acquisiti et al., *The Economics of Privacy*, 54 J. ECON. LIT. 442 (2016); Alessandro Acquisti et al., *Privacy and Human Behavior in the Age of Information*, 347 SCIENCE MAG. 509, 510 (2015); Alessandro Acquisiti, *Privacy in Electronic Commerce and the Economics of Immediate Gratification* (Fifth ACM Conference on Electronic Commerce, 2004), https://www.cs.drexel.edu/~greenie/privacy/privacy-gratification.pdf; *see also Americans' Attitudes About Privacy, Security, and Surveillance*, PEW RESEARCH CTR. (May 20, 2015), https://www.pewresearch.org/wp-content/uploads/sites/9/2015/05/Privacy-and-Security-Attitudes-5.19.15_FINAL.pdf, at 17 (reporting that 74% of survey respondents believe it is "very important" to be "in control of who can get info about you").

By limiting a rival's access to data, dominant firms can make exclusive reliance on their service either inevitable or the clearly best decision. Sharing data or allowing access to certain pieces of information is often feasible at a technical level, but it is not normally in the interest of the platform that could lose its users. For example, Google has been able to limit its users from visiting (multi-homing on) competitors such as Yelp by displaying their information in the search window directly.[23] To some extent, the limited switchability to the rival is driven by asymmetric information in two places. First, consumers are generally not aware of, or attentive to, the costs of failing to switch; for example, the quality of the content and the extent to which the platform steers consumers to inferior content or product choices may be hard to see. Second, there is often no way to compensate the consumer directly with lower prices—as an entrant such as Warby Parker can do by selling eyeglasses directly to consumers at a lower price—because the money price of services from a platform is often fixed at zero for both the incumbent and the rival.[24]

For all of these reasons, digital platform market power can become entrenched. The United Kingdom, the European Commission, Australia, and Germany have all published reports concluding that digital platforms' market power has indeed become entrenched.[25] Surmounting the existing barriers to entry created by consumer behavior, cost structure, public policy, and any past anticompetitive conduct is extremely difficult. This fact has direct effects on consumers: *without entry or the credible threat of entry, digital platforms need not work hard to serve consumers because they do not risk losing their consumers to a rival.*

b. How Big Data Affects Digital Products and the Sale of Advertisements

i. What Makes Data Big? And Does Big Data Harm Consumers?

1) Targeted Advertising

Technology firms claim that they perform machine learning on big data, and that doing so gives them both a competitive edge over rivals and allows them to better tailor their services to their consumers. How might this work in practice? Consider a search engine with information about a

[23] *See* Charles Duhigg, *The Case Against Google*, N.Y. TIMES MAG. (Feb. 20, 2018). https://www.nytimes.com/2018/02/20/magazine/the-case-against-google.html

[24] *See, e.g.*, Competition Decision, Case COMP/AT.39740—*Google Search* (June 27, 2017). http://ec.europa.eu/competition/antitrust/cases/dec_docs/39740/39740_14996_3.pdf. Indeed, as the U.K. Competition and Markets Authority has found, even in industries where prices exist but there are substantial search frictions, consumers do not make choices that would give them substantial savings. *See* note 31, *infra*, and associated text.

[25] *See* U.K. COMPETITION REPORT, *supra* note 1, at 75; EC COMPETITION REPORT, *supra* note 1, at 112; AUSTRALIAN COMPETITION REPORT, *supra* note 1, at 35; GERMAN COMPETITION REPORT SUMMARY, *supra* note 1, at 2.

given user's search history, including the fact that this user recently searched for a specific pair of Nike running shoes. The ad service can more effectively spend advertisers' budgets by showing the user ads focused on running-related products (or similar shoes to those the user searched for). Advertisers will get a greater return on investment because more of their ads will be shown to users who have demonstrated interest in running products—possibly very similar running products to the ones being advertised. Moreover, users may actually prefer seeing ads for other running products compared to more generic ads. The more personalized matching of advertisement to potential customer would appear to help both the producer and consumer of the advertisement.

This simplified example of personalized advertisement uses very little information about a particular user (only that she had a particular search query) and little to nothing about other users or another augmenting dataset, with the exception of a database of running-related items. Indeed, this level of personalization could be similarly achieved in many low-tech spaces (e.g., running products advertised in running magazines, whose readers have expressed interest in running simply by reading the magazine). What is different about personalized advertisement if the ad server has much more data at its disposal?

Box 1
Platform vs. Brick-and-Mortar Advertising and Targeting

Traditional brick-and-mortar stores and online platforms differ greatly in their advertising and personalization capabilities.

At the highest level, local grocers tend not to force shoppers to identify themselves when they shop, rarely verify identification if used, and rarely have the ability to merge purchase history with other detailed information from other aspects of their customers' lives to design targeted advertising. Online retailers, on the other hand, almost always require account creation for purchasing, verify this information for each transaction, and have direct or easy access to detailed non-shopping information about their customers.

Local grocery stores are capable of some data collection and personalization. For example, they normally know that a majority of their customers live relatively close to the grocery store, so they can rely on their knowledge about the general demographics of the neighborhood population. The stores may also ask that consumers use a loyalty card to receive discounts, which then allows them to track per-customer purchasing patterns, offer particular customers with certain purchasing patterns particular coupons or free products, and see the result of such offers on a user's purchase history. Nonetheless, the effectiveness of these methods is limited in comparison to digital shops. Consumers normally retain the option to buy full-priced groceries without tracking (pay in cash), or to intermittently switch their cards with other people they know (for example). More importantly, even if grocers used fingerprints or other unique identifiers to remove the possibility of anonymity, the data they would track would still be entirely comprised of grocery purchase history for its customers.

Platform vs. Brick-and-Mortar Advertising and Targeting (Cont.)

This limitation does not apply to digital platforms. Online groceries require a customer to make an account prior to allowing any purchase. Thus, all purchases belong to a particular account, which also contains identifying information about a customer including their search history, billing, shipping, and email addresses. This ensures that (potentially) all search history and all purchases sent to a particular address (or paid for with a certain mailing address) can be collated and analyzed by the seller and used to design offers or other services for a customer. If this seller has a broader set of services than just grocery retail (for example, the seller is Google or Amazon), the information they can collate together with this purchase history might include email transcripts, calendar information, or search and purchase history of non-grocery products, amongst others. All of this information can allow for much more aggressive marketing to a particular consumer, based on many aspects of their lives beyond their historical grocery shopping habits. A grocery store can take advantage of hungry shoppers by placing a representative selection of junk food in the checkout line. A digital platform, by contrast, can design an individualized tempting "checkout offer" based on that particular consumer's purchase history, current behavior, time of day, and the emotional content of recent communications.

2) Dimensions Along Which Data Can Be Big

In order to discuss the use-cases of large-scale datasets in online personalized advertising, it helps to define in what sense a dataset can be big. Big data commonly refers to two very different properties of a dataset: either that the dataset has many people's data in it, or that the dataset has a great deal of information about each person in the dataset. For simplicity we refer to the former as "large population datasets" and the latter as "high dimensional data." These distinct ways in which a dataset can be big enable very different uses.

Large population datasets allow the possessor to infer both unknown attributes of current users, and statistical facts about individuals not currently in the dataset. If the dataset contains many instances of users' queries along with their locations at the time they made those queries, an advertiser could use future users' locations to help predict what those users might search for or be interested in seeing advertisements about. Numerous statistical techniques can be used to show that, for a large population dataset, simple statistics that hold true on the dataset should also hold true for fresh users, assuming they come from a similar pool as those in the dataset. For example, if 30% of queries in the database originating from Cape Cod searched for lobster rolls, there is a 30% chance that a query made by a future user based in Cape Cod will be for lobster rolls, assuming the user is visiting in a similar time frame that the dataset was gathered in, arrived at the search engine in a manner similar to other dataset users, and the number of queries in the dataset originating in Cape Code is sufficiently large. If the dataset has many queries but

fairly few from Cape Cod, statistical techniques will provide lower confidence in their ability to predict future queries emanating from Cape Cod.

High-dimensional datasets allow for different uses than large-population datasets do. Suppose a dataset contains only a few users, but each user's entry contains their entire email history. A quick read of a user's recent emails could give an advertiser a very clear window into what *that* user might be looking to purchase. The richness of a given user's data entry can describe in great detail many facts about her, including her future travel itineraries, plans for large purchases, information about her career and social networks, and so forth. Looking only at that user's information, a deft advertiser could likely select any number of products this user would be much more likely than an average person to find interesting. Hotels in Cape Cod would much prefer to advertise to a user if her recent emails describe travel plans to Cape Cod. However, if only three or four users belong to the dataset, an advertiser can learn very little about new users from studying the rich but poorly-populated dataset; again, statistical techniques have much lower confidence when the datasets they operate on are small.

The most useful datasets, from the perspective of an advertiser or other service provider, are large in both senses: they contain rich information about a huge number of people. This is even more true when the rich information contains different types of data, for example, email, location, and search queries. A dataset of this type allows the provider to both learn high-level population statistics (for which it needs a large population in its dataset) and to carefully tailor its ads to each individual in its dataset (because it has very rich information about users in the dataset). Even more interestingly, the complexity of population-level statements one can make from such a dataset increases. This occurs both because each user's data has more dimensions, so there are more relevant hypotheses to explore, and because as the number of users in the dataset grows, so does the statistical significance of any particular statement that holds for the dataset.

3) Accuracy (and Utility) May Display Increasing Returns

Entrants could have an opportunity if marginal returns were to fall as providers' datasets grow, because the incumbent's marginal cost of acquiring new data would eventually exceed the marginal value. But a simple model shows this may not be the case. Given a fixed dataset of a particular number n of individuals with a certain number k of features (also referred to as attributes), the dataset owner does not face decreasing marginal returns with respect to either n or k.[26]

Why might datasets show increasing marginal returns in either the number of features or the number of rows already present in the dataset? For a formal treatment of this question, please see the discussion below which works out in detail a particular example in the advertising domain

[26] This holds even in "natural" settings, where each member of the dataset is drawn identically from a normal distribution.

Informally, imagine you are trying to sell a service to people who live in Manhattan and are planning a wedding. Knowing either that a person lives in Manhattan, or that they are planning a wedding, may make almost no difference in determining their willingness to use the service because both are very low-probability events, while having both pieces of information together allows the Manhattan wedding planner to easily pinpoint interested consumers. More generally, as a firm accumulates more information about more people, its marginal returns to new data need not fall.

This last point helps us understand why data has increasing marginal returns. Even if the dataset is large enough that it allows a company to make accurate inferences about a given population, the company will always benefit from having specific information about a given individual, allowing it to become more and more confident about what the consumer wants, and to better tailor its services and ads.

Companies therefore have no incentives to stop looking for and accumulating new pieces of data, entrenching incumbents with large datasets vis-à-vis entrants with smaller databases. Consumers on the internet leave numerous traces of their activities across a range of applications (for example, their location, what they buy, who they talk to, and what they say), and technology allows platforms to identify and analyze these traces. The amount of data on individual behavior that can be collected, merged, analyzed, and stored is rising, and the combination of different dimensions of data generates valuable information about individuals' tastes and behaviors. As individuals rely more and more on a platform to organize their lives through their online social, cultural, or economic activity, their data become more informative about their future choices and firms are willing to pay to influence those choices. Furthermore, the emergence of the Internet of Things means that platforms will have access to yet more data generated by home appliances, cars, and other devices. Indeed, consumers' devices can now track eye movement, mouse movement, body movement, and body position. In parallel with the evolution of the internet that made tracking of billions of individuals possible, advances in data mining and artificial intelligence have enabled firms to learn more from data than was conceivable a few decades ago.[27]

Many digital markets have tipped and therefore there are only a few entrenched platforms able to gather this breadth of data. As Alessandro Acquisti and colleagues concluded in a recent study, "a few 'gatekeeper' firms [will be left] in a position to control the tracking and linking of . . . behaviors across platforms, online services, and sites."[28] When data exhibit increasing returns to

[27] Jaron Lanier, a creator of virtual reality, has warned of the problems associated with a "surveillance economy" in which users of digital tools and platforms would be enticed to give up personal data in exchange for "free" products and access. *See* JARON LANIER, WHO OWNS THE FUTURE? (2013). The data, Lanier argues, could then be monetized by the owners of the platforms and applications, largely through the sale of the data to advertisers and others finding value in the users' personal characteristics and proclivities.
[28] Acquisti et al., *supra* note 22, at 444.

dimensionality and size, platforms that can track many users across those dimensions will have economies of scale and scope; they will be able to sell more valuable advertising.

Nonetheless, this targeting can also raise the quality of services provided by platforms. When they can identify individual tastes at fine levels and personalize their services to this taste, they often improve people's lives. Search engines can better answer queries or find a nearby destination, cultural and news websites are able to suggest well-suited content, and ecommerce websites can improve matching between buyers and sellers. These are all part of the consumer benefit described previously

4) Types of Data

The definition of what constitutes a consumer's data can become complicated. Suppose the consumer's data and those of similar consumers allowed the service to infer characteristics about the consumer (for example, that she has a tattoo) without any action or communication on the topic by the consumer. Is this piece of information part of the "consumer's" data, or is it the intellectual property of the algorithm owner?

The Vestager Report and the Furman Report categorize data as volunteered , observed, or inferred. Volunteered data is intentionally provided by the user to the service -- for example, when a user provides their favorite TV shows to a service in order to receive recommendations. Observed data, such as the history of shows that the consumer actually watches, are automatically gathered by a service. Some observed data may not be intentionally provided by users if they do not understand the privacy protections in the service -- for example, location tracking of a person using a video app. Finally, the service can process volunteered and observed data to *infer* additional information about the user or a group of users.[29] We include (but do not always distinguish among) all these types of data in this report's discussions.

[29] *See* EC COMPETITION REPORT, *supra* note 1, at 25. Famously, Target claims to have been able to predict a customer's pregnancy before she knew about it. *See* Charles Duhigg, *How Companies Learn Your Secrets*, N.Y. TIMES (Feb. 16, 2012), https://www.nytimes.com/2012/02/19/magazine/shopping-habits.html.

Box II
Why Data Has Increasing Marginal Returns

For a particular dataset, suppose the first feature is the one the owner wants to predict for future users. For example, this feature might refer to whether or not a user will book a particular hotel if shown an advertisement for it. If k=2, and the second feature represents the home zip code of a user, there might be some limited ability to predict interest in a hotel based on this zip code being sufficiently far from the hotel. If k=3, consider the case where the third feature refers to the annual household income of each person.

With both zip code *and* income available, we can express much more complex prediction rules for interest in hotel X. For example, we could predict that a user will book the hotel if

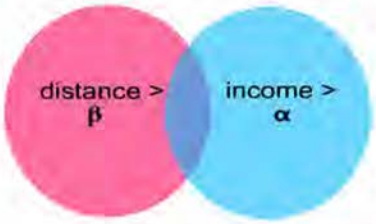
$$\alpha \cdot distance + \beta \cdot income \geq \gamma,$$

for some $\alpha, \beta, \gamma \geq 0$. If the *true* relationship between these three features is in fact linear, then the utility of gathering the income variable will be marginally decreasing in the set of other (linearly relevant) features.

However, it might be that the best prediction of whether a hotel will be booked is a nonlinear function of distance and income; perhaps a person will book exactly when they live far enough away *and* make at least a certain amount of money:

$$distance \geq \alpha \text{ and } income \geq \beta$$

where users with distance > α and income > β make up 10% of the distribution. Suppose 40% of the users have distance > α, and 40% of the users have income > β.



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Why Data Has Increasing Marginal Returns (Cont.)

Knowing a user's zip code (and corresponding distance) gives some limited ability to predict when both the income and distance are sufficiently large, but knowing both the zip code and income will allow them to perfectly predict the 10% of the population that might have interest in staying at the hotel. For this reason, the utility of data owners need not be marginally decreasing in the set of features they have.

To be explicit, fix an advertising firm for the hotel. If the advertising firm purchases the ability to see each potential advertisee's zip code, then showing the advertisement to customers as a function of their distance is now possible. For example, the advertiser could only show the advertisement to customers whose distance is more than β, increasing the probability that the ad is shown to an interested party from 10% to 25%. If the firm then acquired the ability to estimate each advertisee's income, it could use both features together and only show the advertisement to customers with both income $> \alpha$ and distance $> \beta$.

This would raise the probability that a targeted advertisee would be interested in the ad from 25% to 100%. The two features are otherwise identical, and so it would also be the case that first acquiring income and then distance would raise the probability of an advertisement reaching an interested customer from 10% to 25% to 100% if one started with no features, then added income, then distance. Therefore, the utility increase which comes from adding distance first is .15 * (value of showing the ad to an interested customer), while the utility increase from adding distance after first acquiring income is .75 * (value of showing the ad to an interested customer). That is, the distance feature is more valuable *after* first learning about income (and vice versa). This shows that the value of features may not be marginally decreasing in the set of features accrued thus far.

One can also use the same sort of relationship to argue that the dataset owner's utility need not be marginally decreasing in n, the number of people in the dataset. Again, suppose one can only predict interest in the hotel with the conjunction of zip code and income information, but that this relationship is not a priori known to the dataset owner, and they are instead trying to *learn* how to predict hotel interest based on a dataset they have available to them. Using statistical techniques, it won't be possible to learn rules of this form (if x and y then z) to a high degree of accuracy unless the dataset has sufficiently large n. The utility of adding additional people to the dataset can *increase* as the dataset grows, depending on the owner's utility for accuracy of the learned model.

ii. Data Control and Ownership

1) Status Quo

In the United States at present, a consumer has no property or control rights over their data. This stands in contrast to Europe, where the GDPR sets a standard for what a digital business can do with a consumer's data.

In the U.K., regulators have sought to give consumers *useful* control over their financial data. After a lengthy investigation showed that consumers rarely switch banks despite large gains to doing so, regulators sought to use Open Banking to give people the ability to seamlessly move between banks.[30] The Open Banking Initiative allows consumers to obtain, see, and transmit their banking activity in a standardized and secure fashion to regulated and approved third-party firms.[31] This is an example of data portability. Theory suggests that consumers will use that power to move their business to banks that lower prices and improve services. If Open Banking causes more competitive outcomes, it may provide a strong model for regulated portability and interoperability in other markets.[32] The Vestager Report defines protocol interoperability and data interoperability as stronger than data portability because they allow continuing communication between two services. It defines full protocol interoperability as a complete linking of the two services in a way that reduces network effects. We will return to these concepts below.

Data intermediaries collect consumers' information that they then sell to third parties. These intermediaries may be large websites obtaining the information through their service to consumers, or data brokers. Data have specific features that make this market unusual. For example, data are "non-rivalrous" meaning a broker can sell the same dataset to many buyers and still retain it, unlike, for example, the sale of apples. Once you've sold an apple, you're out an apple; once you've sold a given piece of information to one buyer, you can sell it again to another buyer. A key feature of data in this context is that data may be either directly shared with the buyer, or withheld (to prevent the buyer from achieving its own economies of scale and scope) but embedded into a service the buyer wants, such as targeting advertising.[33]

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[30] *See* Alasdair Smith et al., RETAIL BANKING MARKET INVESTIGATION: FINAL REPORT, U.K. COMPETITION & MARKETS AUTHORITY (Aug. 2016), https://assets.publishing.service.gov.uk/media/57ac9667e5274a0f6c00007a/retail-banking-market-investigation-full-final-report.pdf, at xiii-xiv.

[31] *See* U.K. COMPETITION & MARKETS AUTHORITY, THE RETAIL BANKING MARKET INVESTIGATION ORDER 2017 (2017), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/600842/retail-banking-market-investigation-order-2017.pdf; *see also* OPEN BANKING LTD., OPEN BANKING: GUIDELINES FOR PARTICIPANTS (2018), https://www.openbanking.org.uk/wp-content/uploads/Guidelines-for-Open-Data-Participants.pdf; Rowland Manthorpe, *What is Open Banking and PSD2? WIRED Explains*, WIRED (Apr. 17, 2018), https://www.wired.co.uk/article/open-banking-cma-psd2-explained. Third party firms that customers can elect to give data access are regulated and approved by the Financial Conduct Authority. *See* Press Release, U.K. Fin. Conduct Auth., FCA Finalises Revised Payment Services Directive (PSD2) Requirements (Sept. 9, 2017), https://www.fca.org.uk/news/press-releases/fca-finalises-revised-psd2-requirements.

[32] There are some signs that Open Banking has seen early success. *See* U.K. COMPETITION REPORT, *supra* note 1, at 70.

[33] *See* Dirk Bergemann & Alessandro Bonatti, *The Wild West of Information Markets: What We Need to Know Before Law and Order Can Rule*, VOX (Oct. 11, 2018), https://voxeu.org/article/wild-west-information-markets; Dirk Bergemann & Alessandro Bonatti, *Markets for information: An Introduction*, (Cowles Foundation Discussion Paper No. 2142, Aug. 29, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3240310.

2) Externalities

What can a person do with ownership over her data? The previous section describes two ways in which data might be used: First, it might be used to tailor services to a given person; second, it might be used to learn patterns that hold on average for the population from which the dataset was drawn. The former does not necessarily transfer any knowledge about one customer to the treatment of another, while the latter aims to learn about some fraction of a dataset and use that information to affect interactions with future customers. Note that this use of data creates externalities between consumers. Purchase or travel patterns by one person are used to create recommendations or suggestions for similar people, where "similar" is determined by machine learning. For this reason, the value of an individual person's data is more than the value of using it to market to them. A customer whose data predicts the behavior of many other consumers is very valuable to a platform.

3) Deletions

One might simplistically think that "owning" one's own data gives a person the ability or right to delete it. The ease with which a customer's data can truly be deleted depends on the way the firm has created and is using that data. If a user's own data is used only to personalize her experience, deleting her data will mean that the dataset—and the service's subsequent behavior—has no trace of the customer ever belonging to the dataset. If, however, the service used the customer's data to inform population-wide behavior (by analyzing the dataset including this customer and storing the results of those analyses), merely deleting the customer's data from the dataset does not truly erase her presence—her data will still have a lasting effect on the future behavior of the service.

For example, suppose the service scans the dataset for one representative user from each zip code and remembers the purchasing history of each representative user. Even if the service removes the initial entry corresponding to a particular user in the original dataset, if the service still uses this set of representative users' purchasing histories, some of the user's data can still remain in the system. While this example may seem contrived, many machine learning methods do some amount of memorization of some subset of their training data.[34]

Beyond memorization, there are other, more subtle ways in which a user's data can affect the long-term behavior of a system and what information the system holds on to. The natural tool to restrict how much a system's information is affected by one user's data is to impose *differential privacy*. Loosely speaking, differential privacy restricts the statistics created from the dataset to not reveal if any particular person or observation is in the dataset.

[34] For example, support vector machines are explicitly recorded as a small number of datapoints on which the model was learned.

4) Transparency, Choice, and Fraud

According to the Federal Trade Commission, the market for data suffers from a lack of transparency.[35] Most consumers have no idea how much information is being collected about them, sold, and used to make a profit.[36] One way in which digital platforms exploit their market power is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing. The terminology in these contracts is legal and the documents are often lengthy; the consequence of the different clauses is difficult to understand and foresee. Moreover, the user of a device or platform makes a choice to sink investments (posts, calendars, media, and so on) in a particular platform at a moment in time when a particular user agreement is in force. After the device or platform updates its terms of service, a user may be locked in. Having bought a phone, they won't immediately want to switch; having built a network of friends, they often won't want to leave. Thus, the user does not have the same set of choices as she did the first time she hit "agree," and some agencies have argued this is no longer a free choice.[37] Lastly, a digital platform may describe its data-use policy in its terms of service and then deviate from that, rendering the initial statement fraudulent.[38]

Box III
Digital Identities

Perhaps the next major shift in digital competition will be the quest to control the identification market. Once we create an account with any digital platform, we create a digital identity which incorporates select data on age, sex, address, email address, preferences, and, frequently, much more. These digital identities help companies identify and tag users to the data they generate, be it transactional, social, simple web navigation or even meta data. Digital identities work like access and tracking mechanisms, allowing a user to surpass a wall in exchange for enabling the company to link the data to a given dataset (e.g., using a Facebook login to access a website).

Identity data and control is highly valuable and platforms can monetize it in many ways. They can use it to personalize services and charge subscription fees, provide advertising or market intelligence, or as a way to increase bottleneck power and charge companies for user access. The more privacy protection technologies grow and limit widespread data collection online, the more being the single identification point for users will grow in importance and value.

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[35] FED. TRADE COMM'N, DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY: A REPORT OF THE FEDERAL TRADE COMMISSION (2014), https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

[36] *See id.* at 42.

[37] *See* Press Release, Bundeskartellamt, Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources (Feb. 7, 2019), https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/07_02_2019_Facebook.html (determining that Facebook's take-it-or-leave-it under agreements constitute "abuse of market power").

[38] *See, e.g.*, Tony Romm & Elizabeth Dwoskin, *U.S. Regulators Have Met to Discuss Imposing a Record-Setting Fine Against Facebook for Privacy Violations*, WASH. POST (Jan. 18, 2019), https://www.washingtonpost.com/technology/2019/01/18/us-regulators-have-met-discuss-imposing-record-setting-fine-against-facebook-some-its-privacy-violations.

iii. Digital Platforms are Characterized by Free Services

"Free" is not a special zone where economics or antitrust do not apply.[39] A free good is one where the seller has chosen to set a monetary price of zero and may set other, non-monetary, conditions or duties. Zero is a number, just like 10 is a number. If a competitive price is $10 while the realized price is $15, there is a $5 markup above the competitive price. This is the same harm the consumer bears when the competitive price is -$5 (at this price the digital platform is actually paying the consumer for her data and information in addition to providing her with services) and the realized price is $0.

Barter is a common way in which consumers pay for digital services. They barter their privacy and information about what restaurants they would like to eat in and what goods they would like to buy in exchange for digital services. The platform then sells targeted advertising, which is made valuable by the bartered information. But, in principle, that information has a market price. It is not easy to see if the value of any one consumer's information is exactly equal to the value of the services she receives from the platform. However, many digital platforms are enormously profitable, and have been for many years, which suggests that in aggregate we do know the answer: the information is more valuable than the cost of the services. The economics literature has modeled this setting and is able to define a data markup.[40]

The current inability to use both positive and negative prices for digital goods means that the policy discussion cannot focus on dollars alone as the unit of cost. Rather, digital platforms should be analyzed using both price and quality. "Quality-adjusted price" is a metric often used by economists in this situation. If a platform's price is fixed at zero and the quality of the service improves, then its quality-adjusted price has fallen. Conversely, if a platform's price remains zero but its quality falls, its quality-adjusted price has risen. When the price is fixed at zero, it is possible to track quality-adjusted price over time: the movement in quality accurately reflects quality-adjusted price.[41]

Online platforms offer many services for zero monetary price while they try to raise participation in order to generate advertising revenue. Free services are prevalent on the internet in part

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[39] See, for example, the current head of the U.S. Department of Justice's Antitrust Division describing the challenge faced by his division of defining markets when goods are free. Makan Delrahim, U.S. Assistant Att'y General, "I'm Free": Platforms and Antitrust Enforcement in the Zero-Price Economy, Address at Silicon Flatirons Annual Technology Policy Conference at The University of Colorado Law School (Feb. 11, 2019), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-silicon-flatirons (arguing, without regard for quality effects, that traditional antitrust market definition cannot work because "[w]e cannot look at the effects of a five percent increase in price because five percent of zero is still zero"). *See also id.* (arguing that "[c]hoosing variables for measuring market shares also can be more complicated where shares of revenue is not an option").

[40] *See* Dirk Bergemann et al., *The Design and Price of Information*, 108 AMER. ECON. REV. 1 (2018).

[41] The European Commission has noted the importance of assessing product quality in zero-price settings. *See* Samson Y Esayas, *Competition in (Data) Privacy: 'Zero'-Price Markets, Market Power, and the Role of Competition Law*, 8 INT. DATA PRIVACY L. 181 (2018).

because internet firms can harness multi-sided network externalities. While the low price can be a blessing for consumers, it has drawbacks for competition and market structure in a world where institutions have not arisen to manage negative prices. Because there is currently no convenient way to pay consumers with money, platforms are able to mark up the competitive price all the way to zero. This constraint can effectively eliminate price competition, shifting the competitive process to quality and the ability of each competitor to generate network externalities. Depending on the context this may favor or impede entry of new products. For example, entry will be encouraged when a price of zero leads to supra-competitive profits, and impeded when a zero price prevents entrants from building a customer base through low price. Moreover, unlike traditional markets where several quality layers may coexist at different price levels (provided that some consumers favor lower quality at low price), markets where goods are free will be dominated by the best quality firm and others may compete only in so far as they can differentiate their offers and target different customers. This strengthens the firm's incentive to increase quality through increasing fixed costs in order to attract customers (known as the Sutton sunk cost effect) and further pushes the market toward a concentrated market structure.[42]

It is a puzzle that, to date, no entrepreneur or business has found a way to pay consumers for their data in money. For example, a consumer's wireless carrier could aggregate micropayments across all manner of digital destinations and apply the credit to her bill each month. It may be that adverse selection, transaction costs, and coordination difficulties create too large a barrier for today's entrepreneurs, though technical solutions like a verifiable digital identity, mentioned above, would combat adverse selection.[43] Furthermore, a carrier that could bargain effectively with platforms on behalf of its subscribers for high payments would likely gain subscribers. Notice that an easy method to pay consumers, combined with price competition for those consumers, might significantly erode the high profits of many incumbent platforms. Platforms likely have no economic incentive to work diligently to operationalize negative prices.

[42] *See* SUTTON, *supra* note 7.
[43] *See* ERIC A. POSNER & E. GLEN WEYL, RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY (2018).

III. PROBLEMS ARISING IN DIGITAL MARKETS

The changing market dynamics, outlined above, raise doubts about the market's ability to ensure ongoing innovation and competition. Increased concentration levels, market power, network effects, and control over data and analytics have in many digital markets tipped the market in favor of the incumbents.

The theme we return to throughout this report is the difficulty of entry into digital platform businesses once an incumbent is established. Whether the entrant is vertical or horizontal, has succeeded to some degree, is nascent, or is a potential entrant, its existence improves consumer welfare. Either the entrant provides more choice, different features, and a chance of higher quality, or the threat of those outcomes spurs the incumbent to provide lower prices, higher quality and innovation, and to do so more quickly.

By focusing on this feature of digital platforms, we are highlighting the *cause* of the market power, not its result. Absent entry barriers of the type discussed above, the tremendous amount of profit available in these markets would stimulate entry. Protecting competition in these markets requires protecting competitors. Entry and potential entry create more competitors (in expectation), and that increase depends on competition working effectively so that a meritorious entrant can successfully dethrone the incumbent.

The categories of economic harms to consumer welfare from digital platforms are the standard ones: price, quality, and innovation. The report will primarily emphasize quality and innovation harms due to their greater complexity and generality. For example, by excluding competitors, dominant firms do not need to innovate as hard as they otherwise would be required to keep their customers. Likewise, when platforms do not face competition, they will be able to reduce quality, for example, by decreasing privacy protections, without losing customers or revenue.[44] When a service reduces quality without lowering price, it is *raising* quality-adjusted prices, which harms consumers. For example, if a phone service were to lower the quality of service but keep monthly fees the same, it would have raised quality-adjusted price. Because many digital services are purchased with barter, the monetary price paid by consumers is zero, and quality-adjusted prices cannot be directly seen the way a nominal price can be. On the advertiser side of the platform, where monetary prices *are* charged, harms to competition exist in the more ordinary form of higher markups for ads and other services. These markups are eventually paid by consumers because they are built in to the prices of the goods and services that are advertised online.

[44] *See* Agustin Reyna, *The Psychology of Privacy—What Can Behavioural Economics Contribute to Competition in Digital Markets?*, 8 INT. DATA PRIVACY L. 240 (2018).

a. Quality Harms

i. Personal Data and Behavioral Economics

1) Behavioral Economics

As discussed above, behavioral economics helps improve our understanding of real consumer choices and suggests that consumer exploitation is common. There are a number of systematic consumer biases that, when incorporated into economic analysis, affect outcomes and welfare. For instance, individuals can be subject to salience effects, putting excessive weight on the most salient information. Confirmation bias can lead them to change their preferences to conform with past choices.[45] Consumers are often biased toward the status quo even when it is no longer optimal.[46] Perhaps the most important consumer biases are impatience and lack of self-control. The former refers to the discounting of any payoff that occurs further in the future than the present. The latter is closely related and refers to the extent to which individuals fail to resist short-term impulses in order to achieve long-term goals. The literature in behavioral antitrust argues that status quo, salience, and impatience are the most relevant for antitrust analysis.[47] Platforms that analyze their consumers' behavior can exploit these biases by framing choices to make certain information salient, designing a status quo that is profitable, inducing addictive behaviors, generating sales through impulsive consumption, and exploiting consumers' disinclination to search. These strategies are common in the brick and mortar world. For example, the candy aisle in supermarket check-out lines, or the rug store that has a special 50%-off sale every day.

2) Using Machine Learning to Take Advantage of Consumers

There are now decades of economic research demonstrating consumer bias and firm responses in offline markets.[48] For example, gyms offer subscription memberships rather than pay-per-visit

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[45] *Confirmation Bias*, WIKIPEDIA (Mar. 22, 2019), https://en.wikipedia.org/wiki/Confirmation_bias ("Confirmation bias is the tendency to search for, interpret, favor, and recall information in a way that confirms one's preexisting beliefs or hypotheses."); *see, e.g.*, Thaler, *supra* note 19, at 1266 ("People guess that in the United States today gun deaths by homicide are more frequent than gun deaths by suicide, although the latter are about twice as common. The bias comes because homicides are more publicized than suicides, and thus more 'available' in memory.").

[46] William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 8 (1988) ("[D]ecision makers exhibit a significant status quo *bias*. Subjects in our experiments adhered to status quo choices more frequently than would be predicted by the canonical model.").

[47] *See* Amelia Fletcher, *The EU* Google *Decisions: Extreme Enforcement or the Tip of the Behavioral Iceberg?*, COMPETITION POL. INT. ANTITRUST CHRON. (Jan. 2019), https://www.competitionpolicyinternational.com/wp-content/uploads/2019/01/CPI-Fletcher.pdf.

[48] *See, e.g.*, DANIEL KAHNEMAN & THOMAS GILOVICH, HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT (2002); Nicholas Barberis & Richard Thaler, *A Survey of Behavioral Finance*, *in* HANDBOOK OF THE ECONOMICS OF FINANCE (René M. Stulz & George Constantinides eds., 2003); *see also, e.g.*, Daniel Kahneman, Jack L. Knetsch, & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991).

knowing that members will not come as often as they anticipate,[49] and credit cards offer teaser rates knowing that consumers plan to have no debt in 6 months' time.[50] However, the strategies firms have used to date are swamped by what digital businesses can learn by using high-dimensional, large datasets to explore every nook and cranny of consumers' many behavioral shortcomings and biases in real time. This strategy is of serious concern when combined with an understanding of the digital platform business model discussed above. The platform's goal is to use its knowledge of consumers, combined with its market power (and the resulting lack of consumer choice), to extract profit. Some of that profit may come from value creation, or "expanding the pie," but some will come from transfers to the platform from both the consumer side and the advertiser side. Because individuals are subject to behavioral biases, consumers are vulnerable to a platform's exploitative behavior. Additionally, when individuals are workers, as they often are in the "gig" economy, these tools can be used to advantage the platform against the worker.

Digital businesses not only have more information than traditional firms, but they have more variations of products or services and the ability to control the environment and the timing of choices and offers. For example, a firm can hide a component of a good's price to let consumers discover prices only once they have invested significant time and effort into buying the good. This strategy can be differentially employed depending on the consumer's past willingness to pay. Framing, nudges, and defaults can direct a consumer to the choice that is most profitable for the platform. A platform can analyze a user's data in real time to determine when she is in an emotional "hot state" and offer a good that the user would not purchase when her self-control was higher. Consider a supercomputer tracking a consumer, via her cell phone, around the town until she is tired and frustrated in some way, and at that moment presenting her ads and information about junk food. This type of exploitation could depend on input from devices such as eye-tracking sensors, the ability of AI to understand the emotion expressed in texts and email, and all the other data the platform has about the consumer combined at a very large scale. This same tactic can be used to gain advantage against an independent contractor, e.g. a driver, whose behavior and location can be tracked for long periods.[51] In addition, machine learning applied to big data may help differentiate well-informed and sophisticated consumers or workers from poorly informed or more naive consumers, raising the possibility of further exploitation of those least prepared to resist it.

Internet firms make frequent use of digital defaults, framings, and nudges. When a user is signing up for a new service, the sign-up form may automatically check the box that permits the service to send the user emails.[52] A user can opt-out of receiving emails by unchecking the box,

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[49] *See* Stefano DellaVigna & Ulrike Malmendier, *Paying Not to Go to the Gym*, 96 AMER. ECON. REV. 694 (2006).
[50] *See* Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 967 (2012).
[51] https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html
[52] This is no longer permitted in the European Union. *See* Regulation (EU) 2016/679 of the European Parliament and the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data

but doing so is harder than sticking with the default. The results of a search that fits onto one page may all be sponsored, whereas finding the organic links requires paging down. *Homo economicus* is hardly influenced by defaults—to a rational agent, scrolling down or unchecking a box is trivial—but real people are influenced. Nudges are not unique to digital products; for example, an employer offering a default health care plan to its employees nudges employees towards choosing that plan—employees can select a different plan, but doing so is harder than sticking with the default.[53] What is noteworthy, however, is the platform's detailed, personalized, minute-by-minute control over their interface. This control enables platforms to create a façade of competition, choice, and autonomy when in fact users are being directed with behavioral techniques.[54]

With big data and machine learning, firms are able to understand and manipulate individual preferences at a scale that goes far beyond what is possible in traditional markets. This capability is qualitatively new. The environment is characterized by extreme asymmetries of information and analytical capacity between the platform and the user. This enables firms to charge higher prices (for goods purchased and for advertising) and engage in behavioral discrimination, allowing platforms to extract more value from users where they are weak.[55] The problem is only growing; platforms continue to make investments to extract data, encourage stickiness and addiction, and promote ever-greater use, in order to run data analytics and enable more precise targeting.[56]

The economic literature suggests that competition by itself cannot resolve the issue raised by the exploitation of behavioral biases or poor consumer information. This is because staying profitable in a competitive environment may force firms to exploit behavioral bias to achieve maximal profitability. Firms abstaining from doing so may be driven out of the market. Rather, competition causes a shift of surplus to wiser consumers; profit from exploitation of biased consumers is used to compete for well-informed consumers. For consumers who can guard against exploitation, there are therefore significant gains to be had from competition. But this

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and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119/1), § 32 ("Silence, pre-ticked boxes or inactivity should not . . . constitute consent.").

[53] Thaler, *supra* note 19, at 1283. Default settings have very large effects, for example, in voluntary organ donation decisions. Countries with an op-in default generally have the vast majority of the nation's adults enrolled to donate, while countries with default opt-out decisions see the opposite result. *See* Eric J. Johnson & Daniel Goldstein, *Do Defaults Save Lives?*, 302 SCIENCE 1338 (2003).

[54] *See* ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM DRIVEN ECONOMY (2016) (comparing the façade of choice and autonomy on digital platforms to the Truman Show).

[55] For a discussion of the use of online price and behavioral discrimination, see Maurice E. Stucke & Ariel Ezrachi, *How Digital Assistants Can Harm Our Economy, Privacy, and Democracy*, 32 BERKELEY TECH. L.J. 1239 (2018); Maurice E. Stucke & Ariel Ezrachi, *Alexa et. al., What Are You Doing with My Data?*, 5 CRITICAL ANALYSIS L. 148 (2018).

[56] Haley Sweetland Edwards, *You're Addicted to Your Smartphone. This Company Thinks It Can Change That*, TIME (Apr. 13, 2018, 10:28 AM), http://time.com/5237434/youre-addicted-to-your-smartphone-this-company-thinks-it-can-change-that.

will not be true for all people; some will be taken advantage of under perfect competition if consumer protection regulations are insufficient. Hence, while this report focuses on the competition problems created by powerful platforms, related issues raise broader consumer protection concerns that cannot be solved through greater competition.

ii. The Harms from an Advertising-Supported Business Model

1) Market Power Leads to Markups

Access to high-quality data, scale, and scope has allowed a few large platforms to offer efficient targeting services for advertising and to dominate the advertising market. Facebook, Google, and, increasingly, Amazon act as gatekeepers to the online advertising market. The three platforms provide access to billions of users, as well as a data-rich environment, essential for modern online advertising. Being in control of the data and the assets—users—creates market power. That market power generates a profit margin which, for ad-supported platforms, comes from the sale of advertising. One of the characteristics of the digital advertising environment is its opacity: major platforms are able to leave bidders and publishers in the dark with respect to the true success, costs, and profits from placement of advertising. This can be exacerbated when the platform also supplies buyer or publisher tools and analytics. Opacity is partially a consequence of market power. Market power can be used to discourage, or even prevent, multi-homing by buyers. One additional concern is that this opacity may give firms not only the normal ability to exercise market power in intermediation but also to engage in fraud.[57] Lack of transparency also undermines buyers' ability to measure the effectiveness of digital advertising and therefore to understand its true value relative to price.[58]

A report by the French Competition Authority estimated that publishers received 40% of advertiser sales, with intermediaries collecting the rest.[59] What justifies such a large markup for intermediaries? Without detailed study we cannot know for sure. However, reasons likely include the fact that very few platforms can target customers (who may be single-homing) using detailed and accurate data, so advertisers cannot take advantage of competition. The platforms do

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[57] *See, e.g.*, Suzanne Vranica & Jack Marshall, *Facebook Overestimated Key Video Metric for Two Years*, WALL ST. J. (Sept. 22, 2016), https://www.wsj.com/articles/facebook-overestimated-key-video-metric-for-two-years-1474586951; Mike Shields, *Facebook Says it Found More Miscalculated Metrics*, WALL ST. J. (Nov. 16, 2016), https://www.wsj.com/articles/facebook-says-it-found-more-miscalculated-metrics-1479303984; Cyrus Farivar, *Advertisers Allege Facebook Hid the Fact That No One Watches Video Ads*, ARSTECHNICA (Oct. 17, 2018), https://arstechnica.com/tech-policy/2018/10/advertisers-allege-facebook-hid-the-fact-that-no-one-watches-video-ads (reporting allegations that Facebook's "average viewership metrics were not inflated by only 60-80 percent; they were inflated by some 150-900 percent").

[58] This in turn obscures the size of the platforms' markup. *See* SELECT COMMITTEE ON COMMUNICATIONS, HOUSE OF LORDS, 1ST REPORT OF SESSION 2017–19, HL PAPER 116, U.K. ADVERTISING IN A DIGITAL AGE 14, § 29 (2018), https://publications.parliament.uk/pa/ld201719/ldselect/ldcomuni/116/116.pdf; David Pidgeon, *Where Did the Money Go? Guardian Buys its Own Ad Inventory*, MEDIA NEWSLINE (Oct. 4, 2016), https://mediatel.co.uk/newsline/2016/10/04/where-did-the-money-go-guardian-buys-its-own-ad-inventory.

[59] FRENCH COMPETITION AUTHORITY REPORT, *supra* note 1, at 40, § 82.

not sell the data to advertisers, but promise to place the ad in front of the requested demographic. The advertiser lacks transparency or any ability to learn about its customers and potential customers. Moreover, a platform that operates in the advertising placement business holds the keys to a second black box through its control of the pricing process.[60] The integration of the business of running the price-discovery mechanisms as well as tools for each side of the platform enables opacity, which helps maintain market power. When a platform bundles services such as advertising placement and return-on-investment analysis with advertiser data such as completed purchases, it can further enhance its market power.[61] The platform generally never shares the data with advertisers or publishers, but keeps it to itself, preventing disintermediation by a brand or publisher, further sustaining its large profit margin.

2) Incentives Created by Markups

Ad-supported platforms' high markups provide a powerful reason to try and keep users online for another minute in order to show more ads. These profits push platforms to design their firms around "engagement"—an obsession with keeping users on their system for as much time, and with as much attention, as possible.[62] As much of the behavioral literature cited above shows, advertising-supported digital businesses can use consumer biases to hold people's attention in ways that ultimately harm them. Early empirical work has found such effects in social media. In a recent working paper, Hunt Allcott and colleagues found that Facebook users who were paid to leave the site for four weeks wound up with higher subjective well-being than similarly situated people randomly assigned to a group not offered the payment.[63] Users who took the break from Facebook had a "large and persistent reduction in Facebook use after the experiment," along with reduced political polarization and news knowledge.[64] For the platform, engagement serves two reinforcing purposes. First, the more time a user spends on a platform, the more the platform knows about her. Second, the longer a user is on the platform, the greater its income from ads and services. Thus, the more time a user is on the platform, the more ads the platform can sell, and the more it can charge per ad.

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[60] For example. Google's ownership of the ad platforms formerly known as DoubleClick and AdWords. *See* Todd Spangler, *Google Killing Off DoubleClick, AdWords Names in Rebranding of Ad Products*, VARIETY (July 27, 2018), https://variety.com/2018/digital/news/google-doubleclick-adwords-rebranding-1202859088.

[61] *See generally* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397 (2009).

[62] *See, e.g.*, Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, BLOOMBERG (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant ("The company spent years chasing one business goal above others: 'Engagement,' a measure of the views, time spent and interactions with online videos.").

[63] Hunt Alcott et al., *The Welfare Effects of Social Media* (NBER Working Paper No. 25514, Apr. 2019), https://web.stanford.edu/~gentzkow/research/facebook.pdf.

[64] *Id.* at 1.

This financial incentive may explain the growing use of tracking and the creation of ecosystems that are based on the ability to manipulate the user into staying longer on the platform.[65] This opens the door to exploitative tactics or content as a method of increasing engagement. Furthermore, a second element to the large margin earned by a platform may be the low cost of the purchased content that keeps users on the platform. An important question (addressed more fully by the Media committee) is whether the prices for that content are set competitively. In a bargaining environment, the market power of the platform may allow it to negotiate a price for content that is below competitive levels, potentially creating dynamic harm to input providers.[66]

The financial incentive created by a large markup can lead to anticompetitive behaviors as well as exploitative ones. Platforms may seek to reduce interoperability and awareness of outside options. For example, platforms may exclude certain services or increase friction in accessing third parties' services. High search and switching costs are used to "lock in" users and reduce the ability of competitors to access those users. Platforms may adopt strategies to reduce multi-homing to obtain more market power over their users. We will return to this theme below.

3) Resulting Quality of Content

As discussed in detail below, the cheapest way to keep users on a platform is to present content as being more attractive than users thought at the moment when they were ready to leave the platform, or to make departure more costly in other ways, so that users stay longer. (See a similar discussion in the Privacy Report.) The platform is essentially degrading the quality of the content offered in a way that present-biased human beings find engaging. As discussed further below, content that instantly engages most effectively is content that generates outrage, not necessarily content that is truthful or thoughtful. Simple strategies such as more advertising minutes per minute of content also lower quality. Low-quality content represents an increase in the quality-adjusted price of platform services experienced by consumers.

This business model, and the opacity that accompanies it, makes it difficult for either advertisers or consumers to realize they are being charged a markup and makes entry into these advertising markets extremely difficult. Because the advertiser side is where a platform earns its revenue, this is obviously a key entry barrier. The question of how an enforcer or regulator might enable entrants to overcome this barrier to entry is an important part of the discussion in Section III.B of the report.

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[65] *See* Maurice E. Stucke & Ariel Ezrachi, *The Subtle Ways Your Digital Assistant Might Manipulate You*, WIRED (Nov. 29, 2016, 8:00 AM), https://www.wired.com/2016/11/subtle-ways-digital-assistant-might-manipulate.
[66] *See* Maurice E. Stucke & Ariel Ezrachi, *Looking Up in the Data-Driven Economy*, COMPETITION POL'Y INT'L (May 15, 2017), https://www.competitionpolicyinternational.com/looking-up-in-the-data-driven-economy.

4) Welfare and Efficiency

When analyzing the impact of online advertising and the behaviors it creates, one should keep in mind that antitrust aims to promote effective competition for the benefit of consumers. Competition authorities tend to treat advertisers as any other customers of a service. The premise is that market power in advertising channels impedes the ability of brands to reach consumers and inform them about their products. Such a treatment of the welfare from advertising relies on the implicit view that i) the role of advertising is solely to inform consumers; and ii) competition in the advertising market leads to efficiency. The economic literature tells us that both assumptions are questionable, as does observation of digital markets.[67] In competition policy, when assessing the impact of a decision or a regulation involving advertising, it is important to focus on the final impact on consumers and market efficiency rather than on the advertisers' surplus.

On the one hand, targeted advertising to wise and well-informed consumers is welfare-improving insofar as it allows advertisers to send the right information to the right people, improving their choices and fostering competition among suppliers. On the other hand, in the modern economy this simple model becomes more complex because of the cost to the consumer, namely loss of privacy. There is an open empirical question as to whether the tradeoff is worthwhile to consumers.[68] We discuss the problem of measuring welfare in a setting where consumers are manipulated below.

iii. Online Exploitation and Addiction

1) Human Reward Systems

Digital platforms' manipulation of their users—in part designed to get users addicted—is getting a considerable amount of attention from the public. These actions lower the quality of a platform and harm users.

As discussed above, some platforms have deliberately incorporated features that feed human "reward" centers into their products to induce users to give more and more of their time—and data—to the platform. These tools are designed for scale—they become even more valuable the more traffic they carry and the more users they garner—and hence the competition among producers has been described as a competition for eyeballs.[69] Because the digital tools and

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[67] *See, e.g.*, Anderson, S. P., Waldfogel, J., & Stromberg, D. (Eds.). *Handbook of Media Economics, vol. 1A* (2016). Elsevier; Goldfarb, A., & Tucker, C. Digital economics. *Journal of Economic Literature*, *57*(1), 3-43 (2019).
[68] *See, e.g.*, Elizabeth Aguirre et al., *Unraveling the Personalization Paradox: The Effect of Information Collection and Trust-Building Strategies on Online Advertisement Effectiveness*, 91 J. RETAILING 34 (2015); Justin P. Johnson, *Targeted Advertising and Advertising Avoidance*, 44 RAND J. ECON. 128 (2013).
[69] *See, e.g.*, Doni Bloomfield, *High-Speed Ad Traders Profit by Arbitraging Your Eyeballs*, BLOOMBERG (Nov. 7, 2014), https://www.bloomberg.com/news/articles/2014-11-07/high-speed-ad-traders-profit-by-arbitraging-your-eyeballs.

networks have been designed for use at scale, and because there is relatively little cost and considerable benefit associated with adding more users, producers want as much user engagement as they can get. The creators of digital products have benefited from social science and neuroscience findings that concern, for example, how certain colors or mechanics can feed a user's dopamine, much as nicotine does.[70] The Center for Humane Technology, which calls the problem the "hijacking of our society," describes the issues as follows:

> Facebook, Twitter, Instagram, and Google have produced amazing products that have benefited the world enormously. But these companies are also caught in a *zero-sum race for our finite attention*, which they need to make money. Constantly forced to outperform their competitors, they must use increasingly persuasive techniques to keep us glued. They point AI-driven news feeds, content, and notifications at our minds, continually learning how to hook us more deeply—from our own behavior.[71]

This business model is based on acquiring a large volume of data to generate income, and it has led to unprecedented investment in addiction—ensuring continuing use of the interface. From diaper apps,[72] to rewarded ads (in which viewers are given in-app rewards, such as another "life" in a video game, in return for watching an ad)[73] internet firms harness their knowledge of second-to-second individual responses alongside social science learnings about human biases for maximum attention.[74] Researchers do not yet know the full extent of the harm (or potential harm) that may come from this sort of addiction and manipulation, but they are now actively engaged in relevant research.[75] What is known is that a business that depends on users staying online to watch ads and have their preferences harvested will focus its resources on keeping

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[70] *See* Edwards, *supra* note 56.
[71] Ctr. for Humane Tech., *Our Society is Being Hijacked by Technology*, HUMANE TECH (2018), http://humanetech.com/problem.
[72] Edwards, *supra* note 56.
[73] *Rewarded Ads: A Win for Users, Developers, and Advertisers*, GOOGLE ADMOB (2018), https://admob.google.com/home/resources/rewarded-ads-win-for-everyone.
[74] The video app TikTok may have taken this approach to its logical conclusion. *See* John Herrman, *How TikTok is Rewriting the World*, N.Y. TIMES (Mar. 10, 2019), https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html ("TikTok assertively answers anyone's *what should I watch* with a flood . . . [the app] has stepped over the midpoint between the familiar self-directed feed and an experience based first on algorithmic observation and inference. . . . It's an algorithmic feed based on videos you've interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you've explicitly told it you want to see. It's full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.").
[75] *See, e.g.*, Daria J. Kuss et al., *Problematic Mobile Phone Use and Addiction Across Generations: The Roles of Psychopathological Symptoms and Smartphone Use*, 3 J. TECH. BEHAVIORAL SCI. 141 (2018); José De-Sola Gutiérrez et al., *Cell-Phone Addiction: A Review*, 7 FRONTIERS PSYCHIATRY 175 (2016) (noting "a consensus about the existence of cell-phone addiction, but the delimitation and criteria used by various researchers vary"). The field is still nascent and there is no consensus that internet addiction exists or is a distinct psychological condition. *See* Francesca C. Ryding & Linda K. Kaye, *"Internet Addiction": A Conceptual Minefield*, 16 INT. J. MENTAL HEALTH & ADDICTION 225 (2018) (criticizing the cavalier use of the term "internet addiction" without a firmer grasp of the problem); Kristyn Zajac et al., *Treatments for Internet Gaming Disorder and Internet Addiction: A Systematic Review*, 31 PSYCH. ADDICTIVE BEHAVIORS 979 (2017).

users online—for example, with intelligent and flexible algorithms.[76] The algorithm will learn from, and respond to, these basic human preferences, thereby delivering—perhaps along with good content—a large quantity of low-quality content.[77]

2) Examples

There are many examples of exploitation of consumers who have sunk costs in a platform and may not be fully informed. For example, app designers have enticed children into playing free games that are built around in-app purchases, leading children to make large purchases without parental knowledge or permission. The U.K.'s consumer protection agency, the Office of Fair Trading, found that such purchases could be pricey: "A My Little Pony game, for example, offer[ed] users a virtual 'mountain of gems' for a real-life £69.99."[78] Regulators around the world have cracked down to force companies to refund large payments that children make on their parents' phones.[79] More disturbing examples of low-quality content are YouTube recommended videos that lead the viewer towards false or dangerous content.[80] Prior to having these patterns made public and criticized, a Google search about the earth's geology would lead to a chain of recommendations that resulted in "flat earth" content;[81] YouTube would offer

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[76] Beginning in 2014, Twitter followed Facebook in centering around algorithm-selected content rather than simply displaying tweets from accounts a user chooses to follow in reverse chronological order. *See* Will Oremus, *Twitter's New Order*, SLATE (Mar. 5, 2017), http://www.slate.com/articles/technology/cover_story/2017/03/twitter_s_timeline_algorithm_and_its_effect_on_us_explained.html.

[77] *See* Paul Lewis, *'Fiction is Outperforming Reality': How YouTube's Algorithm Distorts Truth*, GUARDIAN (Feb. 2, 2018), https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth; Paul Lewis & Erin McCormick, *How an Ex-YouTube Insider Investigated its Secret Algorithm*, GUARDIAN (Feb. 2, 2018), https://www.theguardian.com/technology/2018/feb/02/youtube-algorithm-election-clinton-trump-guillaume-chaslot; *see also Aim of the Project*, ALGOTRANSPARENCY, https://algotransparency.org/methodology.html?candidat=Francois%20Fillon&file=ytrecos-presidentielle-2017-06-10.

[78] Hilary Osborne, *OFT Warns Free Online Games Pressure Children Into In-app Purchases*, GUARDIAN (Sept. 26, 2013), https://www.theguardian.com/money/2013/sep/26/free-online-games-children-apps.

[79] *See* Press Release, U.K. Competition & Markets Authority, CMA Refers 3 Games to the ASA (June 4, 2015), https://www.gov.uk/government/news/cma-refers-three-childrens-online-games-to-the-asa; Press Release, Fed. Trade Comm'n, Apple Inc. Will Provide Full Consumer Refunds of At Least $32.5 Million to Settle FTC Complaint It Charged for Kids' In-App Purchases Without Parental Consent (Jan. 15, 2015), https://www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million; Press Release, Euro. Union, In-app Purchases: Joint Action by the European Commission and Member States is Leading to Better Protection for Consumers in Online Games (July 18, 2014), http://europa.eu/rapid/press-release_IP-14-847_en.htm.

[80] *See* Bergen, *supra* note 62.

[81] *See* Casey Newton, *How YouTube Helps Flat-Earthers Organize*, VERGE (Feb. 20, 2019), https://www.theverge.com/interface/2019/2/20/18232524/youtube-flat-earth-recommendation-algorithm-conspiracy; Press Release, Google, Continuing Our Work to Improve Recommendations on YouTube (Jan. 25, 2019) (noting that the company was planning to "begin reducing recommendations of borderline content and content that could misinform users in harmful ways—such as videos promoting a phony miracle cure for a serious illness, claiming the earth is flat, or making blatantly false claims about historic events like 9/11"); *see also* Kevin Roose, *YouTube Unleashed a Conspiracy Theory Boom. Can it Be Contained?*, N.Y. TIMES (Feb. 19, 2019), https://www.nytimes.com/2019/02/19/technology/youtube-conspiracy-stars.html.

teenage girls interested in diets videos about how to get anorexia, and so forth.[82] It is important to realize that this content is not chosen by human curators at the platform. Rather, the algorithm learns what content people will click on, and what content will cause them to stay on the platform longer, through many millions of small experiments; that is the content that is suggested and viewed. Exploitation and addiction caused by the optimization of the platform is a harm to consumers because they are likely watching lower-quality content than they would choose if they were fully informed in advance about how the content is chosen, or perhaps if they had alternative platforms to choose among.

iv. Privacy

Another worry is that the privacy of consumers on digital platforms is violated; this too is a decline in the quality of the product. For example, Facebook recently announced that it will merge the infrastructures of Facebook Messenger, WhatsApp, and Instagram. As the New York Times noted, "[t]he integration plan raises privacy questions because of how users' data may be shared between services. WhatsApp historically required only a phone number when new users signed up. By contrast, Facebook and Facebook Messenger ask users to provide their true identities. Matching Facebook and Instagram users to their WhatsApp handles could harm those who prefer to keep their use of each app separate."[83] Germany's competition regulator responded to this announcement by prohibiting Facebook from combining data from different sources (such as WhatsApp or Instagram) with data from Facebook.com without a user's explicit and voluntary consent.[84] Facebook's eagerness to get third-party apps connected to its network has led to mass data leaks, exposing sensitive information from hundreds of millions of people.[85] And Facebook is hardly alone.[86]

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[82] *See* Nicholas Tompson, *When Tech Knows You Better Than You Know Yourself*, WIRED (Oct. 4, 2018), https://www.wired.com/story/artificial-intelligence-yuval-noah-harari-tristan-harris/ (reporting Tristan Harris, head of the Center for Humane Technology, arguing that "[t]he problem is [YouTube] doesn't actually care about what you want, it just cares about what will keep you next on the screen. The thing that works best at keeping a teenage girl watching a dieting video on YouTube the longest is to say here's an anorexia video").

[83] Mike Isaac, *Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger*, N.Y. TIMES (Jan. 25, 2019), https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html.

[84] *See* Bundeskartellamt, *supra* note 37.

[85] *See, e.g.*, *Data on 540 Million Facebook Users Exposed*, BBC (Apr. 4, 2019), https://www.bbc.com/news/technology-47812470; *Millions of Facebook Passwords Exposed Internally*, BBC (Mar. 21, 2019), https://www.bbc.com/news/technology-47653656.

[86] *See, e.g.*, Douglas MacMillan & Robert McMillan, *Google Exposed User Data, Feared Repercussions of Disclosing to Public*, WALL ST. J. (Oct. 8, 2018), https://www.wsj.com/articles/google-exposed-user-data-feared-repercussions-of-disclosing-to-public-1539017194; Chaim Gartenberg, *Twitter Advising All 330 Million Users to Change Passwords After Bug Exposed Them in Plain Text*, VERGE (May 3, 2018), https://www.theverge.com/2018/5/3/17316684/twitter-password-bug-security-flaw-exposed-change-now.

b. The Assessment Problem

i. Measuring Consumer Welfare in a Behavioral World

Each of these issues results in fundamental difficulties in applying standard antitrust analysis—which is related to the assessment of the welfare effects of various practices or of a merger—to digital markets. Adequate measures of volume, quality, and consumer surplus may be difficult to obtain. The number of users choosing a certain option may not reflect their true preferences if the platform can make that choice a default that is difficult to see or to change. The number of clicks on ads may not correlate with greater welfare if higher volume of clicks is obtained by exploiting lack of self-control and addictive behaviors.

Given the prevalence of behavioral effects in the digital economy, the measurement of consumer welfare must be carried out very carefully. As we have mentioned, behavioral economics is now a well-established discipline that can help sort different online behaviors and business practices. Incorporating this knowledge into the legal practice's toolbox may help develop better measures of output and quality.[87] We caution, however, that the legal structure of US antitrust law is not well set up to accommodate this complexity as it opens the door for judges to weigh all manner of social concerns as well as traditional economic effects. We see two approaches that might be more fruitful. First, the fastest route to more accurate measures of welfare might well be for a digital regulator to limit the business models that serve harmful content, the way regulators limit the harm from mortgages by restricting debt to income ratios, the harm from prescription drugs by requiring access through a physician, and the harm from automobiles by requiring airbags and crash tests, to name a few examples. If platforms had little or no incentive to deliver harmful content to consumers, the standard consumer welfare toolkit would be more accurate in this market. Second, harmful content is also, from the viewpoint of the consumer's long run or ex ante self, low-quality content. Analytical paradigms in antitrust analysis commonly deal with low quality and quality-adjusted prices, and could incorporate the role of exploitative content in this way.

Another reason to be pessimistic about measuring traditional surplus concepts is related to the barter nature of the exchange: Users barter attention and personal data for services. With a "free" service, consumers are paying for any expansion of activity with their attention to content. When facing a zero-money price, and when quality is difficult to observe, consumers are not receiving salient signals about the social value of their consumption because the price they believe they face does not reflect the economics of the transaction, and they are ignorant of those numbers.

[87] For a view of the role behavioral economics can play in legal practice, see THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW (Eyal Zamir & Doron Teichman eds., 2014).

ii. Assessing the Social Welfare of Advertising

Behavioral economics also calls for careful use of standard economic surplus measures when applied to the supply of advertising. Unlike supply of goods, higher value of advertising need not imply higher social value. As discussed above, when advertising efficacy relies on psychological nudges that bring people into consumption they would consciously avoid otherwise, more advertising may well mean less consumer welfare.

Moreover, while price competition directly benefits consumers, competition through persuasive advertising may waste resources.[88] To see this point, consider the following example: Two firms share the market equally without advertising. If one then uses advertising and shifts the demand toward that firm (perhaps by some psychological effect), it will then have a larger share of the market. However, if both firms decide to advertise, they will continue to share the market equally. If the advertising cost is not too large, both firms will advertise in order to preserve their market share. Therefore, despite advertising spending, the equilibrium sales and consumption are the same as without advertising. Here, allowing for advertising only induces wasteful spending, which in our setting is captured by the platform as profit. This is an extreme example, but it highlights that a higher volume of advertising—and greater platform profits—may not indicate an increase in social welfare in the same way we normally think a higher output of, for example, shoes, would indicate.

c. Harms to Investment and Innovation

i. Rents

Successful platform-style strategies pre-date the internet. For example, the key to Microsoft's business was the orchestration of ecosystem-wide innovation—the personal computer industry—to benefit its own core offering as well as complements provided by third-party partners.[89] The strategy we highlight in this section of the report is a successful platform's choice of how much rent to expropriate from these complementors. For example, Microsoft turned PC hardware—an essential complement to an operating system—into a commodity business with the main exception of the microprocessor made by Intel. However, PC applications software—again an

[88] Although subtler, the same point has been shown to hold in the economic literature about informative advertising that conveys useful information about products such as existence, location, and other product characteristics. *See* Kyle Bagwell, *The Economic Analysis of Advertising*, *in* 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (Mark Armstrong & Robert Porter eds., 2007), https://doi.org/10.1016/S1573-448X(06)03028-7; Simon P. Anderson & Régis Renault, *Advertising Content*, 96 AMER. ECON. REV. 93 (2006). In this case advertising brings real value to consumers. But competition to steer consumers from other suppliers and/or to preserve market share may still lead to excessive spending on advertising.

[89] *See* ANNABELLE GAWER & MICHAEL A. CUSUMANO, PLATFORM LEADERSHIP: HOW INTEL, MICROSOFT, AND CISCO DRIVE INDUSTRY INNOVATION (2002) (detailing the characteristics of these types of platforms).

essential complement to the OS—remained (in part) an area where other firms could enter, compete, and earn profit.

The level of market power attached to a successful platform is so high that it often gives the platform owner the ability to expropriate almost the entire surplus available on its platform. And the ability to add that surplus to its existing core profit is the incentive to do so. For example, Microsoft's actions to favor Word over WordPerfect expropriated surplus from an existing software complement to its operating system. Importantly, in this example, WordPerfect was not a potential entrant into, or substitute for, a PC operating system, so there was not an exclusionary theme. The distinction between complementors that could disintermediate the platform and are therefore potential rivals, and those that cannot is critical for the antitrust analysis below. When the platform owner takes steps to disadvantage complementors who have no market power, the complementors may resist by using non-market (political and legal) strategies. Such complainants were part of the antitrust cases against Microsoft. We see this response to current platforms by firms in Europe today.

Chamath Palihapitiya, a venture capitalist, has quoted Bill Gates as arguing that a platform exists whenever "the economic value of everybody that uses it exceeds the value of the company that creates it."[90] In that world, complementors earn rents. By contrast, Ben Thompson, a tech journalist, argues that Facebook and Google are what he calls aggregators—firms that completely control the relationship between suppliers and users.[91] His point is that this control allows the aggregator to exercise market power over one side of the platform, control access by the other side, and extract all the rents. This emphasis on the creation of complementor rents and their distribution or expropriation is a theme that runs through this Report.

When and how a platform appropriates the rents of its complementors varies and may engender different responses from complementors. At root, the reason the complementor is there in the first place is because the platform originally needed content to attract consumers, so it invited the complementors onto the platform. Businesses selling widgets on ecommerce sites, games on social media, and mapping apps on handsets, are all examples of complements that were critical to successfully launching a platform. The complementors make these investments thinking they will obtain a return, and that expected return leads to efficient levels of investment. If investments were made knowing that the returns would be zero, there might well be dynamic harm because the platform would not be able to get off the ground. (Or alternatively, the owner of the platform would have to vertically integrate into many applications and provide them

[90] Interview by Semile Shah with Chamath Palihapitiya, CEO, Social Capital (Sept. 16, 2015), http://haystack.vc/2015/09/17/transcript-chamath-at-strictlyvcs-insider-series.
[91] Ben Thompson, *Tech's Two Philosophies*, STRATECHERY (May 9, 2018), https://stratechery.com/2018/techs-two-philosophies (contrasting platforms, such as Microsoft and Apple, which "need 3rd parties to make them useful and build their moat through the creation of ecosystems," with aggregators, such as Facebook and Google, which "attract end users by virtue of their inherent usefulness and, over time, leave suppliers no choice but to follow the aggregators' dictates if they wish to reach end users").

itself.) A significant source of discontent today seems to come from complementors who invested believing that they could capture surplus with a good product and who are later expropriated by the platform. A second discontented group are the complementors that existed in the brick and mortar world and now have no choice but to use a dominant platform, so they have no bargaining power despite providing valuable products or services.

If the expropriation is accomplished using a tool that is anticompetitive, it may violate competition laws. In the United States, this antitrust violation can be established when the complementor may be able to disintermediate the platform and is therefore a potential rival, for example, Netscape and Windows.[92] If such a move is not a violation of competition law but violates the expectations of market participants, it may be viewed as unfair. On the other hand, if the platform has significantly improved quality or engaged in innovation, market participants may think the platform fairly earned those rents.

Digital platforms have a variety of rent-extraction strategies that seem to be loosely related to the social scrutiny they are receiving.[93] For example, the news industry had no choice but to use Facebook. But Facebook has been reluctant to share any of its profits with news companies—and its market power has meant it hasn't had to.[94] Interestingly, when content providers have market power, the platform cannot always extract rents, even when it has a high market share. Take the hypothetical case of a fragmented travel platform industry in a geography where the airline market is concentrated. In that setting airlines could disintermediate a travel site by withholding their participation in the site, or by favoring their own sales channels. The equilibrium division of platform rents in this case will favor the powerful content providers, the airlines, rather than the platforms.[95] Market participants observe that Facebook has slowly commoditized most companies which supply attention to its users—from news and content markets to games and apps, companies' profits deriving from Facebook have slowly diminished as Facebook appropriated most of the gains.[96] These trends may be part of the reason there is growing attention to Facebook's business model today.

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[92] The antitrust theories of harm that cover this case are discussed below.
[93] *See, e.g.*, Josh Dzieza, *Prime and Punishment: Dirty Dealing in the $175 Billion Amazon Marketplace*, VERGE (Dec. 19, 2018), https://www.theverge.com/2018/12/19/18140799/amazon-marketplace-scams-seller-court-appeal-reinstatement (discussing the fear Amazon sellers have of the firm and its ability to shut them down with little or no explanation); Izabella Kaminska, *Amazon (sub)Prime?*, FIN. TIMES (Mar. 20, 2019), https://ftalphaville.ft.com/2019/03/20/1553085361000/Amazon--sub-Prime-.
[94] *See* Ben Thompson, *The Buzzfeed Lesson*, STRATECHERY (Jan. 28, 2019), https://stratechery.com/2019/the-buzzfeed-lesson ("[C]ontent suppliers are absolutely commoditized: Facebook doesn't need to do anything to keep them on the platform, because where else will they go? Might as well keep the money for itself.").
[95] For a related setting, see Fiona Scott Morton et al., *Benefits of Preserving Consumers' Ability to Compare Airline Fares*, (unpublished manuscript, 2015) (on file with authors).
[96] *See, e.g.*, Thompson, *supra* note 94; Pete Brown, *More Than Half of Facebook Instant Articles Partners Have Abandoned It*, COLUM. J. REV. (Feb. 2, 2018), https://www.cjr.org/tow_center/are-facebook-instant-articles-worth-it.php; Harrison Weber, *Facebook Kicked Zynga to the Curb, Publishers Are Next*, VENTUREBEAT (June 30, 2016), https://venturebeat.com/2016/06/30/facebook-kicked-zynga-to-the-curb-publishers-are-next.

Today's prominent tech companies most likely learned from older tech businesses that those older businesses had "lost," or shared, a too-high percentage of profits with their ecosystems. While older businesses were continually confronted with questions about what to own versus what to cede to partners on their platform, without today's technological advancements (including advanced data analytics and greater computational power), older platforms were not as swift and flexible in capturing value as current digital platforms can be. The increased scale and scope of control has provided modern digital platform owners with increased power over their ecosystems. Today's platforms understand that they can obtain higher margins if they either make all of the necessary complements themselves or position themselves as a mandatory bottleneck between partners and customers—leading to many platforms taking a significant commission on sales on their platform or extracting value through barter of information. In particular, today's digital platforms are very careful to maintain complete control over the user relationship so that they do not face any threat of disintermediation. These choices can be used to reduce the possibility of successful entry by an innovator in the platform's space. The next section turns to this problem of entry.

d. Harm to Entry, Including Disintermediation

i. The Practical Consequence of Entry Barriers

When evaluating entry as the main source of competition against a platform, as discussed above, the entrant has a significant disadvantage relative to the platform. Venture capitalist investors will often evaluate a startup based on its ability to either access or build enough data swiftly enough, all with the aim of reaching enough insights to take advantage of all the forces discussed above. In other words, a new entrant starved of data, quantitatively and qualitatively speaking, relative to a tech giant, is at a significant competitive disadvantage, and investors will be unlikely to invest if they view that data deficit as insurmountable. Although it can be attractive for a VC to invest in a firm that may be acquired by Facebook, Google, or Amazon, the road to a successful acquisition is fraught with danger, most notably the ability of any of these three giants to replicate a specific feature, functionality, or business model should other considerations such as intellectual property rights, team quality, defensibility, or time to market not weigh against such copycat strategy. Additionally, investors do not always fare well in these acquisitions.[97]

ii. Incumbent Incentive to Leverage Entry Barriers

There is growing evidence that conglomerate digital platforms are in an advantaged position to stop or block entry by more focused rivals when compared to traditional businesses. Companies like Alphabet, Amazon, and Facebook operate in multiple business verticals (for example, mail,

[97] *See, e.g.*, Rachel Kraus, *Amazon Bought Eero for $97 Million and Employees Still Got Screwed*, MASHABLE (Apr. 5, 2019), https://mashable.com/article/amazon-eero-wifi-router-sale/#HN0veV33jPqc ("Ultimately, thanks to a 'last in, first out' philosophy, Eero's Series D investors, led by Qualcomm, will recoup 84 percent of their investments. The seed round and Series A-C investors will all get back 31 cents on the dollar.").

maps, and search), collecting different dimensions of data on a consumer (for example, identity, location, and purchase intent) which give faster intelligence on competitive threats and new chinks in the platform's competitive armor. These companies can then derive superior insights into what firms they should block, which they should buy, and how they should grow strategically. This gives the platform an advantage over a rival entrant considering the same set of opportunities, and increases their abilities to exclude such rivals. A rival platform with similar economies of scope, data insights, and installed base may be a more formidable entrant.

If large digital platforms have both the incentive and ability to purchase and block entrants that compete with them, or might compete in the future, the question is whether they have done so. The evidence that platforms have bought a series of potential competitors in recent years is anecdotal but fairly robust.[98] For example, many observers believe that Instagram and WhatsApp might well have been serious competitors for Facebook.[99] The evidence that platforms have blocked potential entrants is likewise anecdotal[100] and was used in the Android and AdSense cases the European Commission has brought against Google.[101] More formal research in this area is essential.

iii. Disintermediation and Foreclosure of Potential Platform Entrants

In addition to *de novo* entry, platforms fear disintermediation by a partner. If a platform's partner is able to directly access and serve the platform's customers, it can overtake the platform. Disintermediation can also occur through commoditizing services so that one side (normally the end consumer) is willing to substitute away from the platform—leading to a loss of profits.

The threat of disintermediation has important implications for the analysis of market entry and foreclosure. Modern platforms have an incentive to regularly thwart companies that compete with them for user demand. A platform that has total control of demand can steer customers to content and complements it owns rather than to those provided by independent firms that might challenge its market power. And because of potential harm to competition and complements, US regulators have often been tasked with preventing discrimination, foreclosure, and similar strategies in specific industries.[102] Without a great deal of insight into the technology and the strategy of the platform, foreclosure will be difficult to observe by outsiders. Technological tools such as mobile hardware technologies, advances in computing power, communications technologies, application

[98] *See* U.K. COMPETITION REPORT, *supra* note 1, at 49, tbl.1A.
[99] Tim Wu, *The Case for Breaking Up Facebook and Instagram*, WASH. POST (Sept. 28, 2018), https://www.washingtonpost.com/outlook/2018/09/28/case-breaking-up-facebook-instagram.
[100] *American Tech Giants Are Making Life Tough for Startups*, ECONOMIST (June 2, 2018), https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups.
[101] Press Release, Eur. Comm'n, Antitrust: Commission Fines Google €1.49 Billion for Abusive Practices in Online Advertising (Mar. 20, 2019), http://europa.eu/rapid/press-release_IP-19-1770_en.htm.
[102] *See* Lina Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. R. (forthcoming 2019), https://papers.ssrn.com/id=3180174.

programming interfaces (API), cloud computing technologies, and data analytics enable a strategy of keeping the attractive content from establishing a relationship with the user and thereby possibly entering as a competitor. Platforms have bluntly moved to prevent disintermediation and have engaged in foreclosure to block potential rivals. For example, Facebook acted to suppress the growth video-capture-and-sharing app Vine when Vine attempted to link its users to their Facebook friends.[103] Facebook CEO Mark Zuckerberg personally approved the decision to prevent Vine users from finding friends on the app via Facebook.[104]

Exclusive contracts and loyalty contracts can also be used to achieve exclusion. For example, a long-term contract that requires an advertiser not to use an entrant can foreclose demand from that entrant, leading to exit. An exclusive contract with a global reach can prevent an able niche competitor from growing larger and obtaining economies of scale. Bundling of services by the incumbent platform can be designed to exclude entry or foreclose existing rivals. Contracts between platforms and advertisers that allow for individual negotiation can protect an incumbent from losing individual targeted sales to an entrant without requiring the incumbent to lower its prices across the board. An incumbent platform with market power will often have the incentive and ability to undertake these strategies and thereby preserve its profit.

iv. Foreclosure of Complements to Capture Rents

One critical place to control the relationship is platform access. Amazon and Facebook regularly make decisions over which app or vendor is able to sell or is denied access to their stores and customers. Platforms often have a financial incentive to steer customers to particularly profitable products and can use the power of defaults and ordering to accomplish that effectively. Vendors operate in a risky environment where the platform's whims can determine its future as much or more than consumer satisfaction. If it chooses, a platform can steer demand elsewhere and the vendor loses access to its customers—because these customers are another company's users who single-home and buy from the default choice at the top of the page. Provided the consumer continues to find the totality of the platform experience positive, this bargaining power allows the platform to dictate business terms. The Vestager Report describes the setting clearly:

> Other platforms impose rules and institutions that reach beyond the pure matching services and shape the functioning of the marketplace and, potentially, the relationship between the various platform sides, e.g. by regulating access to and exclusion from the platform, by regulating the way in which sellers can present their offers, the data and APIs they can access, setting up grading systems, regulating access to information that is generated on the platform, imposing minimum standards for delivery and return policies,

[103] *See* Adi Robertson, *Mark Zuckerberg Personally Approved Cutting Off Vine's Friend-finding Feature*, VERGE (Dec. 18, 2018), https://www.theverge.com/2018/12/5/18127202/mark-zuckerberg-facebook-vine-friends-api-block-parliament-documents.

[104] *See id.* Several years after buying Vine, Twitter shut it down. *See* Casey Newton, *Why Vine Died*, VERGE (Oct. 28, 2016), https://www.theverge.com/2016/10/28/13456208/why-vine-died-twitter-shutdown.

providing for model contracts, imposing price controls and MFN clauses, etc. Such rule-setting and "market design" determine the way in which competition takes place.[105]

The way competition takes place determines the level of profit achieved by the platform and each complement. In and of itself, a platform setting the terms of trade, quality levels, services, and so on may not be problematic if the purpose of the change is to "grow the pie" in a way that complementors view as fair (i.e., not involving expropriation). For example, Amazon, Facebook, or Google know in real time which products are sold to whom, at what price, and which packaging or incentives work, which may drive their rules. However, if these rules become opaque and uncertain or the insights gleaned from an app or vendor are biased or used against it in an asymmetrical manner, then the rule changes may not be about increasing everyone's revenue, but about moving a larger share to the platform.

Merchants or vendors can find themselves banned, demoted in search results, or required to bear higher costs without the ability to move to a competing platform because either there is none or because the customers single-home, will not depart the platform because of the loss of one vendor, and cannot be reached elsewhere. The EC's Android case describes the disadvantage faced by independent apps that compete with the Google apps that are included in the mandatory bundle.[106] Twitter has vertically integrated into video streaming by foreclosing the rival service Meerkat.[107] Likewise, by selling logistics services to many of its sellers, Amazon gains an advantage when it wishes to launch a store brand. It can analyze the data from its rivals to develop an entry plan against those sellers. It is important to measure whether, and how much, quality increases with these strategies.

It is not clear what profits such complementors expected or achieved from the platform relationship, nor if there was significant relationship-specific investment required. Vendors may be less likely to enter the market at all, or to innovate, if they know they must distribute through a particular platform and their most successful products will be quickly copied. Businesses that could grow on a platform and increase the platform's attractiveness to consumers will be unwilling to invest if their profits are not secure, and this may be a source of dynamic inefficiency. However, platforms have an incentive to attract good complements in order to

[105] EC COMPETITION REPORT, *supra* note 1, at 60.

[106] The recent Spotify complaint against Apple in Europe is another example. *See* James Vincent, *Spotify Files Antitrust Complaint Over 'Apple Tax,'* VERGE (Mar. 13, 2019), https://www.theverge.com/2019/3/13/18263453/spotify-apple-app-store-antitrust-complaint-ec-30-percent-cut-unfair.

[107] *See* Feng Zhu, *Friends or Foes? Examining Platform Owners' Entry Into Complementors' Spaces*, 28 J. ECON. & MGMT. STRAT. 23, 23 (2018) ("Meerkat, a mobile app that enabled Twitter users to broadcast live video streaming to their followers, vanished after Twitter acquired its competitor Periscope and cut off Meerkat's access to Twitter's social graph."); *see also* Chris Welch, *Tumblr 'Truly Disappointed by Twitter's Decision' to Block Friend-Finding On the Blogging Service*, VERGE (Aug. 22, 2012), https://www.theverge.com/2012/8/22/3261270/tumblr-removes-twitter-find-people-you-know. Twitter acquired Periscope, a competing startup, and then decided to shut out Meerkat. On October 2016, Meerkat was shut down. Currently, Periscope is fully integrated with the Twitter platform and claims 1.9 million daily users (last updated and released info as of 2017).

attract users. This incentive limits the platform's desire to expropriate complementor rents under some circumstances.

e. Harm to Innovation

i. Competition Promotes Innovation

There is significant theoretical and empirical research that concludes that anticompetitive creation or maintenance of market power will cause a reduction in the pace of innovation.[108] This result is intuitive in the sense that firms "run faster" when they face competitors; competing firms will try to offer a better product on any dimension consumers care about, including innovation. Engaging in successful innovation is certainly both feasible and common for a large platform with its enormous collection of data and other assets. These companies routinely spend large sums on R&D, launch new products and services, and are more able than other competitors to derive superior insights into how they should innovate based on the data collected from aggregating demand and advances in machine learning and advanced data analytics. However, the relevant counterfactual is whether the pace of innovation would be faster if platforms faced more robust competition.

ii. Entry Barriers and Innovation

The lessening or blocking of innovative entry is of particular concern given its value. A VC will usually be wary of outright investing in an innovative startup that will implicitly or explicitly compete head-on with a tech giant. Given the tech incumbents' ability to block or foreclose a threatening entrant, the chance of successful entry is tiny. VCs would rather invest in businesses that are creating new categories or solving common technical issues. Take Google's search engine as an example. To our knowledge there is only one search engine that has reached a successful market size as a standalone business: Duck Duck Go. Google search is the dominant firm in this category with high entry barriers; despite the enormous size of this market, VC investors apparently do not want to fund an entrant. By contrast, VCs are attracted to startup teams that solve a specific issue for Google (and have a chance of buyout) as opposed to funding a team that wants to compete head to head. This dynamic leads to a self-fulfilling prophecy. Reduced VC investment due to the inability to enter successfully in fact causes less entry; and less investment also causes less differentiated innovation in the sector. This can be seen increasingly by evidence of platform acquisitions.[109] Despite very high and stable profit margins, markets like social media and search have faced little entry.

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[108] For a comprehensive survey of the innovation literature, see the literature summarized in Giulio Federico, Fiona Scott Morton & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption* (NBER Innovation Policy and the Economy, Working Paper, 2019) (on file with authors).

[109] The number of potential competitors purchased by the tech giants is large. For example, Amazon has purchased Zappos, Fabric, CDNow, Quorus, Audible, Goodreads, and Quisdi; Facebook has acquired WhatsApp, Instagram,

As discussed above, large tech platforms can combine enormous financial resources with data resources. Digital platforms have an ability to produce free cash flows at a speed and level that is entirely new because of the combination of almost zero marginal cost, instant distribution, and global reach. This advantage creates both the incentive and the ability for the digital platform to outspend, to out-invest, or to acquire incumbents or new competitors. Incumbents have the incentive and ability to stand in the way of possibly disruptive innovation. With deep pockets, they can purchase possible future disruptors in order to align the path of innovation with their strategies or otherwise control it. This story is widely believed to be the reason that Facebook purchased Instagram and WhatsApp.[110]

Alternatively, platforms may create "kill-zones" around themselves.[111] For example, Facebook and Twitter's aggressive API foreclosure, acquisition of competitors, and copying of new services have boosted their market power.[112] Facebook even acquired a mobile phone monitoring app, Onavo, which allows it to spot up-and-coming rivals and buy them or snuff them out.[113] While investment in innovation will continue, the type of innovation that will be funded will be broadly determined by the incumbent and its strategies. Disruptive innovation in markets that are characterized by high concentration levels and network effects is likely to be reduced compared to a competitive market. One of the few sources of entry in digital platforms comes from rival platforms that enter each other's markets, as these large firms are more able to overcome entry barriers of all kinds.

FriendFeed, and tbh; Google has bought Nest Labs, DoubleClick, YouTube, Waze, AdMob, Teracent, BeatThatQuote.com, Admeld, and Tenor. *See List of Mergers and Acquisitions by Amazon*, WIKIPEDIA (Apr. 12, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Amazon; *List of Mergers and Acquisitions by Facebook*, WIKIPEDIA (Mar. 25, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Facebook; *List of Mergers and Acquisitions by Alphabet*, WIKIPEDIA (Apr. 12, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet. At times, these firms have barely bothered to disguise their anticompetitive purpose. *See* Jacob Kastrenakes, *Facebook is Shutting Down a Teen App it Bought Eight Months Ago, Along with Two Others That Languished*, VERGE (July 2, 2018), https://www.theverge.com/2018/7/2/17528896/facebook-tbh-moves-hello-shut-down-low-usage.

[110] Tim Wu, *The Case for Breaking Up Facebook and Instagram*, WASH. POST (Sept. 28, 2018), https://www.washingtonpost.com/outlook/2018/09/28/case-breaking-up-facebook-instagram.

[111] Google's, Facebook's, and Amazon's annual conferences "held to announce new tools, features, and acquisitions, always 'send shock waves of fear through entrepreneurs,'" according to one investment firm, and "[v]enture capitalists attend to see which of their companies are going to get killed next." *The Future of Tech Startups: Into the Danger Zone*, ECONOMIST (U.K. edition) (June 2, 2018), at 61, http://weblogibc-co.com/wp-content/uploads/2018/06/The_Economist_UK_Edition_-_June_02_2018.pdf.

[112] *See* notes **Error! Bookmark not defined.-Error! Bookmark not defined.**, *supra*; *see, also, e.g.*, Erin Griffith, *Will Facebook Kill All Future Facebooks?*, WIRED (Oct. 25, 2017), https://www.wired.com/story/facebooks-aggressive-moves-on-startups-threaten-innovation.

[113] *See* Deepa Seetharaman & Betsy Morris, *Facebook's Onavo Gives Social-Media Firm Inside Peek at Rivals' Users*, WALL ST. J. (Aug. 13, 2017), https://www.wsj.com/articles/facebooks-onavo-gives-social-media-firm-inside-peek-at-rivals-users-1502622003l.

iii. The Reward for Innovation

Entrepreneurs may expect a low payoff to developing a free-standing product because of entry barriers and exclusionary conduct by the incumbent platform. In that case, its best hope is to be the preferred innovator of a complement and sell its business to the platform at an early stage. This source of financial reward is often cited as a reason why large platform acquisitions are good for society. Certainly, a reward of this type (a share in the platform's business model and flow of rents) is better than no payoff and will stimulate some level of innovation. However, it is important to see that this incentive is distorted relative to that of the competitive context. Suppose public policy could reduce entry barriers and prevent anticompetitive exclusionary conduct towards entrants. In that case, the entrepreneur would not have to settle for a small fraction of the platform's profits, but could compete for all of them and try to replace the platform. When a young firm has a chance to compete for the entire market on the merits of its innovation because there is no exclusionary conduct holding it back, success could lead to up to 100% of market profits, rather than a smaller acquisition payoff.[114] The availability of this option would allow entrepreneurs to develop improvements, complements, or replacements for a platform according to what has the highest returns. The inability to innovate in pursuit of the whole market leads to lower entry in tech sectors that are already dominated by a single large company.

iv. Current Trends in Innovation

The incipient but growing technical research supports a concern for the impact of big tech on innovation. Much of this research uses startup formation and its fuel, venture capital, as a proxy for innovation. In 2018, Facebook commissioned the consulting firm Oliver Wyman to write a report on this topic.[115] Using Facebook, Google, and Amazon as a proxy for big tech platforms, the authors drew four conclusions: i) Facebook, Google, and Amazon contribute a very small portion of the total venture capital in tech; ii) Facebook, Google, and Amazon M&A activity has no impact on aggregate investment levels; iii) Facebook, Google, and Amazon R&D has had no impact on venture capital investment levels; and iv) the presence of Facebook, Google, and Amazon does not dampen venture capital investment in technology relative to other mature sectors.

The first three conclusions are factual and unsurprising. But the fourth conclusion, that the presence of Facebook, Google, and Amazon does not dampen VC activity related to other

[114] As previously noted, many of these markets will tend toward concentration naturally, so the size of profits is not affected by effective competition enforcement, but the number of years they can be earned will be affected when an incumbent cannot block entrants.
[115] *Assessing the Impact of Big Tech on Venture Investment*, OLIVER WYMAN (July 11, 2018), https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/july/assessing-impact.pdf.

sectors, is surprising. Ian Hathaway has summarized a straightforward rebuttal.[116] The Facebook-commissioned report looked at industry-wide effects. However, as Hathaway points out, viewing the industry in the aggregate masks the effects of dominating firms. By looking at the sub-industries associated with each firm—social platforms (Facebook), internet software (Google), and internet retail (Amazon)—a different trend emerges. Since 2009, change in startup investing in these sub-industries has fared poorly compared to the rest of software for Google and Facebook, the rest of retail for Amazon, and the rest of all VC for each of Google, Facebook, and Amazon. This suggests the existence of so-called "kill-zones," that is, areas where venture capitalists are reluctant to enter due to small prospects of future profits.[117]

In a study of the mobile app market, Wen Wen and Feng Zhu come to a similar conclusion: Big tech platforms do dampen innovation at the margin.[118] Their study analyzed how Android app developers adjust their innovation strategies in response to entry (or threat of entry) by Google

> [A]fter Google's entry threat increases, affected developers reduce innovation and raise the prices for the affected apps. Once Google enters, the developers reduce innovation and increase prices further. However, app developers' incentives to innovate are not completely suppressed; rather, they shift innovation to unaffected and new apps. Given many apps already offering similar features, Google's entry may reduce social inefficiency.[119]

Ultimately, these studies are suggestive but not determinative. Much more research needs to be done to property identify the existence and extent of "kill zones" for market entry and innovation. Nonetheless, the evidence thus far does suggest that current digital platforms face very little threat of entry and are negatively impacting investment in key digital areas. This is reinforced by the fact that the key players in this industry remained the same over the last two technology waves, staying dominant through the shift to mobile and the rise of AI.[120] In the past,

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[116] Ian Hathaway, *Platform Giants and Venture-Backed Startups*, IAN HATHAWAY BLOG (Oct. 12, 2018). http://www.ianhathaway.org/blog/2018/10/12/platform-giants-and-venture-backed-startups.

[117] *Id.*

[118] Wen & Zhu, *supra* note 4.

[119] *Id.*

[120] This dynamic affects where we see innovation, and by whom. While distributed technology seems to be a relatively open playing field with the potential for many entrants, the bulk of innovation in other spaces is dominated by tech giants. This is the case, for example, in the AI and voice-assistant space. In the AI field, innovation is driven by startups leveraging and customizing the existing technology and libraries developed by Microsoft, Amazon, Facebook, and Google. These companies have been quick to acquire promising ventures. Since 2011, Facebook has acquired seven AI startups: Face, Protogeo, Wit.ai, Bloomsbury AI, Dreambit, Grokstyle, and Ozlo. Since 2010, Amazon has also acquired seven startups in the AI space: Yap, ORbeu, GoButler, harvest.ai, Graphiq, Body Labs, and Dispatch. Finally, Google has acquired 20 AI startups since 2011, the most notable being Kraggle and DeepMind. *See List of Mergers and Acquisitions by Facebook*, *supra* note 109; *List of Mergers and Acquisitions by Alphabet*, *supra* note 109. The AI space may not see a successful IPO because of these dynamics. Similarly, innovation in voice-assistant technology has been dominated by tech giants. Microsoft's Cortana, Apple's Siri, Google's Google Voice, and Amazon's Alexa are examples of dominant firms leveraging their previous offerings to retain a first-mover advantage in the market.

dominant business found it difficult to navigate innovation or disruption waves. By contrast, Facebook, Google, Amazon, Apple, and even Microsoft were able to ride these waves without significant impact on market share or profit margins. This indirect evidence corroborates the argument that these companies are facing few competitive threats.

There is an informal sense from practitioners that in mobile, cloud computing, and AI the result is the same: Innovation at the core has slowed and is centered around the tech giants.[121] As a result, new innovation waves have emerged, centering around blockchain, distributed ledgers, and decentralized models (the new Silicon Valley growth paradigm); and with specialized AI, niche retail applications, or, in the enterprise sector, b2b models. It should be noted that, apart from blockchain, whose decentralization eliminates network effects (in theory), the other areas of innovation do not necessarily herald a change in future market structure. Some have also argued that, in markets that are characterized by significant market power, innovation will likely shift from focusing on consumer benefit (to entice a rise in market share), to consumer exploitation.[122]

In summary, unlike last-century's businesses, digital businesses will often lack competition *in* the market. This absence may be redressed by intensive competition *for* the market, as firms compete to be the winner that takes all. However, if dominant firms are able to maintain their dominance, even as the external environment and tastes change over time, consumers may be denied the benefits of competition for the market as well.

f. Old Wine in a New Bottle, or a New Reality?

The market characteristics and problems discussed above in Part I and Part II raise an important question: Is there something new or different about the digital economy, which justifies a revised approach to intervention? Is this simply old wine in a new bottle, the same old problems of network effects and concentration, or do we face a new reality? As we outlined above, we believe the digital platform may be a unique combination of economic forces that requires both new analysis and new public policy.

We expect some to argue that there is no need for action. It is in the interest of the powerful incumbent to deny there is any problem to solve in order to delay while the market remains in its hands. The waiting game allows incumbents to collect profit from the status quo and use those profits to raise doubts or marginalize concerns in order to delay or prevent effective intervention.[123]

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[121] *See, e.g.*, Griffith, note 112, *supra*; *Tech Monopolies Are Stifling U.S. Innovation. Antitrust Enforcement May Help*, BRINK NEWS (Dec. 11, 2018), http://www.brinknews.com/is-antitrust-enforcement-the-wests-best-weapon-against-chinese-tech; *Andreeson Horowitz Makes Big Bet on Blockchain*, REALDAILY (Feb. 13, 2018), https://realdaily.com/andreessen-horowitz-makes-big-bet-on-blockchain.

[122] *See* Ezrachi & Stucke, *supra* note 14.

[123] *See, e.g.*, Brody Mullins & Jack Nicas, *Pay Professors: Inside Google's Academic Influence Campaign*, WALL. ST. J. (July 14, 2017), https://www.wsj.com/articles/paying-professors-inside-googles-academic-influence-

Of course, the rapid developments of our digital world are not yet fully understood and merit ongoing study. However, the material above makes clear that when market power becomes entrenched, it is difficult to return to a competitive market. Inaction could create decades of market power leading to weakened innovation, increased rent extraction, and social domination by gatekeeper tech firms. Making no policy change and standing back to let platforms carry out the strategies of their choice carries unusual risk. The new reality of the digital landscape presents new challenges that will not easily be resolved through organic competition or current US antitrust enforcement norms. The United States now risks missing the moment to confront a serious challenge to competition. That risk spurs our search for possible solutions, which we outline in Part IV.

campaign-1499785286 (relating Google's funding of professors for, among other things, research opposing antitrust intervention in the search engine market).

IV. SOLUTIONS

In this part, we outline a range of solutions to address the issues raised above. Needless to say, there is no magic pill. The legislature, judiciary, and regulators will each need to play a role. Each of the proposed solutions brings with it benefits and costs and should be considered as part of a balanced policy. Still, with these limitations in mind, these solutions have the power to address changing market dynamics and enable society to move toward a more efficient, open, and dynamic market environment.

Competition policy is only one facet of society's wider goals. Alongside the promotion of competition policy, policymakers may wish to implement policies to promote privacy, democratic accountability, and fairness. While these goals may be advanced indirectly through the measures proposed below, they can also be addressed more directly through laws and regulations that we do not consider here. Other committees provide valuable insights on possible advancements on that front.

Having established the impact of high entry barriers, we open with a fundamental question about the ability of a market to self-correct.

a. Will Markets Self-Correct When Competition Problems Arise?

The question whether the market will self-correct is central to antitrust policy. It affects the scope of illegality, as well as the zeal with which competition agencies approach intervention. It also affects the gain from implementing both ex ante and ex post solutions to insufficient competition. When there is a reasonable chance that technological progress and innovation will speedily prevent or remove bottlenecks and maintain an active competitive process, intervention should be limited. For example, the stock trading app Robinhood Markets, which slashed per-trade fees to zero, has forced competitors to scramble—even JP Morgan is now offering a free stock trading app for consumers.[124] Likewise, Amazon and Wal-Mart are currently vigorously competing for fast and cheap delivery services, forcing others to follow.[125]

Acolytes of the Chicago School have persuaded many federal officials and judges that markets will generally quickly self-correct, and that antitrust scrutiny should therefore be limited. This

[124] *See* Hugh Son, *JP Morgan to Unveil New Investing App With an Eye-Catching, Disruptive price: Free*, CNBC (Aug. 21, 2018), https://www.cnbc.com/2018/08/21/jp-morgan-to-unveil-new-investing-app-with-an-eye-catching-disruptive-price-free.html.

[125] *See* Suman Bhattacharyya, *To Compete with Amazon, Walmart and eBay are Spending on Logistics*, DIGIDAY (Jan. 15, 2019), https://digiday.com/retail/compete-amazon-walmart-ebay-investing-logistics; Andrea Cheng, *Amazon, Facing Growing Competition, Offers Free Shipping on All Orders for the First Time*, FORBES (Nov. 5, 2018), https://www.forbes.com/sites/andriacheng/2018/11/05/amazon-free-shipping-holiday-minimum-order-walmart-target/#6c459dc555e1; Nick Statt, *Amazon and Walmart's Rivalry is Reshaping How We'll Buy Everything in the Future*, VERGE (Aug. 3, 2018), https://www.theverge.com/2018/8/3/17630604/amazon-walmart-competition-tech-partnerships-grocery-delivery.

conviction has extended into digital markets. Opponents of government intervention point to the dynamic nature of technology, the role of disruptive innovation, and firms' strong investment in research and development. They defend the adequacy of a free-market, noninterventionist approach, and argue that the cost of over-intervention outweighs the benefits of intervention.

While some markets may self-correct, the findings of this report suggest that rapid self-correction in markets dominated by large digital platforms is unlikely, and that harms to economic welfare from the exercise of market power in such markets are substantial. As discussed above, entrants find it difficult to overcome the high barriers to take on digital platform incumbents. Economies of scale, economies of scope, network effects, and negligible marginal cost all work together to make entry difficult in existing markets. Moreover, while monopoly profits are a lure to competitors, incumbents can use those very profits to entrench themselves and protect their position. No matter how dynamic the technology, an entrant will not unseat a monopolist if the monopolist is permitted to buy the dynamic entrant for a share of monopoly profits. Both parties gain from such a transaction—and the public loses.

The result is less entry than a more competitive environment would create. Less entry into digital markets means fewer choices for consumers, stunted development of alternative paths of innovation, higher prices, and lower quality. Self-correction is not a realistic expectation in this environment—indeed, the available evidence suggests it has not happened—and public policy should not rely exclusively on it. Effective antitrust enforcement and regulation must take account of this reality. If there is a force toward self-correction, it may require active promotion to succeed, and in this way public intervention can be complementary rather than antagonistic to market forces. Indeed, the other reports that have addressed this problem around the world have accepted that policy changes are necessary in order to avoid stagnant and harmful digital markets. We now turn to what policy options exist, and which of these the government might adopt.

b. US Antitrust

i. Basic Principles

Antitrust law is intended to prohibit private conduct by firms that reduces economic welfare. Although application of antitrust principles can be complex and the specific doctrinal embodiments of those principles can seem arcane and arbitrary, at its core US antitrust law is simple.[126] It can be summarized in a single sentence: *Private conduct that creates or increases market power, other than by efficiency-based competition on the merits, is illegal.*

There are two fundamental components of any antitrust violation. The first is bad conduct, commonly called "anticompetitive conduct." The second is a resulting harm to economic welfare

[126] *See* A. Douglas Melamed, *Response: Antitrust Law is Not That Complicated*, 130 HARV. L. REV. F. 163 (2019).

from the creation of more market power than would otherwise exist. A firm gains market power when the competitive discipline imposed upon that firm by either actual or potential future rivals is reduced. One way to achieve market power is through price-fixing and other forms of collusion, but we will not address such behaviors here. Rather, this report will focus on antitrust law as it applies to mergers and non-merger exclusionary conduct.

Importantly, a firm does not violate the antitrust laws if it gains market power by competing on the merits rather than as a result of anticompetitive conduct. For example, if a firm enters the market with a fantastic new product that has strong network effects, competes solely on the merits of that product with no anticompetitive conduct, and finds itself with 95% market share, it would not have violated the antitrust laws. Similarly, a firm does not violate the antitrust laws if it engages in anticompetitive conduct but that conduct does not harm the market as a whole and fails to result in additional market power.[127]

Box IV
More About US Antitrust Law

There are four substantive elements to any US antitrust violation: Private, as opposed to government, conduct; anticompetitive conduct; creation or increase in market power; and a causal connection between the conduct and the market power. There are three basic types of conduct that can be anticompetitive. They are (i) mergers that lessen competition, (ii) conduct that excludes or weakens actual or potential rivals, and (iii) conduct that constitutes or facilitates collusion (e.g. cartels) among firms that would otherwise compete more vigorously. Possible antitrust problems involving digital platforms are most likely to arise from the first two types of conduct.

Anticompetitive conduct is conduct that is likely to lead to the creation or maintenance of market power for reasons other than an increase in allocative efficiency (i.e., by increasing output or decreasing price where price is not less than marginal cost) or productive efficiency (i.e., by reducing cost or increasing product quality). The range of potential anticompetitive conduct is nearly boundless and can include burning down a rival's factory, designing products to be incompatible with rivals' products, acquiring smaller rivals to shut them down or deny them to other suitors, exclusive dealing and Most Favored Nation clauses (MFNs) in some circumstances, and some forms of tying or bundling multiple products or services. Digital markets are prone to new and innovative violations of the antitrust laws because marginal costs are often close to zero, the business models themselves are often new and innovative, and firms are able to be creative with new product bundles, contracts, and transactions.

[127] Certain types of conduct, notably agreements among competitors fixing prices or allocating customers or service areas, are regarded as unlawful per se, which means that they are unlawful without proof of harm to competition in the market as a whole. Per se illegality in these circumstances is not a rejection of the principle described in this text. Rather, per se illegality reflects a pragmatic judgment that those types of conduct are so likely to harm competition and so unlikely to provide any welfare benefits that it would be needlessly costly and burdensome to require proof of harm to the market as a whole on a case-by-case basis.

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More About US Antitrust Law (Cont.)

Current popular debate often seems to imply that high market share in and of itself is a violation of the antitrust laws. It is important to understand that a firm can violate the antitrust laws *only if it engages in anticompetitive conduct*, even if its conduct causes the firm to gain monopoly power. Thus, for example, a firm does not violate the antitrust laws by gaining market power solely because it has a better product that consumers choose to buy for that reason or because it develops a better distribution channels that consumers find convenient.

Since at least the middle of the twentieth century, US antitrust law has embraced the view that those who do not engage in anticompetitive conduct are entitled to the fruits of their labor, including any market power or dominance that they might have gained. This view rests on the concern that breaking up or restricting firms that obtain their success by competition on the merits would deter the very kind of aggressive but procompetitive conduct that the antitrust laws are intended to encourage. Such no-fault intervention would deter such conduct, both because firms would fear that too much success would end up hurting them and because they would be uncertain about the antitrust implications of their conduct. While firms that achieve durable market power, especially in industries that are regarded as "natural monopolies," are sometimes subject to sectoral regulation, durable market power is not itself a sufficient basis for antitrust intervention. Society has other legal mechanisms to regulate an industry that is not delivering on social goals.

US antitrust law has also long required that antitrust plaintiffs prove, not just anticompetitive conduct, but also that the conduct harmed competition in the market as a whole.[1] This requirement limits antitrust enforcement to those matters that are important enough to warrant costly and burdensome antitrust proceedings and ensures that antitrust law remains focused on making markets work.

Both the anticompetitive requirement and the market power requirement protect the competitive process, another concern that arises in the popular debate. The conduct requirement does this by focusing antitrust enforcement on conduct that is not efficiency-based and can thus create market power only by distorting competition on the merits. The market power requirement does this by focusing antitrust enforcement on conduct that impairs the competitive discipline of rivals and, in that way, harms the competitive process. Many of the current proposals for more aggressive antitrust enforcement, although couched in antitrust language, would dispense with either the bad conduct requirement or the market power requirement.
Conduct that harms competition without creating any efficiencies can readily be characterized as anticompetitive. Examples of such conduct include mergers among competitors that do not create efficiencies by combining complementary assets, conduct whose only purpose is to harm or exclude competitors, and agreements among competitors about their prices or other terms of trade.

1 *See* Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 488 (1977) ("The antitrust laws . . . were enacted for the protection of competition, not competitors.") (internal citation and quote marks omitted).

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More About US Antitrust Law (Cont.)

When conduct both generates efficiencies and impairs the competitive efficacy of rivals, the question whether it is anticompetitive is less clear and will depend on specific facts. The conduct is more likely to be unlawful if substantially all of the efficiencies could be achieved by an alternative that is less harmful to rivals or if the efficiencies are insubstantial and the harm to rivals is great. Courts rarely deem conduct anticompetitive if it generates substantial efficiencies that cannot be realized by an available alternative, regardless of the impact of that conduct on rivals.

As explained in greater detail below, antitrust enforcement decisions are often made with great uncertainty about the efficiencies and market impact of the conduct at issue. For the past 30 years or so, antitrust law has reflected the view that mistakes in the direction of over-enforcement are more problematic than those in the direction of under-enforcement. One premise of this view is that under-enforcement results in market problems that are likely to be corrected by innovation or other market developments. As noted above, this report assesses the state of the evidence on entry and innovation and concludes that such self-correction is unlikely to be prompt and effective, in part because digital platforms that have achieved market power possess formidable barriers that inhibit entry and innovation. The assumption that over-enforcement is costly is reflected in aspects of antitrust doctrine applicable to exclusionary conduct, vertical contracts, and merger review as well as in courts holding antitrust plaintiffs to demanding standards of proof.

The relative concerns about the risks and cost of over-enforcement and under-enforcement embodied in current antitrust law has been subject to increasing criticism. This report concludes that the tolerance of antitrust law for under-enforcement should be reassessed and recalibrated. Careful recalibration of the benefits and costs of different mistakes is likely essential to the development of more aggressive antitrust law that remains consistent with the principles described above.

While US antitrust law has long been flexible in combatting anti-competitive conduct, there is increasing concern that it has been underenforced in recent years. First, there is increasing evidence that the enforcement agencies and courts have permitted too many mergers between competing firms that have led to post-merger price increases and other indications of increased

market power.[128] Vertical mergers are rarely challenged by the enforcement agencies,[129] and claimed or expected merger-related efficiencies are often not realized. Second, monopsony—market power of buyers or employers—appears to be a growing problem.[130] Recent studies suggest that labor markets are less competitive than previously thought and employers have exercised market power against workers in those markets.[131] Third, there have been few antitrust challenges to exclusionary conduct since the government's 1998 case against Microsoft, and courts have in several instances been hostile to such cases and have imposed daunting proof requirements on plaintiffs. Apparent under-enforcement is in part due to courts' reliance on so-called Chicago School assumptions that do not have a sound theoretical or empirical basis.

Regardless of whether or not antitrust enforcement has failed to keep up with conduct in the economy more generally, the challenge of enforcing in the area of digital platforms presents new issues. The platforms create new competitive environments; they provide opportunities for new types of anticompetitive conduct; and they create new economic and conceptual challenges for antitrust enforcement. This section is focused on analysis and recommendations designed to help such future enforcement, though that enforcement will often be addressed to conduct that occurred in the past.

The challenges facing future antitrust enforcement are more than just analytical and intellectual. Antitrust law and its application by the courts over the past several decades have reflected the

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[128] *See* JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY 156, 159 (2014); Jonathan B. Baker, Presentation, Has the US Economy Become More Concentrated and Less Competitive: A Review of the Data (Sept. 13, 2018), https://www.ftc.gov/system/files/documents/public_events/1398386/georgetown-deck-913.pdf, at 39 (listing six reasons to believe that industry concentration cannot be explained by scale economics, including the fact that various forms of anticompetitive behavior are "insufficiently deterred" and that "market power is durable"); John E. Kwoka, *The Structural Presumption and the Safe Harbor in Merger Review: False Positives or Unwarranted Concerns?*, 81 ANTITRUST L.J. 837 (2017); John Kwoka, *The Changing Nature of Efficiencies in Mergers and in Merger Analysis*, 60(3) ANTITRUST BULL. 231 (2015); Leemore Dafny et al., *Paying a Premium on Your Premium? Consolidation in the US Health Insurance Industry* 102 AMER. ECON. REV. 1161, 1163 (2012) ("[T]he mean increase in local market [firm concentration] between 1998 and 2006 (inclusive) raised premiums by roughly 7 percent from their 1998 baseline"); Orley Ashenfelter & Daniel Hosken, *The Effect of Mergers on Consumer Prices: Evidence from Five Mergers on the Enforcement Margin*, 53 J.L. & ECON. 417 (2010). *But see* Michael Vita & F. David Osinski, *John Kwoka's Mergers, Merger Control, and Remedies: A Critical Review*, 82 ANTITRUST L.J. 361 (2018). *See also* Robert B. Kulick, *Ready-to-Mix: Horizontal Mergers, Prices, and Productivity* (U.S. Census Bureau, Ctr. for Econ. Studies, Working Paper No. 17-38, 2017), https://papers.ssrn.com/abstract=2637961; Bruce A. Blonigen & Justin R. Pierce, *Evidence for the Effects of Mergers on Market Power and Efficiency* (NBER, Working Paper No. 22750, 2016), https://www.nber.org/papers/w22750, at 24.

[129] *See* D. Bruce Hoffman, Acting Director, Bureau of Competition, Fed. Trade Comm'n, Vertical Merger Enforcement at the FTC, Address at the Credit Suisse 2018 Washington Perspectives Conference (Jan. 10, 2018), https://www.ftc.gov/system/files/documents/public_statements/1304213/hoffman_vertical_merger_speech_final.pdf (admitting that "vertical merger enforcement is . . . a small part of [the FTC's] merger workload").

[130] *See, e.g.*, Michael Kades, *In Conversation with Herbert Hovenkamp and Ioana Marinescu*, EQUITABLE GROWTH (Oct. 11, 2018), https://equitablegrowth.org/in-conversation-with-herbert-hovenkamp-and-ioana-marinescu.

[131] Elena Prager & Matt Schmitt, *Employer Consolidation and Wages: Evidence from Hospitals* (Washington Center for Equitable Growth Working Paper, 2019), https://equitablegrowth.org/working-papers/employer-consolidation-and-wages-evidence-from-hospitals.

now outdated learning of an earlier era of economic thought, and they appear in some respects inhospitable to new learning. Antitrust enforcement better suited to the challenges of the Digital Age may therefore require new legislation.

Box V
EU Competition Law

EU competition law, like US antitrust law and the competition laws of most nations, is intended in large part to promote economic welfare by prohibiting private conduct that injures or is likely to injure competition. Not surprisingly in light of this shared objective, US and EU law are very similar.

With respect to market power, similar to US antitrust law, a firm does not violate the EU Competition laws if it gains power by competing on the merits rather than as a result of anticompetitive conduct. EU Competition law only condemns the abuse of a dominant position. An abuse, under EU law, may however include a wider range of prohibited exclusionary and exploitative practices than under US antitrust law. As a result, some practices which may not trigger enforcement action under US antitrust law, may nonetheless be regarded as infringing EU competition law.

In this context, it is also worth noting the (wider) goals of EU competition law. According to the European Commission, competition on the market is protected 'as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources.'[1] This notwithstanding, EU competition law has also consistently been held to protect 'not only the interests of competitors or of consumers, but also the structure of the market and, in so doing, competition as such.'[2] Moreover, a genuinely indigenous objective is worthy of note, namely that of promoting European market integration.[3]

The multitude of competition goals, and their position within the wider normative EU values may sometimes contribute to possible inconsistencies between the EU and US analysis.[4]

EU Competition law is enforced both at public and private levels; public enforcement is carried out by the European Commission and by the Competition Authorities of the member states. Private enforcement takes place in the courts of the member states, where private parties may bring follow-on or stand-alone damage claims.

1 European Commission, 'Guidelines on the Application of Article 81(3) of the Treaty' [2004] OJ C101/97, para 13 (hereinafter 'the General Guidelines').

2 Case C-501/06 P *GlaxoSmithKline Services Unlimited v Commission and Others* [2009] ECR I-9291, para 63. *See* also Case C-8/08 *T-Mobile Netherlands and Others* [2009] ECR I-4529, paras 31, 36, 38-39; Council Regulation (EC) 1/2003 on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty [2003] OJ L1/1, Recital 9; European Commission, 'Green Paper on Vertical Restraints in EC Competition Policy' COM(96) 721 final, para 180.

3 Information Service High Authority of the European Community for Coal and Steel Luxembourg, 'The Brussels Report on the General Common Market' (June 1956) (Spaak Report); David J Gerber, 'The Transformation of European Community Competition Law?' [1994] Harvard Intl LJ 97, 102.

4 Ezrachi, Ariel, EU Competition Law Goals and the Digital Economy (June 6, 2018). Oxford Legal Studies Research Paper No. 17/2018. Available at SSRN: https://ssrn.com/abstract=3191766

c. Special Challenges Presented by Technology Platforms

Technology platforms present particular challenges for antitrust enforcement. Markets tip and resulting market power is durable, so even effective antitrust enforcement is unlikely to generate fragmented markets. Nonetheless, enforcement that protects competition on the merits in the first stage and prevents exclusionary conduct in the second stage will help ensure that market-participants make unfettered choices among competing platforms and that entry and innovation are not inhibited by private rent-seeking. Additionally, these markets move very quickly in areas such as new product introduction, foreclosure, and tipping. Antitrust litigation does not move quickly. Effective antitrust enforcement should move as rapidly as is practicable. However, enforcers will be most effective when they choose enforcement priorities and remedies to generate optimal deterrence of anticompetitive conduct.

As explained above, digital platforms are able to exploit behavioral biases to their advantage. Economists describe these strategies as falling into two conceptually distinct categories of conduct: exclusive (strategies that foreclose competition) and collusive (strategies that cause higher prices).[132] The former occurs when platforms exploit behavioral biases to keep consumers attached to their platforms and make switching to alternatives more difficult. These tactics generally make consumers less receptive to competitive alternatives—they lower contestability—and thus raise entry barriers. Platforms also exploit behavioral biases—such as hyperbolic discounting and limited self-control—to extract surplus from both consumers and content providers. Strategies such as offering addictive content at moments when consumers lack self-control increase time spent on the platform and profitable ad sales even as the platform lowers the quality of content. These tactics increase the welfare costs of market power.

Many technology platforms are distinctive because they provide valued services to consumers without charging a monetary price. Instead, consumers barter their attention and data to the platforms in exchange for these services. The platforms use that attention and data to generate monetary payments from advertisers. While a barter transaction is, in principle, subject to antitrust scrutiny just like any other transaction, antitrust enforcement has had vastly more experience with transactions based on monetary prices, and that experience has prompted the development of sophisticated tools to analyze money prices.[133] Where monetary prices are fixed at zero while quality changes over time—in response to changes to the nature of the services, privacy protections, content offerings and the like—the quality-adjusted prices change. Because economists, antitrust agencies, and courts have less experience with quality, they lack equally

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[132] *See* Steven C. Salop, Practices that (Credibly) Facilitate Oligopoly Co-ordination, in NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE 265 (Joseph E. Stiglitz & G. Frank Mathewson eds., 1986

[133] For example, the US agencies' traditional definition of an antitrust market is one in which a monopolist could profitably raise price by a non-insignificant amount for a significant period of time. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, 2010 HORIZONTAL MERGER GUIDELINES (2010), https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf, at 9, § 4.1 (defining the hypothetical monopolist test).

sophisticated tools for analyzing changes in quality-based prices. This is partially because quality naturally presents itself in a less quantified form than price, but also because in regular markets price often adjusts to quality, not the other way around, so economists have been able to rely on price as one measure of quality. When enforcers are able to quantitatively link quality to price, they will be better equipped to fit digital cases into older, price-centered jurisprudence.

Technology platforms also pose unusual challenges for antitrust merger enforcement. To the extent that platforms are in winner-take-all or winner-take-most markets, mergers among significant, existing competitors, which are the mergers most subject to antitrust challenge, are likely to be rare. Instead, competition in such markets is largely for the future, often in evolving and very different markets. This competition is sometimes called "competition for the market" or "leapfrog" competition. In this context, acquisition by a dominant platform of a much smaller and possibly nascent firm could be very damaging to competition if, absent the acquisition, the smaller firm would develop into a major competitive threat or would lead to significant change in the nature of the market. In a concentrated market structure, this potential competition from very small entrants may be the most important source of competition faced by the incumbent firm.[134]

The problem is that it is very difficult to know at the time of an acquisition whether the acquired firm is likely to develop into a competitor or whether, to the contrary, acquisition by the platform offers the most promising path to the commercial development and use of the acquired firm's new technology or an essential exit strategy for investors in the acquired firm. Antitrust agencies and antitrust law need to develop a better understanding of the circumstances under which acquisitions of nascent competitors might be anticompetitive.[135] Enforcers may have to learn to think more as venture capitalists do and understand their analytics in order to better identify

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[134] The D.C. Circuit in *Microsoft* endorsed this principle. *See* United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001) (en banc) (per curiam) ("[I]t would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven, competitors at will.").

[135] In addition, because small acquisitions are not subject to pre-merger review under the Hart-Scott-Rodino Act, agencies are often unaware of the acquisitions until after the are consummated. The threshold for pre-merger notification was raised in December 2000 from $10 million to $50 million. While transactions under the threshold are still subject to Clayton Act enforcement, agencies do not see them in advance, may not find them at all, and can only sue to unwind them after the fact. After the filing threshold increase, there was a sharp uptick of newly non-notified mergers (between $10 and $50 million) between direct competitors—the type of mergers that likely would have been blocked during HSR review, had it occurred. Small technology mergers fall in this category also and are rarely reviewed or challenged. *See* Thomas Wollman, *Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act*, AMER. ECON. REV. INSIGHTS (forthcoming 2019), https://www.aeaweb.org/articles?id=10.1257/aeri.20180137. An example of a problematic merger of this type that was challenged by DOJ after consummation is Bazaarvoice-PowerReviews. United States v. Bazaarvoice, 3:13-cv-00133-WHO, 2014 WL 203966 (N.D. Cal., Jan. 8, 2014). While the government prevailed in that litigation, because the two software firms had gone some way down the integration path, the result was arguably not as favorable for consumers as if the transaction had been notified and blocked ex ante which would have preserved two robust competitors. In general, the evidence demonstrates that firms act quickly to obtain market power in the absence of government enforcement, and that the requirement to notify the government serves as an important deterrent to anticompetitive mergers.

harms. A pattern of repeated purchases of small potential competitors that could have developed into substitutes, or an acquisition price that reflects a sharing of monopoly rents, might be useful indicators of possible competitive risks.

Antitrust law might also have difficulty policing conduct by established technology firms that tends to exclude or marginalize smaller rivals. Recall that at launch a platform invites and encourages complementors to provide content and functionality on its platform. It does this when it is competing for consumers' attention against other platforms because it wants its platform to be attractive. A successful platform creates an ecosystem that is valuable to consumers. However, one or both of the following issues may arise. In the first, a complement to the platform seeks to become its horizontal competitor. In the second, the platform seeks to become a horizontal competitor of one of its complements. Let us take these one at a time.

First, a complement can develop the ability to form a relationship with the end user that is sufficiently free-standing and valuable to take the user off the platform and into a separate relationship with the complement. The platform has an incentive to foreclose the complement to prevent this loss of market power and profit. Because the complement is transitioning into direct horizontal rivalry with the platform, US law does not have any trouble recognizing antitrust violations of this form. For example, content providers like Yelp are Google's complements—people want to be able to find Yelp reviews via Google—but Yelp is also a search engine that could grow to rival Google search. Google has entered the restaurant review market with its map product, and Yelp now alleges that Google is engaging in foreclosure.[136]

Second, if the platform observes that a complement (say, complement Z) is earning strong profits, the platform may seek to enter that complementary market. Because the platform and rival complement Z providers are now horizontal competitors, the platform has the incentive—and, often, the ability—to foreclose those competitors. This could take the form of banning rival complements from the platform, reducing their ability to interoperate, raising their costs, steering customers elsewhere, and so forth. If the platform's new product Z is a wonderful innovation, there will be an efficiency (in the form of higher quality) to weigh against any harms from less competition.[137] At root, there is a fundamental question about whether all the rents of the platform are part of the competitive return to the creator of the platform, particularly if the complementors' added-value can be driven to zero once the network effects are operational. In a setting with single-homing users, those complements may have no bargaining power ex post and the platform may have the incentive and ability to give them a share of zero. This is a

[136] *See* Duhigg, *supra* note 23.
[137] Lina Khan, *Amazon's Antitrust Paradox*, 126 Yale L.J. 710, 780-83 (2017). *See also* Feng Zhu & Qihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRAT. MGMT. J. 2618, 2618 (2018) (finding that "[w]hile Amazon's entry discourages affected third-party sellers from subsequently pursuing growth on the platform, it increases product demand and reduces shipping costs for consumers").

particularly interesting problem when those complementors added value to the platform at a critical competitive moment before network effects and entry barriers protected it.

Addressing this issue, the U.K. Furman Report and the EC Vestager Report both devote significant discussion to platforms being "fair" to complementors. First, a sectoral regulator is likely to be better than the antitrust laws at enforcing fairness norms. Antitrust law is focused, not on fairness itself, but on anticompetitive conduct that creates market power and might therefore permit various types of conduct that some might regard as "unfair" because, for example, a platform extracts the rents of partners that offer a good product but have no bargaining power. Because the complementor is not threatening to replace the platform, the simple exclusion theory of harm explained above does not apply directly. The situation is informally akin to the familiar "open early, closed late" strategy.[138] In the "open early, closed late," strategy a firm at first encourages others to become dependent on connecting to it and relying on it, and later uses their dependence to shut out competitors or extract monopoly rents.[139] This type of behavior might be regarded as exploitation or excessive pricing and thus deemed to be an unlawful abuse of dominance under EU law. It would violate US law only if, among other things, it enabled the platform to gain or preserve market power it otherwise would not have in either the platform market or the market in which the excluded firm did business. In the latter case under US antitrust law, this conduct might be captured under the "duty to deal" framework.

Because large technology platforms have huge scale and benefit from network effects, they are often able to engage in aggressive conduct targeted at rivals without violating existing antitrust standards. The platforms might be able to copy rivals' innovations or otherwise increase the value of their services to consumers without pricing below cost, and they might be able to insist that rivals using their platforms enter into agreements, such as agreements regarding access to consumer data, that enhance the platform's ability to compete. A platform might be able to require exclusive contracts or loyalty-based contracts that cause single-homing by one side (e.g. drivers or consumers). Such single-homing might cause the market to tip in the platform's favor and exclude a competitor. This kind of conduct often has efficiency benefits that make it difficult to challenge the conduct under the antitrust laws. Certain aspects of antitrust law might be adjusted, for example antitrust rules intended to prohibit dominant firms from engaging in conduct that would exclude an equally efficient competitor could be revised to better protect

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[138] *See* Scott A. Sher & Bradley T. Tennis, *Exploiting Others' Investments in Open Standards*, COMPETITION POL INT. (Sept. 15, 2016), https://www.competitionpolicyinternational.com/exploiting-others-investments-in-open-standards/; Carl Shapiro, Exclusionary Conduct: Testimony Before the Antitrust Modernization Commission (Sept. 29, 2005), http://faculty.haas.berkeley.edu/Shapiro/amcexclusion.pdf, at 15 ("[I]n a network industry, a firm might obtain a dominant position based in part on certain 'open' policies that induce reliance by complementary firms, and then later exploit that position by offering less favorable interconnection terms or by refusing to interconnect with them altogether.").

[139] For an example, see the discussion of Cisco-Arista at note 16, *supra*, and accompanying text.

smaller competitors. Nonetheless, it is unlikely that such adjustments would entirely eliminate the competitive advantages inherent in large firms with substantial scale and scope economies.

Pinpointing the locus of competition and therefore the relevant market in which technology platforms compete can also be challenging because the markets are multisided and are often ones with which economists and lawyers have little experience. This complexity can make market definition another hurdle to effective enforcement. For example, two platforms might compete in general search, while also each offering social media and mapping functionalities, among other services. Advertisers that buy ads on searches may be a common set of customers. While courts and agencies have substantial experience analyzing advertising markets, for example, they are less knowledgeable about markets for attention or barter transactions involving data made available to providers as an unintended byproduct of using a digital platform. The problems are compounded by the facts that technologies surrounding the products' functions in digital markets are continually changing and changes in quality-adjusted prices are difficult to observe.

Only one litigated US case has explicitly addressed these issues. That case culminated in a 2018 decision by the US Supreme Court.[140] Although the decision has been praised by some conservative commentators,[141] it has been widely criticized by others.[142] The case itself involved the credit card business and what the Court called a "transaction platform," in which the platform (American Express) facilitated simultaneous transactions between consumers and merchants.[143] It should not, therefore, be legal precedent applicable to other kinds of platforms like Google and Facebook. But the case does suggest that the five-Justice majority on the Court is hostile to antitrust enforcement (at least in vertical and exclusion cases), does not understand multi-sided markets very well, and might be more influenced by ideological preconceptions than by evidence in the case or fact-finding by district court judges.[144]

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[140] Ohio v. American Express Co., 138 S. Ct. 2274 (2018).
[141] *See, e.g.*, FED. TRADE COMM'N, *Transcript: FTC Hearing #3: Competition and Consumer Protection in the 21st Century* (Session 4) (Oct. 15, 2018), https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf, at 228-235 (Vinson & Elkins partner Darren Tucker praising the *American Express* decision).
[142] *See, e.g.*, Dennis W. Carlton, *The Anticompetitive Effects of Vertical Most-Favored-Nation Restraints and the Error of* Amex, COLUM. BUS. L. REV. (forthcoming 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3328628; Herbert Hovenkamp, *Platforms and the Rule of Reason: The* American Express *Case*, COLUM. BUS. L. REV. (forthcoming 2019), https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=3060&context=faculty_scholarship; A. Douglas Melamed & Nicolas Petit, *The Misguided Assault on the Consumer Welfare Standard in the Age of Platform Markets*, 54 REV. INDUSTRIAL ORG. 1 (2019); Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 YALE L.J. 1724 (2018). *See also* FED. TRADE COMM'N, *supra* note 141, at 226 (Goldstein & Russell partner Eric Citron describing the *American Express* decision as "economically illiterate").
[143] *American Express*, 138 S. Ct. at 2277.
[144] Anthony Kennedy, one of the members of the five-justice majority in American Express, has since retired, but his replacement, Brett Kavanaugh, is likely even more ideological on antitrust matters. *See* Stephen Calkins, *How Might a Justice Kavanaugh Impact Antitrust Jurisprudence?*, PROMARKET BLOG (July 20, 2018) https://promarket.org/might-justice-kavanaugh-impact-antitrust-jurisprudence.

The harm from lack of competition in digital markets will manifest itself in quality and innovation, as well as from higher prices to advertisers. As detailed by Giulio Federico and colleagues, the impact on consumer welfare of a decline in innovation due to lack of competition is likely to be large, especially in the case of fast-moving technologies that affect many consumers and related businesses.[145] Very often the uncertainty involved in evaluating harms to innovation will be high, especially in contrast to the analysis of price forecasts. It is possible to measure pipeline projects and current R&D to obtain a sense of competitive overlap or trajectory, but the tools do not yet exist to accurately forecast the speed and direction of innovation in the longer run. Likewise, obtaining quantitative evidence about the innovations or products that *would* have been offered to consumers in the absence of the conduct is often not possible.

Perhaps in part as a result of these challenges, US antitrust has not been active in policing allegedly anticompetitive conduct by technology platforms. The government's last monopolization case involving issues raised by platforms was the Microsoft case in 1998. Today, the European Commission and the European National Competition Authorities effectively act as the global enforcers for allegedly exclusionary conduct that operates at a global level in industries such as software, chips, and digital platforms.[146]

d. Could a Reformed Antitrust Law be Effective in Dealing with Digital Platforms?

There are many ways that US antitrust law could be revised to make it more aggressive in addressing competition problems while maintaining the objective of prohibiting private conduct that reduces economic welfare. Such changes could improve competition enforcement in digital markets as well as others.

i. Reform by What Means?

With few exceptions, antitrust law has in the past evolved in a common-law-like process by which it has reflected new learning and judicial and market experience. This process is continuing, at least to some extent, as antitrust law and enforcement have recognized, for example, previously unnoticed competition problems in labor markets and doctrine has evolved to incorporate new learning about competitive problems that can be created by most favored

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[145] Giulio Federico, Fiona Scott Morton, & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption* (NBER Innovation Policy and the Economy, Working Paper, 2019) (on file with authors).
[146] *See, e.g.*, Press Release, Euro. Comm'n, Antitrust: Commission Fines Google €4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine (July 18, 2018), http://europa.eu/rapid/press-release_IP-18-4581_en.htm; Press Release, Euro. Comm'n, Antitrust: Commission Closes Formal Proceedings Against Qualcomm (Nov. 24, 2009), http://europa.eu/rapid/press-release_MEMO-09-516_en.htm; *Report on the Monitoring Exercise Carried Out in the Online Hotel Booking Sector by EU Competition Authorities in 2016*, EURO. COMM'N (2017), http://ec.europa.eu/competition/ecn/hotel_monitoring_report_en.pdf.

nation (MFN) and other vertical agreements. The challenges posed by the big technology platforms and the current populist political climate have, however, put the issue of antitrust reform before Congress in various legislative proposals. There are advantages and disadvantages to both common law evolution and new legislation.

Evolution by a common law-like process takes time. It took the Chicago School roughly 20 years to refocus antitrust law, from the early expressions of its perspective in 1950s and 1960s[147] until the Supreme Court's seminal decision in *GTE Sylvania* in 1977[148]—and the obstacles are probably greater now. While there had been ebbs and flows in antitrust enforcement in the mid-twentieth century, there was not a well-formed conceptual framework calling for aggressive enforcement that the Chicago School proponents had to overcome. The structure-conduct-performance paradigm was widely accepted as an economic proposition, but it was not embedded in a rigorous normative and conceptual antitrust framework. By contrast, oversimplified Chicago School thinking has provided a widely accepted framework for antitrust analysis for more than thirty years. Perhaps more importantly, many federal judges, appointed by an increasingly ideological vetting process, are trained in and adherents of that framework. Many seem unaware of new economic research that calls into question many of the tenets of that framework and continue to cite outdated Chicago School publications of the 1970s and 1980s. And, while there has been a great deal of economic research and literature on which a new antitrust paradigm could be constructed, there is not a widely accepted, alternative paradigm that is comprehensible to and administrable by lawyers and judges. Even if such a paradigm were written tomorrow and rapidly became widely accepted, it would likely take years for that paradigm to be manifest in doctrinal changes and market outcomes.

New legislation could in principle be adopted and take effect much more rapidly. New legislation would not need to depart from the dual requirements of bad conduct and harm to competition in the market as a whole. Such legislation might, instead, implement a recalibration of the relative tolerance of antitrust law for the risk of over-enforcement and under-enforcement by prescribing rebuttable presumptions that would ease the high proof requirements currently imposed on antitrust plaintiffs and place on defendants a more rigorous burden of proving efficiencies. Some possible new presumptions and similar reforms are outlined below.

The risk, of course, is that new legislation will not be enacted by experts committed to sound, economically-focused antitrust. It will be designed by Congress in a politically charged environment subject to pressure from the very companies who stand to lose their market power if subject to increased antitrust oversight, or who benefit if their trading partners are subjected to excessive oversight.

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[147] *See, e.g.*, Ward S. Bowman Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. (1957); Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7 (1966); Robert H. Bork & Ward S. Bowman, Jr., *The Crisis in Antitrust*, FORTUNE, Dec. 1963, at 138, *reprinted in* 65 COLUM. L. REV. 363 (1965).
[148] Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977).

There is more at stake than the risk of flawed legislation. Antitrust law has maintained legitimacy and widespread support for nearly 130 years in part because it applies to all forms of commercial activity and is not perceived as special interest legislation. In our view it is very important that antitrust law not have different rules aimed at different sectors—such as technology[149] or agriculture[150]—that would differentiate industries and undermine political support for antitrust law in general. For this reason, the report outlines a number of useful digital platform interventions that can be undertaken by a sectoral regulator rather than falling to the task of antitrust enforcement.

Equally important, antitrust law has benefited immensely from the brevity and vagueness of the key statutory provisions because they have enabled antitrust law to evolve in response to new learning. The challenge with new legislation is to embrace enduring normative principles without codifying current economic learning in a way that will prevent the law from evolving to take account of newer economic findings.

ii. Reform of Antitrust Law Through a General Tightening

As noted, most antitrust cases require uncertain decisions about unknowable future events like innovation or entry or about unobservable economic elements like demand curves, marginal cost, and product quality. Much US antitrust law reflects judgments about how to deal with such uncertainty. Those judgments are embodied in rules regarding burdens of proof, evidentiary presumptions, and decision-theoretic approaches to fact finding. They are also embodied in substantive legal doctrine, such as rules regarding predatory pricing and unilateral refusals to deal that are intended to reduce the likelihood of false positives (erroneously finding a business has violated the law) even at the risk of false negatives (erroneously deciding that a business has not violated the law). Digital markets typically have high levels of uncertainty and move quickly.

Given uncertainty, courts must determine how much weight to put on the risk of enforcement mistakes: both the likelihood of a mistake and its cost. Much US antitrust law is driven by a judgment, embraced by the Chicago School, that avoiding false positives (good conduct judged to be bad) is more beneficial to society than avoiding false negatives (anticompetitive conduct judged to be good).[151] This judgment rests on the beliefs that false positives are difficult to correct but that false negatives will be quickly corrected by market forces. These beliefs seemed

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[149] As suggested, by, e.g., Elizabeth Warren, *Here's How We Can Break Up Big Tech*, MEDIUM (Mar. 8, 2019), https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c.

[150] As suggested by, e.g., Elizabeth Warren, *Leveling the Playing Field for America's Family Farers*, MEDIUM (Mar. 27, 2019), https://medium.com/@teamwarren/leveling-the-playing-field-for-americas-family-farmers-823d1994f067.

[151] For a classic statement of this proposition, see Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 134, 135-36 (1984) ("There are limits on the ability of courts to sort the beneficial from the deleterious manifestations of [restrictive dealing] practices, and most of the time it is better not to try than to try and fail."). For a criticism of this view, see Jonathan B. Baker, *Taking the Error Out of 'Error Cost' Analysis: What's Wrong with Antitrust's Right*, 80 ANTITRUST L.J. 1 (2015).

plausible in 1975 in a Chicago School framework, but they have never been empirically demonstrated and have fallen into disrepute. Moreover, their logic is incomplete because the cost to society of a false negative, for example, depends not only on its likelihood, but also on both the magnitude and the duration of the resulting harm.

It is time for antitrust law to recalibrate the balance it strikes between the risks of false positives and false negatives. Underenforcement is likely to be costlier than previously thought because, among other things, market power of large technology platforms is more enduring. False negatives are almost certainly more common than previously thought because certain types of conduct that were previously thought to be benign are now understood to be anticompetitive. Especially in technology markets, the most important competitive threats to incumbent firms are likely to come from new entrants that might be vulnerable to exclusionary conduct or anticompetitive acquisitions when their competitive prospects are uncertain. In addition, false positives might be less common than previously thought because of the development in the past few decades of more sophisticated and reliable econometric and simulation tools for assessing conduct and market power effects. New work by economists studying multi-sided markets, network effects, the economics of nominally "free" goods and services, and restrictive vertical agreements suggests that antitrust agencies and courts will continue to improve in their ability to make sound enforcement decisions. And false positives might be less costly than previously thought because firms are finding new and different ways to realize efficiencies.

A recalibration of this type should influence antitrust law in two basic ways. First, it should provide a basis for revising certain aspects of antitrust doctrine that were adopted explicitly in order to minimize the risk of over-enforcement. Second, it could more broadly provide a basis for courts to impose less demanding proof requirements on antitrust plaintiffs, especially where facts are difficult to observe or prove directly and indirect or circumstantial proof is available. Again, we pursue our theme of harm to entry through the next section. Exclusion of existing or potential entrants is well established in both the economics literature and the antitrust jurisprudence as a harm to competition, but the law is not well calibrated to recognize this familiar tactic in its new setting.

Some of the specific ways in which the law might be revised are set forth below. They could be achieved by common law-like evolution of antitrust law or by new legislation.

iii. Specific Areas of Possible Antitrust Reform [designed for the specialist reader]

To address the issues raised by technology platforms, antitrust enforcement agencies and courts will need to understand the unusual factual context that those platforms often present and be receptive to recent and future economic learning about the implications of that context and how to apply antitrust principles to it. Economists and other experts will need to develop new

understanding and new tools to aid agencies and courts in addressing these matters, among others:

- How to assess the quality-adjusted price paid for a good or service sold in a barter transaction with zero or close to zero monetary price, and how to define and analyze markets in which a substantial portion of the sale take the form of barter transactions.
- How learning from behavioral economics and related disciplines about addictive or exploitative content should be considered in addressing issues regarding economic welfare.
- How technology platforms are able to take advantage of consumer biases (such as salience, status quo bias, or impatience) to bind consumers to their platforms and make switching to alternatives more difficult than imagined by lay intuition ("competition is one click away").[152]
- How market circumstances affect the likelihood and nature of innovation and how to evaluate innovation, whether using qualitative or quantitative tools, in both its magnitude and direction.
- How to assess potential competition from new or small firms or not-yet-identified future innovators and entrants. This is especially important in markets that depend on technological change and in which competition in the market is less important than leap-frog competition for the market.
- How to assess consumer welfare in a two-sided market. Learnings from platform economics suggests that users on different sides of a platform generally have divergent interests and thus that defining a single two-sided market—rather than two, closely interrelated ones—obscures the analysis. Platform economics also demonstrates that neither the change in the two sided price nor the change in the transaction volume is a sufficient statistic for a how a firm's conduct affects consumer welfare.[153]

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[152] David Wismer, *Google's Larry Page: 'Competition is One Click Away,' (and Other Quotes of the Week)*, FORBES (Oct. 14, 2012), https://www.forbes.com/sites/davidwismer/2012/10/14/googles-larry-page-competition-is-one-click-away-and-other-quotes-of-the-week.

[153] One of the features of such platforms is that, because of the feedback effects between the two sides of a platform and the importance of the relative prices charged on the two sides, increased output by the platform does not necessarily imply increased economic welfare. Whether increased output by the platform will increase economic welfare depends on how the benefits and costs of that output are allocated across the two sides. *See* Michael L. Katz, *Platform Economics and Antitrust Enforcement: A Little Knowledge is a Dangerous Thing*, 28 J. ECON. & MGMT. STRAT. 138 (2019); Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EURO. ECON. ASSOC. 990 (2003). There is another sense in which increased output of digital platforms does not necessarily increase economic welfare. Because of some of the unique attributes of digital platforms discussed above, consumer demand for digital services does not necessarily reflect consumer welfare from those services. *See* Section II.1,

Other antitrust reforms, including those below, would require changes to doctrine:

- Antitrust law prohibits unilateral refusals to deal only under very unusual circumstances. Current law reflects, among other things, concerns about the difficulty of determining the required terms of trade and incentive effects of required dealing on both the dominant firm and its rivals.[154] The law thus gives platforms substantial freedom both to refuse to deal with actual or potential rivals, including complements, and to deal with them only on onerous terms. Those terms might include access to customer data, interoperability, and other terms that raise the costs of rivals and enable the platforms to reinforce their dominant positions. This doctrine should be reconsidered in light of the substantial importance of large technology platforms and, in particular, their central role as distribution channels, both of which suggest that the benefits of antitrust intervention might be greater than previously appreciated.

- Predatory pricing law has been shaped in large part to avoid over-enforcement and with explicit acknowledgement that the law permits some forms of anticompetitive pricing conduct.[155] Courts have adopted a narrow and rigid notion of recoupment[156] and have made it almost impossible to prove that prices are below cost, even where it seems likely.[157] Digital goods often have a marginal cost close to zero, which makes tests that require prices to be below incremental or variable cost almost impossible for a plaintiff to meet. The law has also been construed to protect only rivals that are equally efficient at the time of the conduct at issue and thus to disadvantage smaller rivals that have not yet reached efficient scale. Predatory pricing law should be modified so that it will be better able to combat anticompetitive pricing by digital platforms and other firms.

- The paradigm of predatory pricing law has also been relied upon to assess more complex pricing strategies, such as loyalty discounts. Loyalty discounts and similar contracts can be used to drive one side of a platform to single-home, which can cause a market to tip and enhance market power. The efficiency benefits of loyalty discounts are very different from those of low prices in general; for example, unlike low prices themselves, even above-cost loyalty discounts do not necessarily increase static welfare. Antitrust law

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supra. This latter concern applies to other products as well, such as mortgages and prescription drugs; and it is very relevant to possible regulation of digital platforms, as discussed below. By contrast, while antitrust enforcers and courts need to understand those attributes of digital platforms in order to understand how the relevant markets work, antitrust law is for several reasons based on the assumption that consumer preferences reflect consumer welfare.

[154] *See, e.g.*, Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004); *see also* A. Douglas Melamed, *Exclusionary Conduct Under the Antitrust Laws: Balancing, Sacrifice and Refusals to Deal*, 20 BERKELEY TECH. J. 1247 (2006).

[155] *See* Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 231, 234 (1st Cir. 1983) (Breyer, J.).

[156] *See* C. Scott Hemphill & Philip J. Weiser, *Beyond* Brooke Group*: Bringing Reality to the Law of Predatory Pricing*, 127 YALE L.J. 2048 (2018).

[157] *See, e.g.*, United States v. AMR Corp., 335 F.3d 1109 (10th Cir. 2003).

should not rely exclusively upon predatory pricing standards to assess loyalty discounts.[158]

- The Supreme Court held in *American Express* that a plaintiff in a case involving a vertical restraint must define and prove a relevant market and may not rely on direct proof of harm to competition.[159] This holding was based on the notion that vertical restraints almost always enhance efficiency and almost never harm competition. Scholars over the past 30 years have demonstrated that that notion is false and therefore, that vertical restraints must be evaluated individually on the specific facts.[160] Where there is direct evidence of harm to competition, antitrust law should not require circumstantial evidence via a defined relevant market.

- Courts are generally very reluctant to second guess a defendant's product design decisions, even where the design harms competitors.[161] Yet product design decisions involving, among other things, app stores, mobile device screen layouts, data storage and analysis, and interface design are often key elements in digital market competition. Antitrust courts should be more willing to assess product design decisions where appropriate.

- There should be no safe harbor based on the short-term of exclusive dealing agreements and other restrictive vertical agreements when they are used by dominant platforms or firms. Such firms can use their market power to induce desired behavior in trading partners without relying on long-term contracts.[162]

Perhaps most importantly, antitrust law might be revised to relax the proof requirements imposed upon antitrust plaintiffs in appropriate cases or to reverse burdens of proof. Burdens of proof might be switched by adopting rules that will presume anticompetitive harm on the basis of preliminary showings by antitrust plaintiffs and shift a burden of exculpation to the defendant or by ensuring that plaintiffs are not required to prove matters to which the defendants have greater knowledge and better access to relevant information. These proof requirements include the following, which are likely to be important in the application of antitrust standards to technology platforms:

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[158] *See* Hemphill & Weiser, *supra* note 156.
[159] Ohio v. American Express Co., 138 S. Ct. 2274 (2018).
[160] *See* Steven C. Salop, Revising the Vertical Merger Guidelines: Presentation at the FTC Hearings on Competition and Consumer Protection in the 21st Century (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_events/1415284/ftc_hearings_5_georgetown_slides.pdf; Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1742 (2018).
[161] *See* United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (per curiam).
[162] *Compare* United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005), *with* Omega Envtl., Inc. v. Gilbarco, Inc., 127 F.3d 1157 (9th Cir. 1997).

- Mergers between dominant firms and substantial competitors or uniquely likely future competitors should be presumed to be unlawful, subject to rebuttal by defendants. This presumption would be valuable, not because it would identify anticompetitive mergers with precision, but because it would shift the burden to the party with the best access to relevant information on issues of competitive effects and efficiencies from the merger.

- Courts should not presume efficiencies from vertical transactions. Crediting of efficiencies should require strong supporting evidence showing merger-specificity and verifiability.[163]

- Courts should be more willing to permit plaintiffs to prove harm to competition by circumstantial evidence, especially where the propositions in question are not observable and there thus cannot be direct evidence.[164]

iv. A Competition Court

Revisions to the law may have little effect to the extent that judges see antitrust cases only rarely and have difficulty understanding the economic underpinning of antitrust law. One way to ameliorate this problem would be to establish a specialized antitrust court on which a certain number of Article III judges would sit for a specified term of several years. These judges could be expected to hear multiple antitrust cases and to develop substantial antitrust expertise. And, because they would be chosen from the general federal bench, they would bring the broader perspective of generalist judges. This model could be used at the trial court level, the appellate level, or both. If judges are selected from the larger pool of Article III judges and rotated on and off the specialized court, judges on the specialized court will be less likely to develop an overly narrow intellectual interpretation of antitrust law.

v. A Regulatory Partner Could Enhance Effective Antitrust Enforcement

Digital markets move quickly. Using the internet as a distribution channel to reach an installed base of billions around the globe means that new products can be rolled out quickly—as can anticompetitive conduct. The pace of antitrust enforcement is far slower—judging by the evidence, too slow—to protect small entrants except by creating deterrence. A sectoral regulator, by contrast, could be endowed with the authority to move quickly. By taking steps to preserve competition before markets have tipped or entrants have been purchased, a regulator could prove a valuable complement to antitrust enforcement.

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[163] For an example of the Court presuming efficiencies from vertical transactions with minimal evidence, see *American Express*, 138 S. Ct. at 2289.

[164] *See, e.g., id.* (injury to competition in a two-sided market); United States v. AMR Corp., 335 F.3d 1109 (10th Cir. 2003) (predatory pricing).

Antitrust enforcement proceeds on a case-by-case basis, and, apart from merger enforcement, it is largely backward looking—it looks at conduct already undertaken that is alleged to harm competition. A regulator, by contrast, can look forward and establish rules to constrain future conduct before there has been harm to competition, or before investments by the defendant and third parties have been shaped by the conduct. This is particularly useful in cases where ex post conduct remedies would be costly or ineffective.

Effective antitrust enforcement requires effective remedies. Treble damages and financial penalties can compensate for past harms and deter future bad conduct, but they do not restore competition to markets in which competition has been harmed. Even an injunction to forbear from the same or similar anticompetitive conduct going forward will not restore the lost competition if entry barriers are high. For example, if the market has tipped and network externalities are very strong, the firm that became a monopolist through violations of the antitrust laws could stop the conduct at issue and yet retain its monopoly position and the associated stream of profits. An antitrust authority that wants to restore lost competition must induce entry and/or impose structural remedies. Such remedies are likely to require detailed and often technical monitoring and years of effort. Antitrust enforcers are not suited to that type of oversight whereas a sectoral regulator is. One possible solution is to permit antitrust authorities and courts to design antitrust remedies and rely on an expert sectoral regulator to oversee their implementation. A similar approach was approved by the Supreme Court in the *Otter Tail* case.[165]

e. Regulation

For the reasons above, we believe the establishment of a sectoral regulator should be seriously considered. Given the tasks detailed by the other committees in this project as well as this one, there would be much for a regulator to do that would improve the impact of digital platforms on society. A digital regulator, should Congress choose to create one, could consider regulations and actions along the following lines. We call this potential regulator the Digital Authority (DA).

The general harm identified above is insufficient entry, and therefore insufficient competition, in digital platforms. Many of the regulations below are designed to lower barriers to entry directly. Others are responsive to the difficulty of effectively prosecuting antitrust cases today in digital markets. Regulations that mimic the antitrust laws but lower the burden of proof for the regulator and allow it to move faster are a way to gain effective enforcement in this sector, if not others.

Regulation offers a valuable addition to antitrust enforcement. It can help design the digital landscape and align the interests and incentives of platforms and key providers with those of consumers and society. When carefully designed, a regulatory regime can limit or even preempt the harmful effects detailed above, while minimizing its impact on the dynamic nature of digital

[165] Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

markets. It can offer clarity and legal certainty as to the boundaries of acceptable competition. Moreover, some of the problems discussed above may have only one structural solution: breakup of the platform. An enforcer might not want to choose that option because it is very disruptive. But less disruptive ex post remedies require ongoing monitoring, which antitrust enforcers are not well-positioned to do. Handing that job off to a regulator might better serve consumers.

Therefore, the committee suggests considering regulatory steps in conjunction with improved antitrust enforcement. It is important that regulation support, and indeed enhance, competition. The report focuses here on regulations targeted at improving competition, not other policy challenges related to digital platforms. And it is critical that any new regulatory framework avoid the well-documented pitfalls that regulation often invites (e.g., agency capture, revolving door syndrome, or incumbent protection). By having a pro-competition mandate, our hope is that the DA will be able to use the tools at its disposal in ways that resist the natural impediments to entry identified in Part I, rather than entrench powerful incumbents.

This combination of enforcement tools applied to one industry is nothing new in the US economy. Virtually every sector of our economy has required both antitrust and specific regulatory oversight, from banking to agriculture to communications, in order to promote competition and other public interest goals. The regulations we propose below are focused on, and limited to, those that will enhance competition.

The communications sector may offer the best guidance for how to approach public accountability for digital platforms. Telephone, cable, and wireless communications networks have many of the same attributes as digital platforms. Large capital expenditures to build networks, declining costs as consumers use the networks and buy more services on the networks, and the difficulties for new players to enter these markets and compete have led to a world of one or few players in each market. And just like social networking, online search, and web-delivered content, communications networks have been the lifeblood of how we communicate and practice our democracy by delivering TV, radio, text, and conversation, making competitive outcomes in the sector critical. The FCC has served as the sector-specific regulator for telecommunications. In complex industries, a sector-specific regulator can have a wider remit than an antitrust authority as is detailed in the box below.

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Box VI
The FCC Model

In the Telecommunications Act of 1996, Congress sought to affirmatively promote, not just protect, competition.[1] Congress' vision included service availability that was universal and affordable to all and a commitment to local and diverse ownership of news sources to support a robust marketplace of ideas.[2] It wanted to prevent undue discrimination, limit ownership to prevent excess market power (both horizontally and vertically in some instances), and police against abusive contract provisions that distort fair market practices.[3] Some of these goals were achieved with more success than others. And in general, the regulatory process inherently restricts behavior and therefore efficiencies. The net benefits of regulation should factor in these lost efficiencies.

The phone number portability rule was a clearly pro-competitive regulation. The FCC published the Wireless Local Number Portability rule in 2003.[4] The rule allows cell phone users to keep their phone number when they switch between wireless carriers. Prior to the rule, a consumer who wanted to take advantage of a low price or better quality with a competing provider would have had to change her phone number. This significant switching cost dampened competition between carriers. The number portability rule made switching easier and thereby strengthened competition between carriers.[5] Similarly, when portability of 1-800 numbers (e.g., 1-800-flowers) was introduced, prices of those services fell.[6]

After Congress found the cable companies to be local monopolies in 1992, Congress identified a dearth in cable competition partially caused by vertically-integrated cable operators' refusal to sell their programming to potential competitors. It therefore temporarily prohibited exclusive programming contracts, banned a variety of abusive contracting practices, and required that vertically-integrated firms sell their content to competitors under reasonable prices, terms, and conditions.[7]

1 H.R. Rep. No. 104-458 (1996) (Conf. Rep.). Even before the 1996 Act, the FCC had already begun the work of promoting competition through the broad authority it had been granted in earlier statutes.

2 47 U.S.C. § 151 (2018).

3 *Id.*; 47 U.S.C. § 160 (2018).

4 *See generally Wireless Local Number Portability (WLNP)*, FED. TRADE COMM'N, https://www.fcc.gov/general/wireless-local-number-portability-wlnp.

5 Press Release, Federal Communications Commission, FCC Observes First Anniversary of Wireless Local Number Portability (Nov. 24, 2004), https://www.fcc.gov/document/fcc-observes-first-anniversary-wireless-local-number-portability ("Wireless local number portability (LNP) eliminated a barrier to full competition in mobile telephone services and between landline and wireless services").

6 V. Brian Viard, *Do Switching Costs Make Markets More or Less Competitive? The Case of 800-Number Portability* (Cheung Kong Graduate School of Business Research Paper No. 1773R2, 2004), https://ssrn.com/abstract=371921.

7 47 U.S.C. § 251 (2018).

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The FCC Model (Cont.)

The resulting increased competition in the cable industry enabled the Direct Broadcasting Satellite industry to grow,[1] opened the door for telephone companies and smaller cable providers to compete in the provision of distribution,[2] and ultimately drove the digital video market to develop today's cable-modem-powered broadband internet services.

The 1996 Telecommunications Act included interconnection requirements between competing carriers to expand competition. The Act outlined a regulatory regime of duties to connect, of parity in quality between connections offered to the incumbent's own affiliates and competitors, and of rates and contract terms that were just, reasonable, and nondiscriminatory.[3] The regulation was designed to protect all of the businesses that needed to connect to the long-distance wire for their business but competed with a vertically-integrated local wire. Not only was raising rivals' costs prohibited, but complete foreclosure was also prohibited. This duty to deal in a non-discriminatory way is an example of a policy that arguably promoted entry of cable, local telephone, and long-distance competitors.

Similarly, the FCC developed Customer Proprietary Network Information (CPNI) rules, designed to protect sensitive business data transmitted through public telecommunications networks. The FCC recognized that a dominant platform, such as the telephone company, on which businesses rely in order to reach their customers, could easily gather and take advantage of sensitive business user data to promote the phone company's business and harm competition.[4] Phone service competitors, as well as data-driven businesses (such as home-security monitoring firms, hotels, and airlines), rely upon these rules to grow their businesses without interference from telecom network owners. The rule was so effective at promoting competition that Congress codified it in the 1996 Telecommunications Act. The harvesting of data flowing through a platform—generated by and belonging to others—is a standard business practice among today's digital platforms.

Of course, these past regulatory efforts have also helped us learn what not to do. Regulations could be and have been used to entrench incumbent firms' market power, erecting regulatory barriers to entry for new or innovative competitors.

1 47 U.S.C. § 548(a) (2018).

2 47 U.S.C. § 521(6) (2018); 47 U.S.C. § 548 (2018).

3 47 U.S.C. § 251 (2018).

4 47 U.S.C. § 222 (2018).

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The FCC Model (Cont.)

Regulatory capture is a common problem.[1] For example, AT&T has historically had a symbiotic relationship with the US government.[2] Perhaps the height of this relationship was the explicit Kingsbury Commitment in 1913, which allowed AT&T, rather than the government, to set the "solution" for managing competition.[3] The current Chairman of the FCC, Ajit Pai, has called this "a cautionary tale about the dangers of regulatory capture."[4] It was likely this close relationship that allowed the AT&T monopoly to persist for so long, eventually requiring an antitrust case to address the problem.

1 *See* George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. REG. 3 (1971) (arguing that, "as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit."); *see also* Sheldon Whitehouse, *Legal Responses to Regulatory Capture*, ACS BLOG (Nov. 9, 2018), https://www.acslaw.org/acsblog/blog-post-for-the-american-constitution-society-legal-responses-to-regulatory-capture ("We unfortunately live in a time of widespread regulatory capture. We should not pretend otherwise."); Elizabeth Warren, *Corporate Capture of the Rulemaking Process*, REG. REV. (June 14, 2016), https://www.theregreview.org/2016/06/14/warren-corporate-capture-of-the-rulemaking-process ("Under the law, it is easy for business groups to challenge a rule for being too strong or too restrictive. But it is much harder for public interest groups or ordinary citizens to challenge a rule for being too weak or riddled with loopholes."); Daniel Carpenter, *Challenges in Measuring Regulatory Capture*, REG. REV. (June 22, 2016), https://www.theregreview.org/2016/06/22/carpenter-challenges-measuring-regulatory-capture ("[T]here are limitations when it comes to preventing capture. Perhaps the most important is that capture is difficult to measure").

2 Chris Matthews, *AT&T and the Government Have Been 'Friends' for a Really Long Time*, FORTUNE (Aug. 18, 2015), http://fortune.com/2015/08/18/att-nsa.

3 Ajit Pai, Chairman, Fed. Commc'n Comm'n, Remarks on the 100th Anniversary of the Kingsburgy Commitment (Dec. 19, 2013), https://www.fcc.gov/document/pai-remarks-100th-anniversary-kingsbury-commitment.

4 *Id.*

i. The Digital Authority

To be effective, a proposed regulatory regime requires an enforcement body capable of carefully designing and enforcing the relevant regulations. We start therefore with a proposal for Congress to pass legislation creating a Digital Authority with the mandate to develop targeted regulation to achieve the goals described above and subsequently engage in monitoring and enforcement.

We anticipate that this regulator will also be tasked with non-competition digital goals, such as those in the areas of privacy, media, data-use restrictions, and consumer protection. While the antitrust agencies will employ structural interventions to protect competitive markets wherever possible, the focus of this regulator will be on both carrying out remedies for the antitrust authority that require ongoing oversight, and on developing regulations going forward that are a combination of structural safeguards, such as unbundling or separation, with limited behavioral interventions in areas where traditional antitrust tools are insufficient. Other jurisdictions that are

assessing competition in digital platforms all propose some form of regulation.[166] Having forward-looking regulations in place will increase business certainty about what conduct is permitted and how enforcement actions are likely to proceed. Ideally, this predictability and clarity will encourage companies to comply with the law, thus requiring fewer government resources for enforcement.

The DA legislation will require Congress to define the scope of regulatory power. The definition must include digital businesses that facilitate transactions of any kind (including the sale of advertising). It should have clear and broad authority over digital business models in order to prevent firms subject to regulation from evading its oversight.

We offer a menu of potential regulation, starting with the least intrusive form and building to the more severe interventions. Each type of regulation comes with costs and benefits which we briefly detail. The size of the costs and benefits will be different across settings, meaning that the choice of the best tool for any particular case may vary. The committee also suggests separating out some types of regulation that will apply to virtually all market participants while others are only appropriate tools to apply to companies with bottleneck power.

1) Bottleneck power

"Bottleneck power" describes a situation where consumers primarily single-home and rely upon a single service provider (a "bottleneck"), which makes obtaining access to those consumers for the relevant activity by other service providers prohibitively costly. As the U.K. Furman Report put it,

> [O]ne, or in some cases two firms in certain digital markets have a high degree of control and influence over the relationship between buyers and sellers, or over access by advertisers to potential buyers. As these markets are frequently important routes to market, or gateways for other firms, such bottlenecks are then able to act as a gatekeeper between businesses and their prospective customers.[167]

The finding of bottleneck power will employ consideration of the forces that, as discussed above in this Report, tend to impede entry and lead to foreclosure. The Furman Report similarly explains that this single-homing foreclosure tends to happen when users experience high switching costs, such as loss of valued personal data or reputational indicators at the point of switching; contract terms that deter switching; technical barriers to switching, such as complex switching processes or a lack of interoperability between the old service and the new or second service; tying services, which can be by contract or technical; and the inertia of defaults.[168]

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[166] *See, e.g.*, AUSTRALIAN COMPETITION REPORT, *supra* note 1, at 13-14; EC COMPETITION REPORT, *supra* note 1, at 8-10; U.K. COMPETITION REPORT, *supra* note 1, at 60-61.
[167] U.K. COMPETITION REPORT, *supra* note 1, at 41.
[168] *Id.* at 36.

Digital businesses that have this incentive and ability to develop and preserve a single-homing environment should be considered entities with bottleneck power. The DA, pursuant to congressional guidance, should have the sole authority to define bottleneck power and should update the definition either regularly or on an "as needed" basis. This is not a determination that should be left for definition by generalist judges. If Congress establishes a specialized panel of judges who review antitrust matters (as described above), it would be wise to grant the same panel sole judicial review authority over DA regulatory actions.

2) Data

Should Congress pass any laws concerning consumer data, the authority could set forth pro-competitive rules concerning the consequences of consumers' control over their data and about user choice in the sharing of data. Where users are simply and clearly informed and given the opportunity to make viable choices about which companies get their data, this valuable competitive information can be shared as the consumer prefers. The DA could design data sharing rules with the general goal of reducing single-homing and promoting entry.

3) Partnership with the Antitrust Agencies

Antitrust enforcement agencies or courts could designate the DA as the administrator and/or architect of remedies in antitrust cases. In cases where structural remedies are not appropriate to restore the lost competition, the DA could be directed to either carry out a remedy designed by the competition authority, or provide an effective behavioral monitoring remedy consistent with the DA's mandate. Since the difficulty of designing an appropriate and administrable antitrust remedy that can be enforced by a court often limits antitrust enforcement, having the option of an expert regulator to craft the remedy, or to simply be responsible for ongoing monitoring or other execution of the remedy, could better ensure cost-effective enforcement of pro-competition policies.

The DA can partner with the antitrust agency when it observes anticompetitive conduct. Due to their frequent interaction with firms in the industry and their real-time data feed, regulators may observe exclusionary conduct before the antitrust authority, and be able to give it relevant information and data.

ii. Menu of Regulations

We lay out below a menu of regulations that could be used to solve the problems identified above from least interventionist to most interventionist. For each, we describe the likely benefits and the costs.

1) Broadly Applicable Regulations

Some of these regulatory tools should be applied broadly to all firms in the industry, not only to bottleneck firms. It would be appropriate, however, to include a small business exception and perhaps even a new business exception, to allow very small entrants, who may benefit competition, time to ramp up against larger established companies.

a. Data collection

The Digital Authority could regularly collect data on market transactions, with an emphasis on data from businesses with bottleneck power. The information would allow policy makers and researchers to assess the performance of the sector and improve rule enforcement. For example, the data may include, inter alia, a sample of searches at a set of websites, a sample of queries followed by purchases at other sites, a sample of downloads of applications at an app store, or a sample of activity and ads shown on a social media site. The DA may further regularly collect information, including what types of data the business collects, how it uses that data, and who else is bartered or sold access to which elements of the data. It may include experiments to evaluate the true portability of data, the ads generated by certain user information, and other information relevant to assessing how and if competition is taking hold in the market. This program will require ongoing costs to run, but these should be reasonable compared to the benefits.

Box VII

Real Time Regulation in Financial Services

Technological innovation and the data revolution are also disrupting the financial services market, spurring regulators into action. Banks and other companies are undergoing an innovation and digitization spree, partially in response to competition by non-financial institutions and startups. This rapid change increases the challenges for regulators to follow and analyze what regulated companies are doing.

The response by some financial regulators has been to embrace new technologies focused on machine readable regulation (with the help of machine learning and AI) and digital reporting (with the help of data sharing frameworks, APIs, cloud computing, and advanced analytics). This is leading to an important shift from manual and template driven compliance and regulatory reporting to a near real time or real time regulatory reporting and supervision. Examples of authorities adopting this system range from the European Central Bank, various national central banks in continental Europe, the Monetary Authority of Singapore, or more notably, the Bank of England and the Financial Conduct Authority (FCA) in the UK.

Real Time Regulation in Financial Services (Cont.)

The Bank of England and the FCA are arguably the most advanced when it comes to digital regulatory reporting. Both were the first financial regulators to set up innovation labs and programs to interact with startups and new technologies. Their aim is to assess which regulation is suitable for machine reading, what data could be included in a standardized fashion within a digital regulatory reporting framework and how these changes will impact data models currently used for regulatory stress testing, leading to upgrades. This standardization then allows for near real time data sharing, lowering compliance costs to small and big firms alike.

Closer to home, in the United States, the SEC is implementing rules requiring trading firms to report intra-day trading data in real time. The SEC, the CFTC and the FDIC have also each set up fintech/regtech innovation labs to assess fintech solutions in general and regulatory tech solutions in particular. A Digital Authority could learn from, and expand on, these experiences of near real time regulation when overseeing an industry that has data at its core.

These data may be requested by an antitrust agency to aid in an investigation or prosecution. This ability to transfer existing data will speed up the enforcement of antitrust laws. After an investigation is opened, rather than subpoenaing the relevant data from the targeted firms and spending months arguing over definitions and formats, the antitrust authority could immediately begin analysis with the DA dataset.

In addition, the DA should make as much of these data public as possible, subject to keeping personally identifiable information and business secrets confidential. This will allow academics and nonprofits to study particular markets and consumer behavior as they do in industries such as airlines (where "Data Bank 1A" is publicly available)[169] to great public benefit. Leveraging the nonprofit and educational sector to help the DA and elected officials understand these markets is likely to be helpful and cost-effective.

b. Restrictions on Practices That Enhance Behavioral "Mistakes"

As described above, it is well known that behavioral "nudges" can lead consumers to make better choices. Better choices promote competition because they generate increased market share for firms that make better offers to consumers. The DA should have a mandate to create such "light touch" rules when they will make markets more competitive. For example, automatic renewals can discourage consumers from comparison shopping when a contract ends. A restriction on automatic renewals in that setting could lower prices market-wide. Regulations that require firms to make salient the most important terms of an offer can improve competition (e.g., a credit card offer must show the APR in large font). The U.K. likely has the most advanced regulatory

[169] *See* Bureau Transportation Stat., *Sources of Aviation Data*, U.S. DEP'T TRANSPORTATION (2017), https://www.bts.gov/explore-topics-and-geography/topics/sources-aviation-data.

regime in this regard, and the DA may be able to learn from it and other jurisdictions that have already taken these steps.[170]

c. Data Portability and Mobility

Congress may, at some point, pass a data law of some type that gives consumers control of their data. For this control to translate into more competitive markets, it must be used to lower switching costs and facilitate entry. The DA has a role to ensure that users can easily transfer their data from one service to another in industries where there is a common business model (e.g., social media, banking, or online grocery shopping). The DA will identify industries where porting is likely to aid the competitive process. Being able to port one's data directly lowers the cost of moving from one service to another, which in turn causes businesses to compete harder to keep those customers.[171] Consumers who control their data and have the right to receive it in a standardized format from the business will be able to take advantage of a new entrant by porting themselves to it, along with their own data. With information about a user's past purchases, likes, friends, and so forth, the entrant can provide a higher-quality service and grow more quickly.

The DA could propose a standard for exchanging the data, but remain open to options that industry favors, provided the format is not itself an entry barrier. The data porting standard should be updated frequently to accommodate new innovations in the industry. New innovators can think broadly about what services users might like that rely on this data, or are compensated through access to the data.[172] The Vestager Report divides data into personal and not personal; and content into volunteered, observed, and inferred.[173] The DA could determine which of these types of data must be included in the portability standard.

While a porting regulation lowers consumer switching costs greatly, they may still be high enough that demand is not sufficiently contestable to induce entry.[174] The DA could also set up a process by which a customer can choose to send her data to an entrant by authorizing it to be transferred directly from her former service provider. The DA would need to authorize the entrant to offer this facility to its consumers and establish regulations to require the incumbent to transfer the consumer's data upon the authorized request from the entrant. This may be particularly useful as the Internet of Things becomes more important; a consumer may wish to

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[170] *See* Fletcher, *supra* note 47.

[171] This is why incumbents may create or maintain systems that make data portability difficult. *See* Section I.1.B.1, *supra*.

[172] *See, e.g.*, the RadicalxChange group. *Mission and Values*, RADICALXCHANGE (2019), https://radicalxchange.org/about/. The group's chair, Glen Weyl, has argued in a paper written with colleagues that it's a mistake to view internet services priced at $0 as simply free; instead, data can be viewed as a form of labor or barter. *See* Imanol Arrieta-Ibarra et al., *Should We Treat Data as Labor? Moving Beyond "Free"*, 108 AMER. ECON. ASSOC. PAPERS & PROCEEDINGS 38 (2018), https://pubs.aeaweb.org/doi/pdfplus/10.1257/pandp.20181003 (exploring "whether and how treating the market for data like a labor market could serve as a radical market that is practical in the near term").

[173] *See* EC COMPETITION REPORT, *supra* note 1, at 8; *id.* at 24.

[174] *See* U.K. COMPETITION REPORT, *supra* note 1, at 129, § 5.11.

port the food supply service that was bundled with her new refrigerator from Amazon to an entrant. Being able to authorize the entrant to obtain all her data from Amazon will lower the cost of switching. Conceptually, automatic porting is no different from manual porting, but it is mechanized in a way that is likely to raise contestability and therefore can make entry more profitable. The Vestager Report notes that the GDPR Article 20 provides these data portability rights to Europeans. If consumers have the right to quickly and easily patronize an entrant without data lock-in, there will be more incentive to enter into these markets. However, other entry barriers remain, which we discuss below.

d. Open Standards to Promote Competition

The DA should move preemptively to prevent the consolidation of control over users' identities, as this would create a large new source of market power. The DA could create an open standard so that new entrants can easily offer their own digital identity product that allows users to access goods and services online. One example of this type of product is Solid, by Tim Berners-Lee, often named as the creator of the World Wide Web. Solid offers users a "POD" that safeguards their digital identity that they can use to connect with different services.[175] Several government-backed efforts at identity portability are underway across the world. These include Estonia's e-Estonia initiative to give citizens a unique digital identifier; India's Aadhaar, a verifiable 12-digit identity number issued for each citizen which serves as an identifier and authenticator for a variety of offline and online services; Sweden's and Norway's BankId, which allows companies, banks, and governmental agencies to identify and conclude agreements with individuals over the internet; and even self-sovereign identity solutions studied by start-ups that would use blockchain to allow individuals to own their identity credentials and control who can access their data in online services. If an individual could then port their identity to the platforms and providers they wish to use, this would again promote entry of new services and erode the switching costs of established platforms.

The DA could consider creating an open standard that would facilitate micro-payments among consumers and digital entities. The coordination needed among stakeholders to create a successful micro-payment system is substantial, and it likely will require assistance and oversight from a regulator.

e. Merger Review

The behavior that may be of greatest concern to the many policymakers studying powerful digital businesses is their acquisition of potential competitors. These acquisitions often fall below the value threshold under which the buyer would need to notify competition authorities in advance of the deal. As a consequence, authorities have limited or no ability to assess whether a

[175] *See How It Works*, SOLID (2019), https://solid.inrupt.com/how-it-works.

given deal is procompetitive or harmful to competition before it closes.[176] Markets move quickly and a competitor's window of opportunity to gain traction against the incumbent is short. For these reasons, Congress could give the DA merger review authority. Similar to the FCC's merger review role, this would be conducted concurrently with the antitrust review done by the FTC or DOJ, but with different standards and tools. It would not be prudent to alter the nation's antitrust laws to accommodate one difficult and fast-moving sector where false negatives are particularly costly. Therefore, giving additional power over merger review to the sectoral regulator is a good solution.

These specific merger regulations should require merging firms to demonstrate that the combination will affirmatively promote competition. This shifting of the burden of proof from the government (to prove harm) to the parties (to prove benefit) will assist the DA by placing the job of demonstrating efficiencies on the parties, who have a greater ability to know what they are. In some cases, the DA's review may be the only merger review conducted, as it should not be subject to the minimum size limitations on HSR filings. In particular, notification and pre-clearance could be required for any acquisition by a business designated as having bottleneck power.[177]

In its merger review process, the DA could be explicitly tasked with evaluating a given merger's likely harm to existing as well as potential competition. Another example discussed above is the case of content or complements that could expand from that position to compete with the digital bottleneck business itself. As already noted, entry from elsewhere in the vertical (or conglomerate) chain may be the most effective and promising entry point to challenge an established bottleneck business. Mergers with either of these types of entrants have the effect of neutralizing companies that might one day have posed a competitive challenge to the bottleneck business. This view of potential competition should drive DA merger review.

The decision in *Credit Suisse* and the dicta, or language, in *Trinko* greatly expanded the industries and conduct that have become, for practical purposes, exempt from antitrust scrutiny.[178] The agencies have understandably been skittish to expend limited resources bringing cases that risk being thrown out on *Trinko* grounds.[179] It is important that *Trinko* not be used to

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[176] *See* Section III.2.B, *supra*, for a further discussion of these difficulties.

[177] When network effects are strong, a digital business with bottleneck power will likely only have very small competitors. Therefore, even small transactions can neutralize an important potential competitor that is poised to grow. *See* Section III.3.B, *supra*.

[178] *See* Credit Suisse Securities (USA) LLC v. Billing, 551 U.S. 264 (2007); Verizon Communications v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004).

[179] Howard Shelanski, at the time the FTC's top antitrust economist, testified in Congress on behalf of the Commission a few years after the *Credit Suisse* decision. He argued that a narrow interpretation of *Trinko* was possible. *See Is There Life After* Trinko *and* Credit Suisse*? The Role of Antitrust in Regulated Industries: Hearing Before the Subcomm. on Courts and Competition Policy of the H. Comm. of the Judiciary*, 111th Cong. (2010) (statement of Howard Shelanski, Deputy Director for Antitrust in the Bureau of Economics at the FTC), https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-courts-and-competition-policy-committee-judiciary-united/100615antitrusttestimony.pdf [hereinafter Shelanksi

create a no-man's land where neither regulation nor antitrust are applied to harmful behavior. A traditional antitrust savings clause can no longer be relied upon, as the clause in the 1996 Telecom Act was found insufficient to protect antitrust enforcement in *Trinko*. Legislation creating regulation and antitrust enforcement for digital businesses should address this concern head on. The statute must be extremely specific, explaining for each tool and goal whether it is intended to supersede antitrust or not. Antitrust enforcers and other agencies can share dual authority with different review standards and goals. They can account for each other's determinations in a manner that will minimize inconsistencies without having one always take priority over the other. Antitrust must remain in full force except where Congress explicitly says otherwise.

The merger review process must move rapidly. The agency will need a simple and efficient merger review process so that businesses can move forward without undue delay, and the agency does not expend more resources than necessary. These concerns indicate that the burden of proof must primarily be placed on the merging parties who have the incentive, data, and resources to quickly deliver the right information to the authority. Decisions should be subject to judicial review, like a rulemaking process under the Administrative Procedure Act, with reliance on the specialist Competition Court discussed above. However, in light of the difficulty of winning antitrust cases in current US courts, judicial review will be effective at supporting the mission of the DA when combined with a more explicit and tougher enforcement statute or a Competition Court, or both.

In order for the agency to be most efficient, it should use a combination of adjudication and rulemaking for these merger transaction reviews. Rules help businesses know what behavior is proscribed, and help the agency clarify its intentions without having to wait for a good test case—or multiple test cases—to fully explain the issue. Clear rules will help companies avoid proposing anticompetitive transactions to begin with.

The cost of such regulation is duplicative merger reviews. However, given the importance of markets that tip and the uncertainty about whether an acquisition is a substitute or complement, having two reviews is perhaps helpful in getting to the right answer. If the regulator can block an incumbent platform's acquisition of potential competitors, and those competitors have the ability to quickly get their customers' data, entrants will plan to enter and compete with the platform, rather than enter and be bought. If the competitive environment is improved by data portability

Testimony]. The key facts in *Trinko* were that the legislation at issue, the 1996 Telecom Act, went farther than antitrust law; an agency, the FCC, had issued rules directly regulating the conduct at issue; and the FCC actively administered those rules. *See Trinko*, 540 U.S. 398. Shelanski argued that "[w]here a competent agency actively administers a rule whose standard for the competitive conduct at issue in litigation is more demanding on the defendant than antitrust law, the Court was right to find it relevant whether the marginal gains outweigh the potential costs of antitrust enforcement against the same conduct." Shelanski Testimony at 9. Yet he expressed concern that courts may use much broader interpretations of the line of cases. The Court in *Trinko* expressed concern about misuse of antitrust law by imprudent plaintiffs, so some preemption could be limited to private plaintiffs, with expert agencies being given greater leeway.

and the elimination of exclusionary conduct, the chance of success will rise and consumers will benefit from increased competition.

f. Interoperability

There may be settings where the DA is charged by Congress to prevent the creation of market power in the first place due to the importance of the market and the potential harms from the market power. Such a market would be a candidate for open interoperability standards that could be used by all competitors and would promote entry. The DA could oversee the creation of an open standard and its adoption in the market of interest. For example, devices in the home might be required to adhere to an open standard so that any platform could connect with any device. Without such a standard, an Apple thermostat would not function in conjunction with a Google home assistant. Under an open standard, if a consumer had purchased a number of Amazon appliances and then switched her home assistant from Amazon to Apple, she would not need to purchase a new refrigerator, thermostat, and security system because all of those devices could connect to the new platform and stay functional. It is possible that such open standards can slow down innovation that depends on the interface, but open standards will drastically reduce lock-in and market power, leading to greater incentive to innovate on the service itself.

2) Regulations that apply to firms with bottleneck power

Some regulations should apply only to firms that meet the DA's definition for bottleneck power. In these cases, the bottleneck firm has the incentive and ability to harm competition and is an important source of consumer welfare. These firms require extra monitoring to be sure they are not violating antitrust, or other laws, because of the uncertainties in technology and demand, the speed at which platforms tip, the irreversibility of tipping, and the need for expert evaluation of the design of algorithms. For all of these reasons, the cost of false negatives is high and therefore, under conditions of uncertainty, the public interest requires the DA to take a more interventionist approach.[180]

a. Mergers

The DA could be given merger review authority over all transactions involving digital businesses with bottleneck power because new competition against these entities is the most valuable for consumers. Businesses with bottleneck power would notify the DA and obtain pre-clearance for an acquisition of any size. While this would potentially result in many reviews for the DA, their number will be limited by the number of platforms with bottleneck power.

The DA may want to use its merger review authority over bottleneck firms to assess consummated mergers, just as the antitrust authority can under section 7 of the Clayton Act. Past

[180] If these regulations fail to create or maintain competitive digital markets, the DA should alert Congress that neither antitrust nor existing regulatory tools are effective so that Congress may consider stronger steps.

mergers of potential competitors that created monopoly positions could be assessed in this way. Similarly, past vertical mergers (e.g. a business that develops tools for brands to place ads and a business that runs mechanisms to set ad prices) may be found to cause higher prices or otherwise lessen competition. Any such anticompetitive mergers could be unwound by the DA.

b. Non-discrimination and foreclosure

Discrimination against current or future rivals is an important tool in a foreclosure strategy by a digital business with bottleneck market power.[181] As explained above, there are broadly two types of foreclosure of a complement: one that operates against a complement that is a potential competitor of the platform itself; and one that operates only on the platform between rival providers of content. Because large digital platforms today are conglomerates with large eco-systems of complements, this is an important area in which to enforce competition. Non-discrimination can be a helpful tool in creating a competitive environment in which entrants are protected and can thrive, while allowing a platform to vertically integrate to some degree. Non-discrimination requirements should be used only after careful study because they can also prevent efficient forms of service that enhance competition.

Anticompetitive foreclosure of a firm that is a current or potential competitor can be addressed by the antitrust authority if the antitrust law is strong enough. If not, there will be a role for the DA to develop a stronger rule in order to successfully enforce against such foreclosure by firms with bottleneck power. Furthermore, the DA could use similar rules in a forward-looking regulatory context. Effective non-discrimination rules can foster entry and diversity, create potential sources of disruptive innovation and protect start-ups and other entrants. The goal of the forward-looking regulation is to prevent a digital business with bottleneck power from exercising it in order to protect *entrants on* the platform so that they have the chance to become *competitors of* the platform.

Platform strategies to prevent multi-homing are an important category for the DA to include in its analysis of foreclosure. A platform contract to induce single-homing on one side of a multi-sided market can be used to reduce competition (e.g., a loyalty payment to drivers of a ride-sharing service). Likewise, a platform can make it costlier for users to multi-home among applications on the platform by, for example, limiting data sharing. Such strategies can foreclose entrants and harm competition; appropriate regulation could limit their use by firms with bottleneck power.

The second reason for forward-looking regulation is to prevent digital businesses with bottleneck power from inefficiently expropriating rents created by complements on their platform. As described above, this harm is less well-protected by antitrust laws so the need for enhanced

[181] For a deeper discussion of the power of discrimination in preventing entry by disintermediation, see Section II.2.B.3, *supra*.

regulation will be greater when considering foreclosure *on* the platform. The DA may be able to build on the concept of "business to platform" regulation that is developing in Europe to create effective non-discrimination rules.[182] The motivation of this EC regulatory effort is to create a "fair, predictable, sustainable, and trusted legal environment" in which complementors and content providers can invest safely and contribute to social welfare.[183] The Vestager Report states that platforms "[i]f dominant . . . have a responsibility to ensure that they regulate in a pro-competitive way. Dominant platforms should be subject to a duty to ensure interoperability with suppliers of complementary services."[184] Likewise, the Furman Report recommends developing a platform code of conduct to ensure fairness.[185]

The DA could promulgate regulations prohibiting the foreclosure of a competing content provider on a platform that is vertically integrated. The authority would need to develop rules to identify foreclosure that might depend on finding certain anticompetitive conduct, market share, or market power to make such determinations. The DA must also account for potential pro-competitive innovations that a company with bottleneck power seeks to provide. The data collected by the DA will allow it to examine such outcomes and weigh all factors to make pro-competitive determinations. This balancing will be costly and, despite its best efforts, the regulator may err. However, as the report emphasizes, non-intervention is also costly. Non-discrimination rules in the past suffered from slow and expensive adjudication, which limited their usefulness.[186] Strategies for speedy adjudication are addressed in detail below.

c. Bundling

A digital platform with bottleneck power may have a contract with complementors (e.g., retailers on an ecommerce platform) that bundles together access to their transaction data along with logistics services. This could have harmful anticompetitive effects.[187] As described above, the business may also compete against those retailers on its ecommerce site. The business could use

[182] For regulatory developments, see *Fairness in Platform-to-Business Relations*, EURO. COMM'N, https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5222469_en.
[183] *Proposal for a Regulation of the European Parliament and of the Council on Promoting Fairness and Transparency for Business Users of Online Intermediation Services*, at 3, COM (2018) 238 final (Apr. 26, 2018), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0238 ("The present proposal aims at ensuring a fair, predictable, sustainable and trusted legal environment for business users, corporate website users, providers of online intermediation services and online search engines alike, which will limit the occurrence and the impact of harmful platform-to-business trading practices occurring in certain online activities, thereby safeguarding trust in the online platform economy and preventing further legal fragmentation of the Digital Single Market.").
[184] EC COMPETITION REPORT, *supra* note 1, at 71.
[185] *See* U.K. COMPETITION REPORT, *supra* note 1, at 5.
[186] *See Leased Commercial Access Modernization of Media Regulation Initiative*, Further Notice of Proposed Rulemaking, 33 FCC Rcd 5901 (2018), https://docs.fcc.gov/public/attachments/FCC-18-80A1.pdf, at 1, n.2 and accompanying text (noting that "the [Federal Communication] Commission's 2008 Leased Access Order . . . has [been] stayed for a decade in conjunction with several judicial appeals").
[187] Retailers may accept what otherwise seems like a bad bargain due to the importance of being available to customers through the bottleneck. *See* Section II.2.B.4., *supra* for a discussion of bottleneck firms' ability to dictate business terms.

the retailers' data to learn which products are selling well and expropriate the ideas and strategies of the retailer. That data advantage over rivals can enable a company to achieve and/or maintain critical economies of scale, better predict consumer behavior, and form a powerful barrier to entry for potential competitors.[188] Bundling may also discourage multi-homing.

Another example of possibly harmful bundling could occur when a platform owner requires installation of a bundle of applications. Those apps might be chosen to block the growth of rival apps that were extracting rents from the platform or threatening to be a future competitor of the platform. The Internet of Things will create more settings in which bundling policy will be critical. Will a consumer's new fridge arrive with a supply contract from Amazon's WholeFoods? Will the consumer be able to change that contract in some period of time, or is the consumer permitted to purchase the fridge without any contract?

An antitrust case in these settings may be ineffective in protecting entrants and competition in digital bottleneck businesses due to the complexity of the problem and the slow pace of litigation. However, the DA could establish regulations that prohibit anticompetitive bundling by firms with bottleneck power. Such a firm would be required to demonstrate that its bundle was on balance procompetitive if foreclosure was alleged. The DA could require unbundling and an offer to business customers of a choice of contracts in the case of anticompetitive bundling. The DA would need to enforce such contracts.

iii. DA-Enforced Remedies for Antitrust Violations

When a company has been found liable for violating the antitrust laws, the antitrust authority is tasked with devising a remedy to restore the lost competition. A fine does not restore lost competition. No longer engaging in the illegal conduct may help the next entrant or complement that wishes to interoperate, but it will typically not restore the competition that has already been lost, particularly in the face of durable barriers to entry that protect incumbent digital platforms.

Antitrust authorities are good at enforcing structural remedies that require no ongoing monitoring, such as requiring a divestiture between a platform and its content, or the sharing of a dataset or intellectual property with the entrant, royalty-free. However, reducing entry barriers often requires a remedy that involves ongoing monitoring, as do behavioral remedies, such as firewalls between platforms and content. As mentioned above, the DA could also enforce remedies for antitrust violations identified and addressed by existing antitrust agencies.[189] Below are some types of remedies for which the DA would be a more appropriate body to enforce.[190]

[188] *See* Section I.1.B.1, and Section I.2.A.3, *supra*.
[189] *See* Section III.3.A., *supra*.
[190] For example, ongoing monitoring. *See* Section III.3.A, *supra*.

1) Data Sharing

Anticompetitive conduct may result in a market that has tipped in favor of a single provider which then benefits from unparalleled access to data. In those cases, a new entrant may find it impossible to service users with new products as it lacks the scale needed for effective operation. Data sharing could restore the lost competition. The relevant data to share may not be just historical data, but present and future data also. Because data are non-rivalrous, an incumbent can both share its data with a competitor and also keep it. Thus, access to data forms a very important remedy in the toolkit of both the antitrust authority and the DA. The Furman Report recommends that agencies mandate "data openness" (which leads to data sharing) to enhance competition.[191] The Vestager Report likewise recognized that data sharing can help level the playing field.[192]

2) Full Protocol Interoperability

Another useful tool that could restore lost competition is an open protocol and interoperability standard that would be available for entrants to use on a continuing basis and allow them to overcome network effects. A bottleneck business whose anticompetitive conduct created a monopoly position could be required to interoperate with its competitors. Entrants, previously rendered uncompetitive by network effects, could use the APIs to bring information from the incumbent bottleneck firm to its own users. In a social media context this would allow the users of the new service to see not only all the content on their own service, but also content from friends on an incumbent site that was subject to an interoperability requirement. The network barrier to entry would no longer protect the incumbent firm, which would then encourage entry into the industry. Interoperability would facilitate ongoing competition on the merits of the user experience, rather than on the size of the installed base, and potentially stimulate robust competition.

Interoperability managed by the DA would be necessary due to the ongoing monitoring needed, the likelihood of technical change, and the incentive for non-cooperation by the incumbent firm. The DA could mandate the standard protocols or APIs to be applied and tightly control the process to avoid having competition undermined by actions of the dominant firm. The DA would need a process to update protocols at the time of the launch of new functionality or innovation. It would need rules to protect the privacy and choice of users on one service as some form of access to them is granted to users of another service. With easy interoperability, users will be free to make a real choice about which service they prefer. This will encourage new market entry and vigorous competition between providers.

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[191] *See* U.K. COMPETITION REPORT, *supra* note 1, at 10, 74, § 2.79.
[192] *See* EC COMPETITION REPORT, *supra* note 1, at 98-107.

3) Non-discrimination

The clear and simple remedy for a case when a bottleneck digital business favors its own content or complement is divestiture of one of the businesses, either the bottleneck business or the content/applications. This removes both the incentive and the ability for the conduct. However, this structural remedy could be costly to consumers in various ways, leading to the conclusion that a behavioral non-discrimination remedy might be more appropriate. Requiring a dominant bottleneck to abide by a non-discrimination rule could induce competitive entry by allowing complementary businesses to thrive and eventually become horizontal competitors to the bottleneck.[193] The ongoing monitoring necessary to enforce this type of remedy in a specific antitrust case is not an ideal role for an antitrust agency. However, if the antitrust agency determines that such a remedy run by the DA would restore and protect competition, the law would allow it the option of requesting the DA to carry out the remedy. A speedy mechanism to adjudicate complaints would be of key.

4) Un-Bundling

As described above, the requirement to unbundle contracts could be an antitrust remedy that is less onerous than divestiture. Such a remedy would require ongoing monitoring that would best be performed by the DA.

iv. Aligning other policies with competition

In addition to the structural competition tools, the authority should be empowered to align privacy protection, as well as AI and algorithmic oversight, with competition goals. Privacy protections that shield consumers from misuse or over-collection of their data can be set up in a way that raises or lowers entry barriers. This point is often forgotten inside a specialist agency and therefore we strongly suggest that the DA's mandate include evaluating and then directing regulatory solutions in a pro-competitive direction.[194] Mandating that the DA have vigorous competition as one of its goals will help to make sure that potentially complex analysis takes place and that the needs of entrants are taken seriously when making policy decisions. The authority may also need to examine the development and use of algorithms to capture consumer attention, maximize advertising revenue, and drive consumer purchases or information selection, and examine how structural or other tools can promote competition in that space as well.

v. Adjudication Process

Adjudication of disputes by this new authority must be quick. Due to the fast pace of change in these industries, the short amount of time it takes to destabilize or eliminate an entrant, the

[193] *See* Section III.2.B.3.E.

[194] It is worth considering whether the competition function and staff of the DA will be more effective when incorporated into other agency tasks or separated into a distinct division.

substantial discrepancy in bargaining power between digital bottlenecks and their business customers, and the necessity to use government resources efficiently, a speedy process is crucial. This could be achieved through mandatory deadlines for dispute resolution or other procedural rules requiring the authority to produce a decision in a fixed number of days, as well as by crafting clear standards that are simple to enforce where possible.

The regulatory framework outlined above would coexist with and complement antitrust enforcement, only blocking transactions and preventing behavior that harm the public interest in ways clearly defined by Congress and that strengthen the reach of antitrust. The authority could help elucidate the common line-drawing problem of what behaviors are in or out of the reach of antitrust through communication with the antitrust enforcement agencies and with the public. An effective regulator will devise rules that promote competition and new avenues for innovation.

V. Conclusion

This report has discussed the unique combination of attributes of large digital platforms and their tendency toward entrenched market power. The entry barriers that result are in part due to certain characteristics of digital technology, but in part also due to behaviors of market participants. Consumers create entry barriers with their behavioral biases, and incumbents create entry barriers through strategic use of contracts and technologies, as well as by engaging in various other activities. The resulting monopoly or concentrated market structures do not serve consumers as well as would a market in which entry is a credible, or actual, reality.

Public policy has been slow to respond to economic harms resulting from these conditions. Such harms include advertising prices that are higher than would be expected in a more competitive environment. The markups distort decision-making and are subsequently passed through to consumers in the goods and services they buy. There are also quality harms. Platforms have incentives to provide low quality in order to keep users "engaged" and sell more ads. More generally, a lack of competition lessens the pressure on any platform to deliver high quality to its customers for fear that they will move to a rival platform. Perhaps most importantly, insufficient competition among and for digital platform position distorts and reduces innovation in a sector that has been—and, under the right conditions, will continue to be—the source of huge benefits for consumers and society.

It is unlikely that these problems will self-correct, meaning new and revised rules and incentives will be needed to prevent market power from entrenching a few dominant tech firms as economic and social gatekeepers. The United States is very far behind the frontier in antitrust enforcement, both because courts have taken a conservative view of what constitutes anticompetitive conduct and because agencies have not yet developed expertise in digital competition cases. Considerable work can be done by academics to help provide new relevant knowledge and tools to both agencies and courts. It also may be necessary for Congress to pass new legislation that revises the antitrust laws, establishes a specialist Competition Court, or

both. The committee believes that vigorously enforcing the antitrust laws under these conditions would be likely to increase entry in digital platform industries, competition, and consumer welfare. Moreover, such enforcement would result in remedies to restore competition that has already been lost as well as serve as a deterrent to future anticompetitive conduct. Finally, because the problems we identify may require action beyond antitrust, we also propose the establishment of a new digital regulatory agency, or Digital Authority.

Such an agency could increase social welfare by establishing baseline market rules and conditions that both promote competition and limit the dimensions of competition to those that benefit consumers, rather than exploit them. In addition, the agency could assist in carrying out modern competition enforcement, using burdens of proof that reflect new understandings of market behaviors.

Whether the platforms that are dominant today have achieved that position entirely on the merits bears further examination. If illegalities are determined, appropriate remedies will be needed to restore the lost competition. However strong antitrust remedies likely will require coupling with market-opening regulations to overcome market power that prevented competitive market entry. Going forward, two important goals for public policy are ensuring entry and competition *for* platforms, as well as creating competition *on* platforms. Forward-looking laws and regulations should be geared to lowering entry barriers as much as possible and vigorously guarding against exclusion, lock-in, and foreclosure in the platform context. Without a swift policy pivot to apply these combined tools, digital markets may tip toward levels of entrenched power that undermine the benefits of innovative digital businesses for American consumers.

ONLINE PLATFORMS AND MARKET POWER, PART 2: INNOVATION AND ENTREPRENEURSHIP

HEARING

BEFORE THE

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

OF THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

JULY 16, 2019

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ONLINE PLATFORMS AND MARKET POWER, PART 2: INNOVATION AND ENTREPRENEURSHIP

TUESDAY, JULY 16, 2019

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

COMMITTEE ON THE JUDICIARY

Washington, DC.

The subcommittee met, pursuant to call, at 3:00 p.m., in Room 2141, Rayburn House Office Building, Hon. David Cicilline [chairman of the subcommittee] presiding.

Present: Representatives Cicilline, Johnson, Raskin, Jayapal, Demings, Scanlon, Neguse, McBath, Sensenbrenner, Buck, Armstrong, and Steube.

Staff Present: Lisette Morton, Director, Policy, Planning, and Member Services; Madeline Strasser, Chief Clerk; Julian Gerson, Staff Assistant; Amanda Lewis, Counsel; Joseph Van Wye, Professional Staff Member; Lina Khan, Counsel; Slade Bond, Chief Counsel; Daniel Flores, Minority Chief Counsel; and Andrea Woodard, Minority Professional Staff Member.

Mr. CICILLINE. Good afternoon. The subcommittee will come to order.

Without objection, the chair is authorized to declare recesses of the committee at any time.

We welcome everyone to the second in our series of hearings investigating competition in the digital markets, this one on innovation and entrepreneurship. I now recognize myself for an opening statement.

Thirty years ago the first software for the World Wide Web was released into the public domain to create a global communications network. Within a few years search and browsing services were built onto this software to give people tools to communicate, share, and explore information through a decentralized platform that was designed to be open and nondiscriminatory.

Vint Cerf, an internet pioneer and codesigner of the internet's early architecture, testified in 2006 on behalf of Google that the overarching principle of the open internet was that no central gatekeeper should exert control over the internet. As he noted, this open and competitive environment meant that entrepreneurs with

new ideas for applications need not worry about getting permission for their inventions to reach end users.

Over the following decades the meteoric growth of our open and competitive internet revolutionized our lives, our work, our businesses, and our entire world. Millions of new, good paying jobs were created, and greater access to information promised a renewal of our democracy and social progress.

This environment also fostered the growth in dynamism of four companies that will testify at today's hearing: Google, Amazon, Facebook, and Apple. Each of these American companies have contributed immense technological breakthroughs in economic value to our country. They were started on shoestring budgets in dorm rooms and garages and are a testament to our core values as a country.

But in an effort to promote and continue this new economy, Congress and antitrust enforcers allowed these firms to regulate themselves with little oversight. As a result the internet has become increasingly concentrated, less open, and growingly hostile to innovation and entrepreneurship.

Makan Delrahim, the associate attorney general of the antitrust division recently noted, and I quote, "there are only one or two significant players in important digital spaces, including internet search, social networks, mobile and desktop operating systems, and electronic book sales," end quote.

Google controls nearly all the search market in the United States and over 90 percent of all internet searches are conducted via Google platforms.

Amazon controls nearly half of all online commerce in the United States. Despite statements from the company that it only captures a small percentage of retail in the United States, the reality is that half of American families have an Amazon Prime account, up from only 35 percent just 3 years ago, and Amazon's closest competitor, eBay, controls less than 6 percent of the market for online commerce.

Facebook controls over 58 percent of the U.S. social media market and has approximately 2.7 billion monthly active users across its platforms. Notwithstanding the growing popularity of TikTok, a Chinese video sharing app, Facebook captures over 80 percent of global social media revenue. And as Facebook cofounder Chris Hughes has recently observed, no major social networking company has been founded in the United States since the fall of 2011.

And finally, Apple is under increasing scrutiny for abusing its role as both a player and a referee in the App Store through prices that may be higher than a competitive market would allow and policies that may favor Apple's own products and services.

As the Supreme Court recently noted in Apple v. Pepper, regardless of price, and I quote, "Apple pockets a 30 percent commission on every app sale," end quote, in addition to developer membership fees and a 30 percent commission on its—on in-app purchases.

A former Apple executive who oversaw app store approvals for 7 years has also described Apple as having, and I quote, "complete and unprecedented power over their customers' devices and using this power as a weapon against competitors," end quote.

Although Apple has made a series of laudable commitments to protect consumers' privacy online, as the New York Times editorial board recently noted, its management of the App Store is, and I quote, "dangerously reminiscent of the anticompetitive behavior that triggered United States v. Microsoft, a landmark antitrust case that changed the landscape of the tech industry," end quote.

Several reports by leading economists and competition experts also suggest that the dominance of these firms is unlikely to be challenged by new rivals due to certain features that characterize digital markets. As these reports have found, the combination of high network effects, high-switching costs, and the self-reinforcing advantages of data can result in a winner-take-all market that shield dominant firms from competitive threats.

At the same time there is growing consensus among venture capitalists and startups that there is a kill zone around Google, Amazon, Facebook, and Apple that prevents new startups from entering the market with innovative products and services to challenge these incumbents.

And in recent years the number of technology startup financings has dropped significantly, from above 10,000 startup financings in 2015 to just above 6,000 in 2018, while the number of venture capital deals for investment beneath $1 million have also declined significantly.

Even when tech startups escape the investment kill zone they remain extremely reliant on these platforms in other ways. According to a recent report in Bloomberg, 17 out of 22 initial public offerings by significant technology companies, such as Lyft and Pinterest, cited online platforms as competitors or risks to their business. As this report noted and, I quote, "the tech giants have the power to change their services at any time generating havoc downstream," end quote, on smaller firms.

And while the explosion of the early internet connected local businesses to broader markets, there is growing concern that anticompetitive practices and the gatekeeper role of online platforms is now imperiling small business in our communities.

As Stacy Mitchell of the Institute for Local Self-Reliance will testify today, and I quote from her written testimony, "powerful online gatekeepers not only control market access but also directly compete with the businesses that depend on them," end quote, undermining entrepreneurship and economic opportunity.

As I said before, this trend is not compatible with the open internet or its defining features that have allowed innovation and entrepreneurship to flourish. As Tim Wu will testify today, "the United States is at risk of losing the best of our innovation culture and instead being a country of giant lumbering concerns where incremental improvement is the norm and where innovators dream of being bought not of building something of their own," end quote.

Most importantly, for purposes of today's hearing, this trend is not the inevitable consequence of technological progress. It is the result of policy choices we are making as a country. Over the past decade, the largest technology firms have acquired over 436 companies, many of which were actual or potential competitors.

For example, according to the New York Times report by Tim Wu and Stuart Thompson, of the 270 companies Google has acquired,

171 involved actual or potential competitors, and of Facebook's 92 total acquisitions, 46 involved actual or potential competitors. But not a single one of these acquisitions was challenged by antitrust enforcers. In fact, only a handful of these were closely scrutinized.

And in the 2 decades since the Justice Department filed its landmark monopolization case against Microsoft, there has not been a single complaint filed by either agency alleging anticompetitive conduct in this market. Together these enforcement decisions have created a de facto immunity for online platforms.

I hope that today's hearing provides an opportunity for a serious and sober discussion about these trends and possible paths forward to addressing them. As Tim Berners-Lee, the inventor of the World Wide Web, recently observed, unless we examine and address these trends, and I quote, "we can expect the next 20 years to be far less innovative from the last," end quote.

In other words, this hearing isn't just about the companies before us today. It is about ensuring that we have the conditions for the next Google, the next Amazon, the next Facebook, and the next Apple to grow and prosper.

With that in mind, I thank both of our panels of expert witnesses for appearing before us today. And I now recognize the gentleman from Wisconsin for his opening statement, Mr. Sensenbrenner.

Mr. SENSENBRENNER. Thank you, Mr. Chairman.

Innovation and entrepreneurship are the hallmarks of the American economy. This has been true in the past and it remains true now in the digital age. Today's hearing will focus primarily on the impacts large online platforms have on innovation and entrepreneurship. This is a critical topic, and I want to stress that we must take a fair and balanced approach to it.

There are some who advocate that the biggest platform should just be broken up because they supposedly dominate too much of the market. That impulse seems misguided for several reasons: First, just because a business is big doesn't mean that it is bad. Antitrust laws focus on the conduct of companies and whether that conduct is anticompetitive. They do not exist to punish businesses just because they are big.

Likewise, the antitrust laws do not exist to punish success; on the contrary, they exist to foster it. The most innovative, successful, and competitive companies often become very big, not through anticompetitive conduct, or violations of antitrust laws, but simply by providing a better service or product than the other companies in the marketplace.

Second, as the written statements, offered by some of our witnesses attest, big online platforms can present small companies in many sections with a better way to reach the most customers. Breaking up big businesses simply because they are large would end up hurting lots of small businesses throughout the country.

Third, breaking up big platforms won't necessarily solve a problem associated with those platforms. For example, the privacy issues are prominent in today's discussions of what is going on wrong online, but breaking up the big platforms into smaller ones might actually compound the problems of protecting privacy.

I raise these points not to dismiss the idea that there might be genuine issues of anticompetitive conduct in the online ecosystem.

However, I want to offer a counterpoint to some of the more radical positions that are being articulated.

We should take a serious look at allegations of wrongdoing. Perhaps we'll hear some of those today. But we should not rush to amend the antitrust laws or break up companies by congressional fiat based upon false notions that being big is inherently bad or that everything a big company does should be presumed to be anticompetitive.

And I yield back the balance of my time.

Mr. CICILLINE. Thank you, Mr. Sensenbrenner.

I want to just acknowledge that both the chairman of the full committee, Mr. Nadler, and the ranking member of the full committee, Mr. Collins, are on the floor right now, and when they come to committee they'll be recognized, if it's okay with Mr. Sensenbrenner, for their opening statements.

And at this time now I would like to introduce our panel. We have two panels of witnesses today. It is now my pleasure to introduce today's first panel.

Our first witness is Adam Cohen, the director of economic policy at Google. Before joining Google Mr. Cohen was an economic corespondent for Dow Jones and the Wall Street Journal reporting out of both London and Brussels. Mr. Cohen received his AB from Harvard University and his MS from the London School of Economics.

Our second witness, Matt Perault, is head of global policy development at Facebook, leading the company's global public policy planning efforts on law enforcement and human rights issues. Mr. Perault has also overseen public policy for WhatsApp, Oculus, and Facebook artificial intelligence research. Before joining Facebook he was counsel at the Congressional Oversight Panel as well as a consultant at the World Bank. Mr. Perault received his bachelor's degree from Brown University, his MPP from Duke University Sanford School of Public Policy, and his JD from Harvard Law School.

Our third witness is Nate Sutton, associate general counsel for competition at Amazon, who oversees all competition-related litigation and regulatory matters for the company. Before joining Amazon, Mr. Sutton was a trial attorney with the Department of Justice Antitrust Division for 9 years working on civil antitrust matters. He also worked at the law firm of William & Connolly, LLP, from 2001 to 2007. Mr. Sutton received his BS in nuclear engineering from North Carolina State University and his JD from the University of Chicago Law School.

The last witness in our panel is Kyle Andeer, vice president of corporate law at Apple. Prior to joining Apple Mr. Andeer spent 4 years as the deputy chief trial counsel with the Federal Trade Commission's Bureau of Competition, managing a trial staff of more than 25 attorneys and support staff. He also served as the principal competition attorney adviser to Commissioner J. Thomas Rosch as well as the DOJ's Antitrust Division. Mr. Andeer received his BA from the University of Pennsylvania and his JD from the University of California Berkeley School of Law.

We welcome all of our distinguished witnesses on our first panel and thank them for participating in today's hearing.

Now, if you would please rise, I'll begin by swearing you in.

Please raise your right hand. Do you swear or affirm under penalty of perjury that the testimony you are about to give is true and correct to the best of your knowledge, information, and belief, so help you God?

Let the record show the witnesses answered in the affirmative. Thank you. You may be seated.

Please note that each of your written statements will be entered into the record in their entirety. Accordingly, I ask that you summarize your testimony in 5 minutes. To help you stay within that time, there's a timing light on your table. When the light switches from green to yellow you have 1 minute to conclude your testimony. When the light turns red it signals your 5 minutes have expired.

Mr. Cohen, we'll begin with you.

TESTIMONY OF ADAM COHEN, DIRECTOR OF ECONOMIC POLICY, GOOGLE; MATT PERAULT, HEAD OF GLOBAL POLICY DEVELOPMENT, FACEBOOK; NATE SUTTON, ASSOCIATE GENERAL COUNSEL, COMPETITION, AMAZON; AND KYLE ANDEER, VICE PRESIDENT, CORPORATE LAW, APPLE

TESTIMONY OF ADAM COHEN

Mr. COHEN. Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the committee, thank you for the opportunity to appear before you today. My name is Adam Cohen, and I'm director of economic policy at Google. In my role I lead our public policy work on antitrust issues.

Google was founded in 1998 by two students who had a big idea: Organize the world's information and make it universally accessible and useful. In their earliest form Google search results were simply ten blue links on a web page. Twenty years later we provide our users with much richer results, including direct answers to questions, pinpoints on a map when they search for an address, and direct links to flights, products, and a range of other information.

As a responsible and successful company, we understand the importance of discussing how our business works and how we compete. We are proud of our record of continued innovation. We face constant pressure to improve our products and services, both sure signs of a competitive marketplace.

In my testimony today I will focus on the value Google and the wider technology sector are creating for the U.S. economy, our investments in new technologies, and our industry's competitive dynamics.

For the U.S. economy, Google's products and services create significant value, generating an estimated $335 billion in economic activity in 2018. This has benefited a wide range of consumers and businesses across the country. Firms that once operated in a local or regional market now reach national and international customers using our tools.

We have also made substantial direct investments in the U.S. economy. Last year we hired more than 10,000 people and invested over $9 billion in data centers and offices across the country. In February we announced plans to invest an additional $13 billion this year with major expansions in 14 States.

These new investments will give us the capacity to hire tens of thousands of additional employees and create more than 10,000 new construction jobs. Overall, the technology sector supports roughly 12 million American jobs, the equivalent to 7.6 percent of the total U.S. workforce. It is a vital source of new jobs.

And for consumers, technology companies continue to provide innovation and better prices. Prices in the tech sector fell in 2018 compared to an increase in the rest of the private sector. When it comes to investing in innovation technology companies are America's largest spenders on research and development.

As an example, Google last year spent $21.4 billion on research, development, and related areas, three times more than in 2013. Our continuing investments spur innovation that improves our own products and services and also supports and accelerates innovation among other firms. We share many of the results of our research and new technologies typically through open-source software. This helps broad communities of developers to use our advances in their own applications and services.

In terms of competition, our industry is highly dynamic and drives innovation that gives consumers better choices at lower prices. For example, when consumers search for information they can choose among Amazon, Yelp, Microsoft, Travelocity, and many other companies like these that consistently report strong user growth. If you don't want to use Google, there are many other information providers available.

We also face formidable competition around the world. Our success enables us to make the research and development investments necessary to compete in a global environment with other global players. New firms are competing too. We continue to see record-setting venture capital activity with over 8,000 venture-backed companies raising more than $130 billion in financing last year, the highest amount in over a decade.

The technology sector has had one of the highest rates of business formation and job creation in the country over the past 3 decades. In fact, in the first quarter of 2019 a record 147 American companies reached so-called unicorn status with valuations exceeding $1 billion.

These companies had a combined value of $582 billion in the first quarter of the year, the highest aggregate value ever recorded. That is a rate of new business success unrivaled elsewhere in the U.S. economy creating new companies that compete with established companies across many areas.

To conclude, even as progress and innovation expand sound regulatory frameworks help ensure our societies and economies continue to benefit from new technologies. We look forward to continued work with the committee as it examines these issues.

Thank you for your time, and I look forward to your questions.

[The statement of Mr. Cohen follows:]

Google

Written Testimony of Adam Cohen
Director, Economic Policy, Google LLC

House Judiciary Committee
Antitrust, Commercial and Administrative Law Subcommittee
"Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship"
July 16, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the Committee: thank you for the opportunity to appear before you today to discuss important questions about competition, innovation, and the dynamism of the U.S. economy.

My name is Adam Cohen, and I am Director of Economic Policy at Google. In my role, I lead our public policy work on antitrust issues. For almost a decade, I have been working with governments, legislators, and regulators around the world, discussing the competitive dynamics of the technology sector and our own products and services.

Google was founded in 1998 by two students who had a big idea: Organize the world's information and make it universally accessible and useful. In their earliest form, Google's search results were just 10 blue links on a webpage. Twenty years later, we provide our users with richer results, including direct answers to questions, pinpoints on a map when they search for an address, and direct links to flights, products, and a range of other information.

As a responsible and successful company, we understand the importance of discussing how we operate and how we compete. We regularly work with governments to discuss our products, services, and operations. In my testimony today, I will focus on four key areas we hope the Committee will consider: (i) the value Google provides for consumers and businesses; (ii) our advances in research and development; (iii) the state of investment, new business formation, and competition; and (iv) the tech sector's wider contributions to America's economic growth.

Google's Value for Consumers and Small Businesses

Google's products and services, including Search, Google Ads, Android, Google Maps, Gmail, YouTube, Google Cloud, the Chrome browser, Google Photos, our Nest and Pixel devices, and more, provide significant value to a wide range of consumers and businesses across the country. And we believe strongly in the need to invest in the American economy. We're proud that our tools and products helped create $335 billion in economic activity for millions of businesses, website publishers, and nonprofits across the U.S. in 2018. Firms that once operated in a local or regional market now reach national and international customers. There are too many success stories to count, but here are three examples:

- Georgia-based Okabashi runs Google Shopping campaigns, uses Google Analytics to monitor its web traffic, and fields reviews from happy customers with Google My Business. Okabashi has grown to 200 employees and sold over 35 million pairs of shoes.

- Rhode Island-based Crisloid, a classic-game manufacturer and wholesaler, uses Google Ads to find new customers. They've been in business for 70 years, and they say they've seen a 500 percent return on their investment in advertising with Google.

- Skinny Sticks Maple Syrup, a veteran-owned Wisconsin business, launched a Google Ads campaign to reach people searching for pure maple syrup or similar products. Skinny Sticks now moves 2,925 gallons of maple syrup each month and sells to customers in six countries and counting.

Across the wider business sector, the share of GDP going to advertising in media has dropped by roughly 25 percent in the U.S. since 2000.[1] That's because digital ads are more relevant for users and more efficient for merchants. A recent report showed that for every $3 spent on digital advertising, advertisers would have to spend $5 on print advertising to get the same impact. The benefits of these lower prices flow directly to businesses and consumers.[2]

The economic impact of Google's products and services is complemented by our direct investments in the American economy. Last year, we hired more than 10,000 people in the U.S. and invested over $9 billion in data centers and offices across the country. We have expanded within the U.S. to find new talent, improve the products and services we offer, and ensure our business works for everyone. In February, we announced plans to invest an additional $13 billion this year in U.S. data centers and offices, with major expansions in 14 states. These new investments will give us the capacity to hire tens of thousands of additional employees, and enable the creation of more than 10,000 new construction jobs in places like Ohio, Oklahoma, South Carolina, Nebraska, Nevada, Texas, and Virginia. With these additional investments, Google will now have a home in 24 states, including data centers in 13 communities.

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[1] Progressive Policy Institute, The Declining Price of Advertising: Policy Implications (2019), https://www.progressivepolicy.org/issues/government-reform/the-declining-price-of-advertising-policy-implications/.
[2] *Id.*

Google's Research, Development, and Innovation

Technology companies are America's largest spenders on research and development, reflecting robust competition. Google last year spent $21.4 billion on research, development, and related areas, three times more than in 2013.

Our continuing investments spur innovation that improves our own products and services. They also support and accelerate innovation by others. We share many of the results of our research and new technologies with broad communities of developers for use in their own applications and services. We have published over 5,000 research papers, including more than 2,000 in the last three years, in areas including algorithms, distributed systems, machine learning, robotics, and privacy and security. We have open-sourced technology platforms such as Android, TensorFlow, and Chromium, and we are the largest contributor of open-source code to GitHub, a shared repository for software development.

We are committed to advancing computer science and engineering work, developing new and improved applications. We are pioneering artificial intelligence and machine learning applications ranging from detecting cancer to improving automotive safety. Our teams are improving internet and mobile connectivity in both urban and rural communities. Our scientists and engineers are pursuing research in other advanced areas, ranging from chip design to quantum mechanics. And the annual Google Science Fair creates opportunities for students from around the country and the world to share their experiments and research.

New Investment, New Business Formation, and the Competitive Environment

When it comes to the tech sector as a whole, we continue to see record-setting venture capital activity, with over 8,000 venture-backed companies raising more than

$130 billion in financing last year — the highest amount in over a decade.[3] Similarly, the technology sector has had one of the highest rates of business formation and job creation in the country over the past three decades.[4] Silicon Valley Bank states in a recent report that 69 percent of startups surveyed successfully raised capital and the number that plan to hire is at a five-year high.[5]

Former Google employees have built more than 2,000 start-ups, and the U.S. continues to be the home of so-called "unicorns" — businesses that came from nowhere and are now each valued at over $1 billion. In the first quarter of 2019, a record 147 private American companies reached this status.[6] These companies had a combined value of $582 billion in the first quarter of the year, the highest aggregate value ever recorded.[7] Over the past decade, this list has included AirBnB, Lyft, Pinterest, Plaid, Reddit, Square, Stripe, Snap, WeWork, Uber, and many more. That's a rate of new business success unrivalled in the U.S. economy, creating new companies that compete with established technology businesses across many areas.

Beyond competition from emerging firms, we compete against other large tech firms in a wide range of business activities. Competition extends across many existing and developing fields: operating systems, mobile devices and applications, voice assistants, artificial intelligence and machine learning, virtual reality, enterprise services, cloud computing, office applications, digital advertising, mobile, video sharing, and much more.

In our core search business, consumers can choose among a range of options: Bing, DuckDuckGo, Yahoo, and many more. Specialized search services are strong

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[3] PitchBook-NVCA, Venture Monitor.
[4] Hathaway, Tech Starts: High-Technology Business Formation and Job Creation in the United States (2013), kauffman.org/-/media/kauffman_org/research-reports-and-covers/2013/08/bdstechstartsreport.pdf
[5] Silicon Valley Bank, US Startup Outlook 2018, svb.com/startup-outlook-report/us.
[6] CB Insights, Venture Capital Funding Report Q1 2019
[7] *Id.*

competitors, too, including companies like Amazon, eBay, Kayak, Travelocity, Yelp, and others. As an example, a survey last year showed that 54 percent of US product searches started on Amazon.[8] And in the last several years, it has become even easier to create new, competing search services. Merchants have low barriers to entry and use standardized data formats to put their product listings online. The same holds true in other categories like flights, hotels, and restaurants.

The Tech Sector's Wider Contributions to Economic Growth

The growth of the digital economy has fueled economic opportunity across the country. That's been good for workers, businesses, and consumers. By the numbers:

- The technology sector supports roughly 12 million American jobs — the equivalent of 7.6 percent of the total U.S. workforce — and is a vital source of new employment.[9]
- Prices in the tech / telecom / e-commerce sector fell by 0.8 percent in 2018, compared to a 3 percent price increase in the rest of the private sector.[10]
- Job growth in the tech / telecom / e-commerce sector last year exceeded the rest of the private sector, increasing 4 percent compared to 2.1 percent.[11]

Conclusion

Of course, even as progress and innovation expand, sound regulatory frameworks help ensure our societies and economies continue to benefit from new technologies. A wide range of rules already apply to technology products and services, including antitrust, advertising standards, copyright, privacy, and consumer protection.

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[8] Krista Garcia, More Product Searches Start on Amazon, *eMarketer* (Sept. 7, 2018), https://www.emarketer.com/content/more-product-searches-start-on-amazon.
[9] CompTIA, CyberStates.
[10] *Id.*
[11] *Id.*

In the face of intense competition, we are proud of our record of continued innovation. We have helped reduce prices and expand choice for consumers and merchants in the U.S. and around the world. We have created new competition in many sectors, and new competitive pressures often lead to concerns from rivals. We have consistently shown how our business is designed and operated to benefit our customers.

We look forward to continued work with the Committee as it examines these issues. Thank you for your time, and I look forward to your questions.

Mr. CICILLINE. Thank you, Mr. Cohen.
Mr. Perault is now recognized for 5 minutes.

TESTIMONY OF MATT PERAULT

Mr. PERAULT. Thank you, Chairman.

Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today. My name is Matt Perault and I'm a director of public policy at Facebook. I've been at the company for 8 years, and I focus on competition and economic policy. It's an honor to be here to discuss these important issues.

Facebook is an American success story. We were founded in a college dorm room 15 years ago, and since that time we've helped transform the way people around the world communicate, connect, and share. We believe deeply in the values of competition and innovation, values that are fundamental to the success of the American economy, and it's precisely because of these shared values that Facebook has grown from a dorm room idea to a vibrant American company.

New apps enabling people to connect, discover, communicate, and share are emerging all the time because barriers to entry for digital platforms are low. Launching a new mobile app or online service often requires minimal staff, capital, and infrastructure, and the rise of cloud computing in app stores enables these platforms to reach a global audience. Consumers move easily between different apps and services. If they don't enjoy a product or experience, they'll leave it and explore other options.

We face intense competition for all of the products and services that we provide. To name a few examples, Twitter, Snapchat, iMessage, Skype, Telegram, Google, YouTube, and Amazon offer photo and video sharing, messaging, advertising, and other services that compete with Facebook. In fact, more than 92 percent of advertising happens off of Facebook, and less than a quarter of U.S. online ad spend goes to Facebook.

And our competition isn't just here in America. We compete with companies from all around the world. TikTok, for example, a Chinese app launched less than 3 years ago has been downloaded more than 1 billion times and was the most downloaded iOS app in the world in 2018.

Facebook was transformative and groundbreaking when it launched, and we worked hard to remain so today. That's why we push ourselves to evolve and experiment to develop the next big technologies that will change how people connect and communicate in the future. I'd like to touch briefly on four of the ways that Facebook is investing in innovation.

First, through developing new products and features. When Facebook was created the site consisted mostly of text details about each user. Now users can message, read news, broadcast live video, connect with businesses, send and receive payments, and raise money for important causes, just to name a few options. And the Facebook family goes beyond software to hardware products like Portal and Oculus. We're proud of how much we've invented and innovated and of how much our products and services have improved.

Second, our investments in research and development have played an important role in fueling our innovation. We devoted nearly 20 percent of our revenue last year to investments in innovation, and we've made significant advancements in areas like artificial intelligence, virtual reality, and energy efficient data centers.

Third, our acquisitions have been a powerful force for innovation. Companies like Instagram and WhatsApp have had increased opportunities to innovate as part of the Facebook family. We are better together and that's good for users.

Fourth, Facebook has democratized advertising. Helping millions of small and medium-sized businesses our advertising platform can accommodate almost every budget, and we help advertisers reach their target audience and maximize their impact.

Our services have enabled small and medium-sized businesses to grow, create jobs, and more effectively compete with larger companies leading to more choice and better products for consumers.

We've heard countless examples of small entrepreneurs in Rhode Island, in Wisconsin, and across America who couldn't afford print or TV ads but who have been able to succeed by using our services to reach a local, national, or even global audience.

Facebook is constantly working to find new ways to help people connect, communicate, and share. Like many successful American companies before us, we've grown by taking risks, learning from our mistakes, and constantly striving to improve. We recognize that we're a work in progress and we're committed to addressing the challenges we face as a company, but we are incredibly proud of what we've accomplished so far.

I appreciate the opportunity to be here today, and I look forward to your questions.

[The statement of Mr. Perault follows:]

HEARING BEFORE
THE UNITED STATES HOUSE OF REPRESENTATIVES
JUDICIARY COMMITTEE
SUBCOMMITTEE ON ANTITRUST,
COMMERCIAL AND ADMINISTRATIVE LAW

July 16, 2019

Testimony of Matt Perault
Director of Public Policy, Facebook

I. Introduction

Chairman Cicilline, Ranking Member Sensenbrenner and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today. My name is Matt Perault, and I am a director of public policy at Facebook. I have been at the company for eight years, and I focus on competition and economic policy. It's an honor to be here today to discuss these important issues.

Facebook is a quintessentially American story. The company was founded in a college dorm room fifteen years ago and, since that time, we have transformed the way people around the world communicate, connect and share. We believe deeply in the values of competition and innovation—values that are fundamental to the success of the American economy. It is precisely because of these shared values that Facebook could grow from a dorm room idea to a vibrant and successful American company that now employs almost 40,000 people around the world.

Our heritage is one of invention and iteration. We work constantly to improve our services and products, including by introducing new features that bring people closer together and help keep them safe. This innovative spirit is what drives us to build and enhance our family of free services and products that billions of people now use to connect with friends and loved ones. Facebook also provides entrepreneurs and small and medium-sized businesses the opportunity to advertise inexpensively, to grow their businesses and engage with customers. We recognize that we are a work in progress, and we are committed to addressing the challenges we face as a company in protecting people using our services around the world. But we are incredibly proud of what we have accomplished so far.

II. Innovation and Competition in the American Digital Economy

Facebook is proud to be part of the American innovation economy, which is the envy of the world. The digital sector is a rapidly evolving and dynamic environment in which competition is vigorous. In seven of the last ten years, investment in technology has grown at a faster rate than other sectors, driven by transformative developments like artificial intelligence and virtual reality, two areas in which we have made significant contributions. During the past decade, innovative digital platforms have delivered untold

value to consumers in industries such as payments, transportation, travel, food, retail, and entertainment. The growth and success of these new entrants shows the dynamism in digital markets, the health of the innovation ecosystem in the United States and the value these companies bring to consumers and to the millions of businesses, large and small, that use them to connect and grow.

A. We face vigorous competition for our products and services

In the United States and around the world, new apps enabling users to connect, discover, communicate, and share are emerging all the time. Facebook faces intense competition for all of the products and services that we provide. To name a few examples, Twitter, Snapchat, Apple, iMessage, Pinterest, Skype, Telegram, Viber, Google, YouTube, and Amazon offer photo and video sharing, messaging, advertising, and other services that compete with Facebook.

And the competition we face is not just here in America. We have competitors all around the world, notably in China, including companies like WeChat and TikTok. TikTok, which was launched less than three years ago, has been downloaded more than a billion times and was the most downloaded iOS app in the world in 2018.

Users increasingly spread their time between more and more services. The decreasing cost of high-speed Internet connectivity and the increasing processing power and storage space on personal devices allow people to move easily between different apps, add new ones or use several at the same time. The average smartphone user has more than 80 apps on their phone, and they use close to 40 of those apps every month. And because so many services are low-priced or free, users are able to try new technologies as often as they like. If a user does not enjoy a product or experience, they can—and do—abandon it and explore the myriad other options available. This creates strong competition for every product and service Facebook offers and pressure to develop new features to attract and retain users.

B. There is fierce competition for advertising revenues

The advertising sector is incredibly dynamic, and competition for advertising spend is increasingly fierce. Companies have more options than ever when deciding where to advertise. Unlike a few decades ago, when companies had more limited options, today there are numerous different advertising channels and platforms, and hundreds of companies offering them.

As a result of this competition and choice, advertisers spread their budgets across multiple outlets and channels. Today, more than 92 percent of advertising happens off Facebook. Less than a quarter of new U.S. online ad spend goes to Facebook. To attract advertisers, we must continually demonstrate the value of placing an advertisement on our platform.

And Facebook is able to provide nearly all of its consumer services free of charge because we sell advertising. Millions of Americans use Facebook to connect with the people they care about. Recent research has shown that though Facebook offers these services at no cost, they offer significant value—a huge consumer surplus.

C. Low barriers to entry allow new entrants to compete effectively with established competitors

Constant competition keeps us on our toes and acts as a powerful force that drives us to innovate. Tech is, after all, an industry where major players rise and fall quickly. We continue to witness and experience a sector undergoing seismic change, and history shows that it is very difficult to predict which online companies will thrive over the next few years. Although we are successful today, our continued success is not guaranteed. Neither Facebook nor any other company in the tech sector can rest on its laurels, and we never take our customers for granted.

This is particularly true because barriers to entry for digital platforms are low. Software-based services can be rolled out, adopted and built upon more quickly and inexpensively than industrial products. Launching a new mobile app or online service typically requires minimal staff, capital investment and infrastructure. With the rise of cloud computing, young companies no longer need to build expensive and complex data centers; they can rent (and seamlessly scale) computing power, dramatically decreasing the time and capital necessary to start and grow their businesses. And new entrants can easily distribute their applications to millions of people through app stores that provide instant access to a global audience.

III. Facebook's Investments in Innovation

Facebook was transformative and groundbreaking when it launched fifteen years ago, and we work hard to remain so today. The intense competitive pressures we face push us to evolve and experiment with new ideas and approaches. We work every day to develop the next big technologies that will change how people connect and communicate in the future. We know that if we don't keep improving, our competitors will, and we will lose our users and advertisers.

A. Facebook delivers innovative new ways for people to connect, share and build community

When Facebook was first created, the site consisted primarily of text details about each user. Now, we offer an incredible variety of capabilities through the Facebook family of products and services. Facebook users can create new content, read news, broadcast or watch live video, play games, connect with businesses, buy and sell their own products, send and receive payments, organize groups and events, and raise money for important causes, among many other options. WhatsApp provides secure communication, including voice and video calls. Instagram offers a social experience centered around photo sharing with tools to connect and create. And the Facebook family goes beyond software, with hardware products like Portal and Oculus. In each of these areas, we face numerous

competitors at home and abroad. We are proud of how much we have invented and innovated, and of how much our products and services have improved compared to when we first began.

Providing the highest-quality features and best experience for consumers is at the heart of what we do. We offer innovative services that people use to connect and share with their friends, families and wider communities. Since we launched in 2004, Facebook has introduced new products and features, including News Feed (2006), the Like button (2009), video calling (2011), Messenger (2011), Safety Check (2014), Instant Articles (2015), Facebook Live (2015), Marketplace (2016), peer-to-peer payments (2017), personal fundraisers (2017), Watch (2017), and Watch Party (2018). Features such as our News Feed and the Like button were ground-breaking when we created them, and they have served as models for other companies and apps that have used and iterated on our ideas.

B. Facebook is investing in innovation

In order to stay relevant, Facebook invests heavily in research and development to improve the user experience. We devoted nearly 20 percent of our revenue last year to investments in innovation. We have made significant innovations and contributions in areas such as artificial intelligence (AI), augmented reality (AR), virtual reality (VR), and energy-efficient data centers.

In an effort to share our AI research and learning, we open-sourced one of our most successful AI development tools, PyTorch. PyTorch is freely available for use, lowering the barrier for other companies to create AI technology. We also released Pythia, a deep learning framework designed for vision and language tasks that is built on the PyTorch framework. Pythia enables researchers to quickly build, reproduce and benchmark AI models. Similarly, we are sharing AI Habitat, a new simulation platform created by Facebook AI Research (FAIR) that is designed to train embodied agents (such as virtual robots) in photo-realistic 3D environments. We have hundreds of projects like these available to developers on Facebook Open Source and GitHub, where our projects have hundreds of thousands of followers.

In addition to advancements in these technical areas, our innovations have also advanced our users' sense of community. Our Crisis Response feature allows people to let family and friends know they are safe using Safety Check. This feature also enables users to learn and share information about what's happening and how to help affected communities recover. Safety Check has been activated for more than 1,400 crises, and in 2018 alone, the community used Facebook's Crisis Response for over 300 crises in more than 80 countries.

We have developed charitable giving tools that make it easy for our community to raise money for causes they care about directly on Facebook. We offer tools for people, nonprofits and verified Pages to collect donations from their friends and supporters, and together, our community has raised more than $1 billion. For example, the nonprofit No

Kid Hungry has raised over $5 million from more than 200,000 donors on Facebook to help feed kids across the United States.

American innovation takes many forms: new products or services may be built from scratch, achieved through partnerships or made possible through mergers and acquisitions. Like most major American companies, Facebook's acquisitions have played an important role in fueling innovation—both for our own products and services and for the startup community. Acquisitions directly facilitate innovation by bringing together parties' complementary strengths. An acquirer, for instance, may be able to contribute resources, know-how, technology, personnel, and more to an acquired company. In turn, an acquired company may possess specialized experience or other resources that it can contribute to the buyer, allowing the combined firm to grow and succeed. This is particularly significant in the startup context, where established players help fledgling companies thrive over the long term.

These synergies accelerate innovation. They enable the development of new products and technologies and yield improvements in features and services for users. For example, Instagram and WhatsApp have had more opportunity to innovate as part of Facebook than they would have on their own—enhancing users' experience and resulting in more choice for more people overall, not less.

C. American small businesses are growing with Facebook

Facebook has democratized advertising, helping millions of small and medium-sized businesses along the way. Our advertising platform can accommodate almost every budget, and we help advertisers reach their target audience and maximize their impact. Our advertising services have enabled small and medium-sized businesses to grow, create jobs and more effectively compete with larger companies, leading to more choice and better products for consumers. We've heard countless examples of small entrepreneurs across America who could not afford print or TV ads, but who have been able to succeed by using our advertising services to reach a national—or even global—audience. Indeed, recent research shows that digital platforms like Facebook have lowered the cost of advertising and delivered better results for customers.

Our business model makes it possible for businesses of all sizes to reach the exact audiences they want to reach. Today, more than seven million businesses around the world choose to advertise with us every month, and two-thirds of small businesses on Facebook say they've increased sales because of Facebook.

IV. Competition and Regulation

Facebook is where it is today because we have worked hard and taken risks. Our efforts have resulted in significant success, and America does not punish success; it rewards it.

Facebook is working hard every day to meet the challenges we face. In tackling issues like terrorism, misinformation, hate speech, and harassment, we view our size as an asset: we can dedicate 30,000 people to keeping our users safe, invest in industry initiatives to

jointly combat terrorism, and develop the new technologies that are needed to confront these evolving threats.

As we have said previously, we believe in a more active role for governments and regulators in helping address the important and difficult issues that companies confront. Companies like Facebook shouldn't be the only ones developing the rules of the road for these issues, and we would welcome an updated regulatory framework. The rules should reflect the American ideals that have guided and shaped the creation of the Internet: they should incentivize and reward innovation, preserve the freedom for people to express themselves and for entrepreneurs to build new things, and protect society from harm. We would be happy to work with Congress to create policies that protect people, give them choices and enable developers to innovate and compete.

V. Conclusion

Facebook is constantly working to find new ways to help people connect, communicate and share. Like many successful American companies before us, we have grown by taking risks, learning from our mistakes and constantly striving to improve. I appreciate the opportunity to be here today, and I look forward to your questions.

Mr. CICILLINE. Thank you, Mr. Perault.
I now recognize Mr. Sutton for 5 minutes.

TESTIMONY OF NATE SUTTON

Mr. SUTTON. Thank you, Chairman Cicilline, Ranking Member Sensenbrenner, and members of the subcommittee. In my brief remarks today I will provide some background on Amazon's approach to business and on the industries in which we operate, I will discuss a relationship with third-party sellers that sell in our stores, and I will explain the positive effects we have on competition and the economy.

Amazon's mission is to be Earth's most customer-centric company. Our corporate philosophy is firmly rooted in working backwards from what customers want. And we seek continually to innovate, to provide customers the best experience. This principle is essential to understanding Amazon as we apply it to all areas of our business.

Amazon operates a diverse range of businesses, from retail and entertainment to consumer electronics and technology services. In each of these areas we face intense competition from well-established competitors.

For example, retail, which remains by far our largest business, is as old as human commercial experience. It has long been and continues to be characterized by intense competition at every level. New technology, such as the internet, have only made retail more competitive, reducing barriers to entry, and expanding output.

Studies show that retailers sell and customers shop in multiple stores, both offline and online. In fact, as Target and Best Buy recently announced, one of the fastest growing consumer practices is a mix of offline and online, whereby customers order products online that they later pick up in a physical store.

And there are now dozens of online marketplaces in the U.S. and around the world. The result in retail is an ever-broadening array of competitors, including many large and well-known companies like Walmart, eBay, Target, Safeway, Wayfair, and Kroger, not to mention large and growing global competitors such as Alibaba and Rakuten.

Amazon success in retail depends on our partnership with third-party sellers that sell their products right alongside our own products. We have invested heavily in these sellers, and they are growing twice as fast as Amazon's own retail and make up almost 60 percent of total unit sales in our stores.

These businesses are primarily small and medium-sized firms, and last year almost 200,000 of them sold more than $100,000 in our stores. Amazon supports these sellers because we have a strong incentive to do so. The broad selection and price competition these sellers bring to our stores are attractive to our customers.

For example, our selling partners provide the vast majority of new products in our stores. We know sellers have other ways to reach customers, so we invest in them, support them, and make continuous efforts to improve their experience.

We have dedicated teams assigned to supporting sellers, launch new tools to help them increase sales, and spend significant resources to root out bad actors and prevent fraud and abuse that

harms both sellers and customers. If we did not make these efforts on behalf of our selling partners, they would sell fewer products in our stores and more through our competitors.

Amazon's investments in retail have also benefited the economy more generally. We have invested tens of billions of dollars in infrastructure and technical services. We employ more than 275,000 people in the United States. We offer a $15 minimum wage and valuable benefits. We continue to invest in our employees through workforce training programs.

For example, just days ago, we announced an initiative to invest $700 million to provide 100,000 of our employees new skills and training to help them move into more advanced jobs or find new careers.

From our vantage point as a retailer in a highly competitive field, we offer two views for the committee's consideration. First, the technology used to provide a service is not the primary factor in a competitive analysis. Consumers benefit from all retail competition regardless of the precise business model involved. In today's retail market the notion that two products that are exactly the same do not compete with each other simply because one was ordered online and one was bought in a brick-and-mortar store makes little sense.

Second, to avoid unintentionally tilting the competitive playing field, new rules should encompass all retailers regardless of the supply models that they use.

Thank you, and I look forward to answering any questions the committee may have.

[The statement of Mr. Sutton follows:]

amazon

Statement of Nate Sutton

Associate General Counsel, Competition

Amazon.com, Inc.

before the

United States House of Representatives

Committee on the Judiciary

Subcommittee on Antitrust, Commercial and Administrative Law

July 16, 2019

Thank you, Chairman Cicilline, Ranking Member Sensenbrenner, and members of the Subcommittee. I am Nate Sutton, Associate General Counsel for Competition at Amazon. Amazon's mission is to be Earth's most customer-centric company. Our corporate philosophy is firmly rooted in working backwards from what customers want and continuous innovation to provide customers better service, more selection, and lower prices. This principle is essential to understanding Amazon, as we apply this approach to all areas of our business.

I. Amazon's Role in the Global Retail Market

Amazon operates a diverse range of businesses, from retail and entertainment to consumer electronics and technology services. Each of our businesses faces intense competition from well-established competitors.

Retail remains our largest business by far, accounting for over 80% of our total revenues. Retail is as old as human commercial experience—the market is large and well established and, while we continuously strive to innovate to serve customers better, we know they have many options. Online is just one of many ways consumers shop for products—studies demonstrate that most consumers buy, and most sellers sell, in and from multiple locations both online and offline. In fact, according to data from the U.S. Census Bureau, the vast majority of retail sales—90%—still occur in physical stores. In addition to thousands of other retailers around the world, our competitors include many large and well-known companies such as Walmart, Target, Macy's, Safeway, and Kroger.

Of course, the role of technology in retail continues to change and evolve. Ecommerce has grown steadily over the years, and selling online is now extremely common for all retailers. Technology has only made retail more competitive, as numerous multichannel retailers offer

customers a wide range of online and offline experiences. In fact, as Target and BestBuy recently announced, one of the fastest-growing consumer practices is to order products online that they later pick up in a physical store. Third-party sellers now sell online in the dozens of marketplaces in the U.S. and around the world, such as eBay, Alibaba, Walmart.com, Rakuten, and Wayfair. And at the same time, online retailers are moving into physical retail, adding brick-and-mortar stores.

The results of all of this retail competition are impressive—the retail market is healthier than ever with the National Retail Federation (NRF) estimating that overall U.S. retail sales grew 4.6% percent year-over-year in 2018 to hit a record high of $3.68 trillion, which exceeded NRF's original projections. Amazon continues to represent less than 1% of the nearly $25 trillion global retail market, and less than 4% of U.S. retail.

II. Third-Party Sellers in Amazon's Stores

The success of Amazon's stores depends on its partnership with third-party sellers. There are millions of small and medium-sized businesses around the world selling in Amazon's stores—including more than a million third-party sellers in the U.S. alone. And sales by these sellers are growing twice as fast as Amazon's own sales in our own stores. Since 1999, the gross physical merchandise sales of third-party sellers in Amazon's stores—primarily comprised of small and medium-sized businesses—have grown from $0.1 billion to $160 billion in 2018. Third-party sales have grown from 3% of the total, to 58% of our total physical gross merchandise sales. Nearly 200,000 entrepreneurs worldwide surpassed $100,000 of sales in our stores in 2018, and more than 50,000 of those entrepreneurs exceeded $500,000 in sales. On top of that, we estimate that third-party sellers have created over 1.6 million new jobs around the world.

Amazon absolutely celebrates this growth of our selling partners, which is consistent with our incentives. The broad selection and increased price competition third-party sellers provide make our stores attractive to customers. For example, our seller partners provide the vast majority of new products in our stores. It is through these sellers selling the majority of products on Amazon that we are able to honor our promise to customers of offering the lowest prices, biggest selection of products and services, and fastest and most convenient delivery options. We know these sellers have other ways to reach customers, so we invest in them, support them, and make continuous efforts to treat them well. If we did not invest and innovate in ways to improve the experience for our selling partners, they would sell fewer of their products in our stores and more through the myriad of other options available to them both online and offline.

As a result, we have invested significantly in infrastructure and technical services that help support the growth and success of our selling partners. We have dedicated teams assigned to supporting sellers directly, continually launch new tools that make it easier for our seller partners to sell, and spend significant resources to root out bad actors and prevent fraud and

abuse that harm both sellers and customers. A few examples of the innovative tools and services we offer small businesses and entrepreneurs include:

- With Fulfillment by Amazon (FBA), businesses selling on Amazon can choose to have us handle shipment of their products, returns, as well as customer service for all orders placed on Amazon.

- The Amazon Handmade store is available for artisans to sell their handcrafted products to millions of Amazon customers all over the world. Amazon uses an application process to add new Artisans to the Handmade category to ensure customers are able to buy with confidence.

- Amazon Launchpad is a program that makes it easy for startups to launch, market, and distribute their products to hundreds of millions of Amazon customers across the globe.

- Amazon Storefronts is a store featuring exclusively U.S. small and medium-sized businesses selling on Amazon. With Storefronts, customers can shop a curated collection of over one million products, and deals from nearly 20,000 U.S. small and medium-sized businesses, and learn more about profiled businesses through featured videos and stories from all 50 states.

By offering small and medium-sized businesses another low-cost way to reach consumers, and by investing to support these businesses, Amazon helps make retail even more vibrantly competitive and innovative. The reason our marketplace model has worked so well, and why both Amazon and our selling partners have thrived since we introduced it, is that we are partners—we complement each other, and together we can create a better customer experience than either could create alone. This helps explain the wide proliferation of the marketplace model by retailers of all types and sizes around the world, further intensifying competition within retail.

III. Continued Innovation and Robust Retail Growth Benefits Sellers, Customers, Workers, and the Economy

Amazon has invested tens of billions of dollars in infrastructure and technical services to help sellers reach customers around the world, from investing in our fulfillment network, to rolling out new tools for sellers, to launching dedicated stores for sellers. These investments have directly created more than 45,000 full-time, full-benefit U.S. jobs in 2018, and have increased our total workforce in the U.S. to more than 275,000. We offer a $15 minimum wage and valuable benefits including 401k, health insurance, and bonuses. Our investments also support over 680,000 indirect jobs in construction, building services, hospitality, and other industries. We invest heavily in our employees, including through programs such as Career Choice, which pays up to 95% of tuition and fees towards a certificate or diploma in qualified fields of study, leading to in-demand careers for our employees, even if those careers take them away from Amazon. We are well on our way to meeting our pledge to hire 25,000

veterans and military spouses by 2021, and through the Amazon Technical Veterans Apprenticeship program, we are providing veterans on-the-job training in fields like cloud computing.

And, as we announced just a few days ago, in one of the largest corporate retraining initiatives ever undertaken, we are investing $700 million to provide 100,000 of our employees new skills and training for the digital age to help them move into more advanced jobs or find new careers. This program will provide the training for employees to move into highly skilled technical and non-technical roles across our company's corporate offices, tech hubs, fulfillment centers, retail stores, and transportation network, or to pursue career paths outside of Amazon.

IV. Conclusion

As you examine the role of technology and innovation on competition, from our vantage point as an innovative retailer with both online and physical stores in a competitive field, we offer two perspectives for the Committee's consideration. First, the technology used to provide a service, or the business model a company deploys, is not the primary consideration in determining the scope of relevant markets in antitrust analysis or a jumping off point for sectoral regulation. In today's retail market, the notion that two products that are exactly the same do not compete with each other simply because one was ordered online makes little sense.

Second, since our early beginnings as an online bookstore, Amazon has innovated and invested heavily to help third-party sellers succeed. The result has been good for Amazon's stores, good for third-party sellers, and good for customers in the form of competitive pricing, great selection, and unprecedented convenience. Any legislation to regulate the relationship between suppliers and retailers should be done with the involvement of all relevant stakeholders and careful consideration for how each may be affected. To avoid unintentionally tilting the competitive playing field, new rules should encompass all retailers regardless of the supply models that they use.

We look forward to engaging with the Committee on these important subjects. Creating policy that is good for all stakeholders in our dynamic economy takes careful attention, and our experience has proven that focusing on customers first, and working backward from the best customer experience makes it easier to make good decisions. Technology is an important part of modern life and offers extraordinary competitive benefits that customers are only just beginning to realize. Amazon shares your core goal of embracing technology in ways that serve all customers and the broader economy, especially during times of fast-moving innovation. As technology evolves, so too will the opportunities for all of us to work together.

Mr. CICILLINE. Thank you, Mr. Sutton.

The chair now recognizes Mr. Andeer for 5 minutes.

TESTIMONY OF KYLE ANDEER

Mr. ANDEER. Thank you. Mr. Chairman, members of the committee, thank you for inviting me to speak with you today. My name is Kyle Andeer, and I am Apple's chief compliance officer, and I spend a lot of time focusing on business ethics and competition legal issues.

Apple is a proud American company, a 40-year history of innovation in very competitive markets. Our mission is to make the best products and services in the world in each of the markets where we compete. For us it's never been about making the most. It's always about making the best. We design our technology to be easy to use and safe and secure for all customers.

We see our customers' privacy as a fundamental human right, and we embed that value in everything we create. We go above and beyond to incorporate needing accessibility features to make sure everyone can get the most from their devices. And our products are made with our responsibility to the environment in mind. We are deeply proud of the role we play in democratizing coding and other high-tech skills all around the world.

In discussing Apple's online platforms, we consider five distinct categories: iOS, macOS, watchOS, tvOS, and our soon-to-be-released iPadOS. Our products run and compete on these platforms. We are very proud of each of these and feel that they are the best at each of their categories. We only create great products, not commodity products, and as a result we do not have a majority share in any one of these categories.

For Apple the competition is fierce. Our customers have an ever-growing number of choices when it comes to products and services. We compete against some of the largest companies in the world, both foreign and domestic. We work hard every day to retain and grow customer trust and to compete for their business.

Each of our platforms depends on a thriving ecosystem, from the App Store to peripherals and accessories, to partners such as service providers and car makers. Our expertise in software enables experiences like moving seamlessly between Apple devices, finding your same messages in Safari bookmarks no matter which device you use, and taking advantage of features like CarPlay that integrates your iPhone into your daily commute.

The benefits of this ecosystem and the innovation it makes possible are clear to our customers. It means, for example, world-class security and unparalleled ease of use. We are also proud to offer services where millions of artists and entrepreneurs can share their work and ideas, like Apple Music, hosting more than 50 million songs from artists around the world, podcasts where hundreds of thousands of topics are discussed and shared, and the App Store, which has spawned new opportunities from everyone from the individual entrepreneur to the biggest companies in the world.

Since its launch in 2008, the App Store has been vibrant, competitive, and ever growing. It has transformed the experience and reduced the cost of software distribution. So anyone with a great idea can invent a new app and distribute it worldwide from home.

We're proud that App Store entrepreneurs across this country have generated over 1.5 million U.S. jobs across all 50 States.

We designed the App Store to be both a safe and trusted place for customers to discover and download apps that interest them and a great opportunity for developers to start businesses. In entering the App Store every developer abides by the very same guidelines. From the student in her living room to some of the largest companies, we want to have—we want every creator to have an equal opportunity to succeed.

We work hard every day to compete for developers who want to join and stay in our ecosystem. We're proud that a good number of apps, apps like Pinterest, Spotify, Lyft, and Uber have built successful businesses through the App Store with support from our team and the developer tools we offer. The App Store provides an enormous opportunity for developers to reach millions of users overnight, and the vast majority of apps, over 84 percent share none of the revenue they make from our store with Apple.

Only a very small number of the nearly 2 million apps in the App Store are made by Apple. And in every category where our software competes we face multiple strong competitors. Apple believes users expect that their devices should provide a great experience out of the box, so our products include certain functionality like email, phone, and a music player as a baseline.

But users have various needs, and they are free to discover and use any alternatives they might prefer. For instance, if a customer wants to use iCloud—doesn't want to use iCloud, they can use Box, Dropbox, or any number of other options.

At the end of the day our only objective is to provide our customers the very best products and ecosystem in the world. It means the phone they love, the choice of accessories that enhance their experience, and millions of applications and services at their fingertips.

And when it all comes together it means the tremendous market opportunity for everyone, entrepreneurs, artists, carriers, car makers, accessory makers, and developers. We are committed to carrying this legacy forward, believing at our core that a single great idea can unlock opportunities once unimaginable. That's what defines Apple and it always will.

Apple welcomes this subcommittee's efforts to promote American innovation and entrepreneurship, and we look forward to working with you.

[The statement of Mr. Andeer follows:]

Statement of Kyle Andeer
Apple

U.S. House of Representatives Judiciary Committee
Subcommittee on Antitrust, Commercial, and Administrative Law
Hearing on "Online Platforms and Market Power, Part 2:
Innovation and Entrepreneurship"

July 16, 2018

Mr. Chairman and Members of the Committee, thank you for inviting me to speak with you today. My name is Kyle Andeer, and I am Apple's Chief Compliance Officer, focusing on business ethics and competition.

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At the end of the day, our only objective is to provide our customers the best products and ecosystem in the world. It means a phone they love, the choice of accessories that enhance their experience and millions of applications and services at their fingertips — all of which are

seamlessly integrated into the world around them. And when it all comes together, it means a tremendous market opportunity for everyone — entrepreneurs, artists, carriers, car makers, accessory makers and developers.

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Apple welcomes this Subcommittee's efforts to promote American innovation and entrepreneurship, and we look forward to working with you. Our nation's entrepreneurial spirit and competitive environment have led to innovations during each generation — and that must continue.

Mr. CICILLINE. Thank you, Mr. Andeer.

We will now proceed under the 5-minute rule with questions.

I'll begin by recognizing the gentlelady from Pennsylvania, Ms. Scanlon.

We're doing it a little out of order due to the time change. A couple of our committee members have other commitments, so I want to begin with Ms. Scanlon. You're recognized for 5 minutes.

Ms. SCANLON. Thank you very much, Mr. Chairman. And thank you for hosting this event, this hearing.

We've certainly heard a lot about the various ways in which your platforms have really developed a whole new sector of our economy, but we wanted to dig into a little bit of the anticompetitive aspects. And I wanted to focus on the issue of digital piracy and what that does in the creative community.

So Creative Futures is a coalition representing 555 organizations ranging from MGM to one of our local Philadelphia theater groups, and it represents a quarter million people in the creative rights community.

They've raised concerns about the impact on the competitive process of copyright theft on the Facebook and Google platforms. Specifically, they noted in a submission unfair methods of competition can be facilitated or sometimes practiced on these massive internet platforms, and it results in less creative content than otherwise would exist, fewer new voices, and harm to legitimate nonpirated sources of distribution.

So, Mr. Cohen, can you address these concerns of people in the creative rights community particularly about how YouTube doesn't really have an economic incentive to combat widespread copyright theft and this may have distorted the market for online streaming of movies and television?

Mr. COHEN. Congressman, thank you for the question. YouTube has a very strong set of tools to prevent copyright infringing material from appearing. We developed a technology called Content ID that can remove copyrighted material before it's ever seen by anybody using the platform.

We take this matter very seriously, and we provide by YouTube and other products means for consumers to find and access quality licensed legitimate content.

Ms. SCANLON. So is that the process that you use when, in fact, pirated content is uploaded but then there's a takedown notice? Or are you talking about something else?

Mr. COHEN. Congresswoman, we use a combination of automated tools. We can recognize copyrighted material that creators upload and instantaneously discover it and keep it from being seen in our platforms.

Ms. SCANLON. Okay. I guess an additional concern that has been raised around this issue is that if you Google—if I were to Google an original show produced by the YouTube premium, maybe something like Koper Ky or Weird City, if I try to find pirated versions of the YouTube shows, nothing comes up. But if I go search for a pirated version of a show like Game of Thrones or Netflix's Russian Doll or HBO's Barry, a whole—well, torrented versions, a lot of different pirated versions pop up.

So there's a suggestion that there's a discrepancy in how these tools are working because the YouTube Google shows those pirated versions are taken down but some of the other companies' versions aren't taken down. Can you address how that discrepancy might be occurring?

Mr. COHEN. Congresswoman, I have not seen any evidence of a discrepancy. We take great steps to protect copyrighted material and to show and to provide our customers legitimate means of reaching legitimate licensed content.

Ms. SCANLON. Well, if you do come up with any data regarding discrepancies between the various platforms, can you provide that to the committee, please?

Mr. COHEN. I would be happy to.

Ms. SCANLON. Thank you. I'll yield back.

Mr. CICILLINE. I now recognize the ranking member of the subcommittee, Mr. Sensenbrenner, for 5 minutes.

Mr. SENSENBRENNER. Thank you very much.

First question is to Mr. Perault. There is a time when Facebook was a pledging operation and people thought that others like MySpace were the future of social media. What competitive features of the social media marketplace made it possible for Facebook to overtake and vanquish MySpace and others like it?

Mr. PERAULT. Thank you very much, Congressman, for the question.

We have rolled out many innovations over the course of the history of our product. We had a real name policy at the time that we were founded. That was important in ensuring that there were authentic interactions on our platform and provided users with a better experience. We've since rolled out many additional features, such as News Feed and the "like" button, and we continue to innovate today.

Mr. SENSENBRENNER. So MySpace didn't have any of those features? Is that why people went to Facebook and abandoned MySpace?

Mr. PERAULT. Congressman, I believe they did not have all of those features. We competed aggressively with MySpace, and we believe that that aggressive competition is in part responsible for our success today.

Mr. SENSENBRENNER. Well, I think what we're looking at is anticompetitive action. Did MySpace complain about what you were doing being anticompetitive, or did they just watch their ship slowly sink under the waves?

Mr. PERAULT. Congressman, I am not aware of anticompetitive complaints from MySpace.

Mr. SENSENBRENNER. Okay. Thank you.

To Mr. Cohen, your written statement says that Google helped reduce prices and expand choice for consumers and merchants in the U.S. and around the world. That sounds nice, but what facts, figures, and sources can you point to us to prove that it's true?

Mr. COHEN. Congressman, I saw a recent study from the Progressive Policy Institute that showed that for every $3 of advertising spent online a business would have to spend an equivalent of $5 offline to get equal prominence. That cost savings—that efficiency in those businesses goes to reinvestment, it goes to lower

prices for consumers. That is a tremendous savings for the U.S. economy.

Mr. SENSENBRENNER. Okay. You know, the print news media has come on hard times. There are a whole lot of reasons for that, and Google might be one of them, but I don't think it's the exclusive reason for the print media falling on hard times.

You know, if I buy a copy of the Washington Post and there is an ad in there, and the Washington Post, you know, only circulates at least extensively in the Washington metropolitan area, and the same company puts an ad on Google, what do you think the exposure is between the print ad and the online ad in terms of numbers?

Mr. COHEN. It can vary, Congressman. There's a lot of variety and control given to the advertiser in how they interact with online platforms, how they advertise with online platforms. One of the key things is that in newspaper advertising you would spend a certain amount of money. When I was last a journalist it was quite expensive to place advertisements in print media.

You didn't know what your return on that investment was. It was hard to measure. In digital formats it's easy to know when an ad is clicked on. In fact, for our services often you only pay when an ad is clicked on. And you can then measure the effectiveness of that advertising campaign. You can have these ads reach as broad an audience as you like or you can use them narrowly focusing on local markets, if you prefer.

Mr. SENSENBRENNER. What do you think about the persuasive ability—now I look toward my own campaigns. I don't think we've put ads in newspapers either daily or weekly for over 25 years because the surveys that we did showed that the people who read political ads in newspapers were either seeing what their favorite candidate was doing and mentally cheering or seeing what the opposition was doing and, you know, saying boo.

But with an online ad, and we've used those for the last couple of cycles, you would think there is—at least the purpose of advertising is to educate someone toward a vote or a—buying a product or something like that? You really don't need any marketing surveys to show that that's effective?

Mr. COHEN. Well, Congressman, I'm not an expert in political advertising. But what I would say is that I think you've identified an issue that affects the newspaper industry. There are different ways of reaching customers in different settings.

And the newspaper business model has come under pressure, even before the internet, from competing services like cable news and with the advent of the internet from—you know, newspapers used to make a lot of money from classified advertising and a lot of that has shifted to services like Craigslist, Autotrader for automotive ads. There are a range of competitive pressures, and I think that's probably true for political advertising as well.

Mr. SENSENBRENNER. Thank you very much. My time is expired.

Mr. CICILLINE. The chair now recognizes the gentlelady from Washington, Ms. Jayapal, for 5 minutes.

Ms. JAYAPAL. Thank you, Mr. Chairman.

And thank you all for being here.

My district has the great honor of long being a place for innovation, a place where many small companies became large giants, including Amazon. And it is also a place where in the past innovation has had to be protected by the Federal Government.

And specifically, I call your attention to in 2001, the Department of Justice sued Microsoft accusing the company of violating the Sherman Antitrust Act by using a monopoly adversely affect the web browser market. And the case later settled after Microsoft agreed to make it easier for Microsoft's competitors to integrate their software with the Windows operating system.

And there are many scholars out there who believe that this case is actually the one that opened up tremendous space for real innovation that wouldn't have otherwise existed and allowed a whole new wave of tech companies to spring up. And some of the companies represented here today actually flourished after that court ruling.

Mr. Perault, let me start with you. You're the head of global policy development at Facebook. Does Facebook devote any resources to identifying promising tech startups or innovative non-Facebook platforms and apps?

Mr. PERAULT. Not to my knowledge, no, Congresswoman.

Ms. JAYAPAL. None at all?

Mr. PERAULT. We certainly devote resources to understanding the competitive landscape in which we operate, but, no, I believe the answer to your question is no, not to my knowledge.

Ms. JAYAPAL. So you don't acquire promising tech startups or innovative non-Facebook owned platforms or apps?

Mr. PERAULT. Congresswoman, we certainly look to innovate with our products, and the focus of our acquisition strategy is focused on acquiring companies that enable us to offer a better service to the people who use our products. So we do look to acquire services that will enable us to innovate more effectively.

Ms. JAYAPAL. And they might actually be competing with you, and that might be something that you think would integrate well into your existing platform?

Mr. PERAULT. Thank you, Congresswoman. The focus of our acquisition strategy is on companies that will enable us to innovate more effectively and bring value to the people who use our services. For instance, at the time that we acquired Oculus, a virtual reality company, it didn't yet have a product in the market. As a result of our investment in Oculus, it now has a virtual reality product in the market.

Ms. JAYAPAL. And what about when you acquired the positivity focused polling startup, TBH, 2 years ago and then the company shut down the app after only 8 months? It also bought the app Moves and then later shut it down. How would you consider those acquisitions and terminations, if you will, of those smaller companies?

Mr. PERAULT. Congresswoman, it is certainly the case that some acquisitions don't work. When they don't work we may discontinue a product because of legitimate business judgment.

Ms. JAYAPAL. I would just draw your attention to sort of a—you know, I would look at the pharmaceutical industry in—according to a 2018 Yale study, some pharmaceutical companies seemed to en-

gage in what they called killer acquisitions where they would buy smaller firms and then shut down potentially competing projects.

And researchers actually found that when that happened it was more likely that the acquired companies' competing drug would be discontinued. So I'm not saying it's directly parallel, but it is one of the concerns I have.

Mr. Sutton, you're associate general counsel at Amazon. Does Amazon devote any resources to identifying the most popular brands and products sold using the Amazon interface? So, for example, do you track the most popular non-Amazon brands that are sold in houseware divisions or the brand of size 14 pants that sold most often or any other product like that?

Mr. SUTTON. Thank you for your question.

Amazon is proud to be a company of builders and have built our company from within not through acquisitions. With respect to data such as you identified, we do not use any seller data for—to compete with them. Last year was our smallest year of acquisitions, and we've only had one multibillion dollar acquisition and that was Whole Foods.

Ms. JAYAPAL. I'm sorry, that was slightly different than the question I asked, which was when people sell products on your site, do you track which products are most successful, and then do you sometimes create a product to compete with that product?

Because essentially you have this massive trove of data, right, people that are buying products on your platform, and so you're able to see which are the ones that are doing really, really well, like that size 14 pant or that houseware that's being sold. Do you track that and then do you create products that directly compete with those most popular brands that are out there?

Mr. SUTTON. Thank you. Let me answer that question. That data on popularity of products like much retail data is actually public data. For each of our products you can see where it's ranked. You can see how popular it is. We do not use any of that specific seller data in creating our own private brand products.

And private brands is an area where, quite frankly, we lag behind many of our retail competitors who have 20 to 80 percent of their products as private brands, where we're only in the low, single digits. We do offer private brands on occasion because we think it offers high value and low-cost items for customers and because customers demand that and we want to provide that opportunity for customers.

Ms. JAYAPAL. Thank you. I know my time is expired, Mr. Chairman. I just wanted to quickly say that my office recently met with a small business located in my district, and they pay a living wage, they create a high-quality product that they sell online and in a storefront.

And they did have concerns, and so I know my office has reached out directly. We are right in the same place and we're looking forward to that conversation with you to see how Amazon can make sure that it's helping some of these small businesses. Thank you.

Mr. CICILLINE. Thank you. I now recognize the gentleman from North Dakota, Mr. Armstrong, for 5 minutes.

Mr. ARMSTRONG. Thank you, Mr. Chair.

And I'm glad that privacy has come up, already piracy has come up. I know censorship has come up. We have talked about newspaper advertising, and I think that's where we get into this, and everybody sitting at that table up there has a role in some of those issues. We all have different interests in that.

But I think that's when we—and I know everybody at this table is anti—witnesses are antitrust experts, but I think one of the problems, and I think we have to recognize this, is that antitrust is very company specific and it's very fact specific. So while we may want to talk to one of you about piracy, we may want to talk to another one of you about privacy—piracy and privacy, I should probably pick two different words—so as we do that.

But I think one thing that is consistent is everybody sitting there in the companies you work for are capable of dealing with regulation. And we have witnessed this before as we continue to move forward, whether it's Dodd-Frank, whether it's healthcare regulation, wherever we deal with this. Whenever we work as a body to attempt to capture big bad actors, I would argue that often times what we do is we make it more difficult for startups whether that was our intent or not.

Mr. JOHNSON. Would the gentleman pull his mike closer, please?

Mr. ARMSTRONG. Sure. Yeah. So, I mean, and it's just a caution and it's not that we shouldn't have these conversations because I'm glad we're having these conversations. But I just want to say that at the beginning that whatever concerns anybody may have with a particular company aren't necessarily the same for the other one.

But you all as for-profit companies with a fiduciary duty to shareholders, I understand the fierce—particularly in this field to stay on the cutting edge of innovation. I mean, and 20 years ago GE was the most valuable company in the world, and sorry to pick on Apple, but you guys were almost bankrupt.

And even through that space and even now, even a handful of unicorn companies even with the vast resources of other companies again show that we miss valuable innovations in—particularly in the tech field. All this just simply demonstrates how hard it is to predict what consumers will want in the future.

So I guess we'll just go down, and I don't think this applies to Apple so much, but to what extent do your companies use venture capital funding to invest in startups? And I'll start with Mr. Sutton.

Mr. SUTTON. Thank you. Amazon is a company of builders and we primarily build from within. I'm not sure of the exact details to the extent we use venture capital funding to start. I would be happy to follow up with more details.

Mr. ARMSTRONG. Sure. Mr. Perault.

Mr. PERAULT. Thank you very much, Congressman. My understanding is that we do not engage in that practice, but I'd be happy to follow up with specifics.

Mr. ARMSTRONG. And Mr. Cohen.

Mr. COHEN. Thank you, Congressman. We do have a venture capital arm. I'm not familiar with the size or the scope of their investments. What I can tell you is that we acquire some small businesses in order to accelerate innovation. We actually are a great incubator for technology talents as well.

And somebody mentioned the number of acquisitions Google has made. We have probably spawned ten times as many companies from former Google employees who have left the company and started companies like Twitter and Pinterest and Instagram.

Mr. ARMSTRONG. And then I would just go back to Mr. Perault for a second. Your written testimony highlights the new products and features Facebook has introduced, but how many of those has Facebook developed in house as opposed to buying? That's a really broad and long question, I understand that.

Mr. PERAULT. Thank you, Congressman. We have developed many in house. For instance, we developed News Feed, which is now used broadly by many of our competitors. We developed the "like" button. We developed photo tagging. We developed Portal. We have also invested in companies that we've acquired, like Instagram, Oculus, and WhatsApp.

Mr. ARMSTRONG. And what features in the current social media market, if any, could make it possible for a new fledgling competitor to take on Facebook?

Mr. PERAULT. Congressman, I think there are probably many different answers to that question. My understanding, for instance, is that TikTok has focused on public sharing, for instance. That may be one feature that companies like ours might be interested in the future.

Mr. ARMSTRONG. And my last question for Mr. Cohen is more of a personal question not a congressional question. But can you explain to me why a 9-year-old would rather watch somebody play fortnight on YouTube than actually play fortnight, because I don't understand.

Mr. COHEN. Congressman, I am completely mystified. I have no idea.

Mr. ARMSTRONG. Thank you. And with that, I'll yield back, Mr. Chairman.

Mr. CICILLINE. I thank the gentleman.

I now recognize myself for 5 minutes. I want to focus on how the state of competition online is affecting real people in the communities we represent. I think we see a tremendous concentration of economic power that is fundamentally shaping markets in a way that is often unfair, unbalanced, and not competitive, resulting in less choice and worse quality of products and services for working people.

We want to make sure as part of this investigation that we're doing everything we can to make sure our competition system is working for the entire economy, including small and local businesses in our community. For more than half of online commerce, retailers and manufacturers of consumer goods are relying on Amazon as a commerce platform.

But as we know, and as Ms. Jayapal's question revealed, Amazon also offers its own products on the platform. So, Mr. Sutton, initially I want to say, doesn't that create a conflict of interest?

Mr. SUTTON. Thank you for the question. Respectfully, we disagree. We partner very closely with our third-party sellers. We rely on them to provide a broad selection and prices to our customers, and we've been very proud of our investments to help them grow to be a majority of our store and growing twice as fast.

Mr. CICILLINE. That's a different question. What I'm saying is, you are selling your own products on a platform that you control and they're competing with products in the marketplace from retail—from other sellers, right?

Mr. SUTTON. Thank you. Thank you for the question. That practice I think has been common in the retail industry for decades. Most retailers offer their own products in their store as well as third-party products and——

Mr. CICILLINE. But the difference is Amazon is a $1 trillion company that runs an online platform with real-time data on millions of purchases and billions in commerce and can manipulate algorithms on its platform and favor its own product. That is not the same as a local retailer who might have a CVS brand and a national brand.

I mean, it's quite different. So I want to drill down a little bit on the question that Ms. Jayapal asked you. You said we do not use seller data to compete with other sellers online. You do collect enormous data about what products are popular, what's selling, where they're selling. You're saying you don't use that in any way to promote Amazon products?

Mr. SUTTON. Let me answer——

Mr. CICILLINE. And I remind you, sir, you're under oath.

Mr. SUTTON. Yes. Thank you for your question. We use data to serve our customers. And to clarify my question, we don't use individual seller data to directly compete with them. And, again, similarly with respect to some of the most——

Mr. CICILLINE. Let me just—do you use consumer data to favor Amazon products? Because before you answer that, analysts estimate that between 80 and 90 percent of sales go to the Amazon buy box. So you collect all this data about the most popular products, where they're selling, and you're saying you don't use that in any way to change an algorithm to support the sale of Amazon branded products?

Mr. SUTTON. Our algorithms, such as the buy box, is aimed to predict what customers want to buy——

Mr. CICILLINE. Sir, but——

Mr. SUTTON [continuing]. And we apply the same criteria whether you're a third-party seller or Amazon to that because we want customers to make the right purchase regardless of whether it's a seller or Amazon.

Mr. CICILLINE. But the best purchase to you is an Amazon product?

Mr. SUTTON. No, that's not true.

Mr. CICILLINE. So you're telling us, sir, under oath that Amazon does not use any of that data collected with respect to what is selling, where it's selling, what products to inform the decisions you make or to change algorithms to direct people to Amazon products and prioritize Amazon and deprioritize competitors?

Mr. SUTTON. The algorithms are optimized to predict what customers want to buy regardless of the seller. We provide the same criteria. And with respect to popularity, that's public data on each product page, we provide the ranking of each product.

Mr. CICILLINE. Okay. I just want to give you an example of an entrepreneur in Rhode Island who creates a better set of head-

phones. She sells her product on Amazon on the marketplace, sales soar, which is great for her, great for Amazon because more people become Amazon Prime customers to buy this great renowned product.

But instead of seeing the fruits of her success, the next thing that happens is that this hardworking Rhode Islander discovers that Amazon has rolled out a direct replica of her product. And because Amazon controls the platform, Amazon gives itself top billing and demotes the entrepreneur to page three results, which most people will never see.

So how would anyone—in light of that kind of sequence of events, how would any entrepreneur invest in this kind of environment where that can happen, where there's no assurance it won't?

Mr. SUTTON. Our incentive is to help the seller succeed because we rely on them. If we did that, we know they'd go elsewhere. They have many options. So we apply the same criteria to both, and we do not use their individual data when we're making decisions to launch private brands.

Mr. CICILLINE. Thank you.

I will now turn to Google—to Google Search for a moment, Mr. Cohen. Similar to results in Amazon, every day people think they are getting the best, most accurate result for searches for the products or services they're looking for. But instead what is happening is people are seeing results for Google's own services.

In 2004, Google's cofounder Larry Page said the purpose of Google is to have people come to Google, quickly find out what you want and to get you out of Google and get you to the right place as fast as possible. Would you agree that Google still claims that that's your principle—guiding principle?

Mr. COHEN. Congressman, our goal is to provide users information as quickly and as efficiently as possible.

Mr. CICILLINE. Sir, I want to direct your attention to two studies. The first is a study that was recently produced by Rand Fishkin, a leading expert on search engine optimization. His study prominently reviewed desktops and found that the majority of traffic to Google no longer goes out to the broader web, but instead stays on Google products.

The second is the research by Cafferata Consulting which also finds that Google is increasingly keeping both a majority and a growing share of traffic within Google's ecosystem, sort of a walled garden. Do you agree that these studies show that Google is no longer showing people the best products or best results, but instead is giving them results to keep them on Google's products, not Google's platform?

Mr. COHEN. Thank you for the question, Congressman. I'm not familiar with either of those studies, but what I can say is that we send a lot of clicks, a lot of traffic to competitors. In our own services we have aimed to connect merchants, airlines, a range of other services directly with consumers making the consumer experience better and making the experience for advertisers and merchants better.

Mr. CICILLINE. I regret my time has expired. But I would just ask you to review these studies because if innovators and entrepreneurs don't have traffic to their websites because the Google

search is rigged in favor of Google's own services by keeping them inside Google's walled garden then the internet as we know it ceases to be an economic opportunity. So I would really ask you and welcome your comments after you have an opportunity to study those.

And my time has long expired. I now recognize Mr. Steube, the gentleman from Florida.

Mr. STEUBE. Thank you, Mr. Chair.

I have got a very important question for Apple that I believe is on the minds of all Americans, why do you keep getting that alert for the iCloud and for the 99 cents on the iCloud all the time, constantly, constantly until you pay the 99 cents for iCloud and then you are paying the 99 cents for iCloud, but you are not using it.

Mr. ANDEER. Thank you, Congressman. I am afraid I'm not aware of the details around what you're talking about, I would be happy to get back to you with any information on that. But I'm honestly not familiar with that.

Mr. STEUBE. Okay, if you can give men some information on that, because I've seen and a lot of people have asked me about the fact that they constantly keep getting these alerts to use iCloud and you don't want to use it, but the alerts won't go away until you actually pay the 99 cents to use iCloud but you're not using it. So I—if you have some information on that, I'd love to get it.

I'd like to go to Amazon for a second and kind of piggyback on the chair's questions. What's the current market share of Amazon in total U.S. domestic retail sales?

Mr. SUTTON. Amazon is 1 percent of the global retail market and 4 percent of the U.S. retail market approximately.

Mr. STEUBE. So only 1 percent of the domestic retail sales. So who is above Amazon in total U.S. retail market share?

Mr. SUTTON. In the U.S. Walmart is two to three times larger than we are.

Mr. STEUBE. Are there others or just Walmart?

Mr. SUTTON. I don't know everyone who is potentially larger. There are thousands of competitors across the retail landscape.

Mr. STEUBE. So who is the current market share of Amazon total U.S. domestic online retail sales?

Mr. SUTTON. Online is not a separate market, it's just another channel. We know customers shop online and offline and evidence show that prices have converged between online and offline.

With respect to online, Amazon is one of the leading retailers. There are many other retailers including Walmart and every other major retailer who has a large online presence, as well as just online players such as eBay.

Mr. STEUBE. So you're like 1 percent, you stated. Is that correct?

Mr. SUTTON. Well, 1 percent of the global retail market and 4 percent of the U.S. retail market.

Mr. STEUBE. Let's just focus on U.S. So 4 percent of the U.S. market, what's the largest market share of any retailer in the total U.S. retail market?

Mr. SUTTON. Amazon focuses on our customers and so I'm not sure of exact market shares of all of our competitors because that's not what we focus on as a company. I do know again that Walmart is many times our size in the United States.

Mr. STEUBE. Okay. And Amazon sales online U.S. retail shares growing at a faster rate of all companies or along the same level as other companies. So I know Walmart's put a lot of investment into their online platform. How do you compare to a Walmart or to other retail stores online?

Mr. SUTTON. Thank you for your question. The third party reports I've see report Walmart growing at a faster rate than we are online.

Mr. STEUBE. Okay. Your written statement suggested Amazon competes directly with other sellers, serves competing sellers as a distributor and serves other sellers simply as an online marketplace platform through which they can reach their customers, which you testified before.

Explain to me how that does or doesn't translate into whether Amazon is leveraging allegedly dominant retail market power into anticompetitive behavior against those other sellers?

Mr. SUTTON. I think the clearest answer to that question is from the evidence showing how much we've invested to help those third party sellers since we invited them into our store grow. They are now the majority of our sales, and they are growing twice as fast. We think that's great for these small and medium-sized businesses and it is great for our customers.

Mr. STEUBE. Are you aware of any facts or figures that show that consumer choices among outlets in the U.S. retail market is declining or the competition in the U.S. market is failing to keep consumer retail prices down?

Mr. SUTTON. I'm only aware of data showing increasing choice for consumers today.

Mr. STEUBE. Oh, man, we are going to get back to iCloud. What is Amazon's share of the storage market for the online cloud, for your cloud?

Mr. SUTTON. We offer AWS for Enterprises, which is different than a personal online storage.

Mr. STEUBE. Okay. Any other comment on that?

Mr. SUTTON. With respect to Enterprises the vast majority of that space is still operating on premise servers and cloud is a new and developing space. We are one of the innovators so we are a leader, but competition primarily exists with long-standing on premise IT competitors.

Mr. STEUBE. When did Amazon get into the cloud services market?

Mr. SUTTON. A number of years ago. I don't remember the exact year.

Mr. STEUBE. And how fast has this marketshare grown on the cloud?

Mr. SUTTON. Amazon innovated in creating cloud options for both storage and compute for enterprises. So as one of the early innovators we had to lead, but competitors, major competitors have entered and are closing that gap such as Microsoft, IBM, Google and many others. Although again cloud is still in its very early days and primarily IT is still serviced through on premise servers.

Mr. STEUBE. All right. Thank you my time has expired.

Mr. CICILLINE. Thank you. Thank you the gentleman from Georgia, Mr. Johnson for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. And thank you for holding this very important and timely committee hearing. And also I want to thank the witnesses for your appearance today. Is it Parole or Perault, Mr. Parole or Mr. Perault?

Mr. PERAULT. Thank you, Congressman. It is Perault.

Mr. JOHNSON. Thank you sir. Mr. Perault, when was the last time that Facebook changed its terms and conditions?

Mr. PERAULT. Thank you, Congressman. We——

Mr. JOHNSON. There's no need to thank me.

Mr. PERAULT. We evaluate our terms and conditions on a regular basis.

Mr. JOHNSON. When is the last time you changed them?

Mr. PERAULT. We are constantly changing our terms and conditions to ensure that people have the best experience on our product.

Mr. JOHNSON. Certainly. So how many times over the last year have you changed the terms and conditions?

Mr. PERAULT. Congressman, I don't have the specific data on that. I'd be happy to get back to you.

Mr. JOHNSON. Ten times?

Mr. PERAULT. Congressman, I don't have the data.

Mr. JOHNSON. Twenty?

Mr. PERAULT. I don't have the data, but I do know that we certainly face significant concerns about various different aspects of our products, including privacy. That's one of the reasons that we have actually called for regulation in that area.

Mr. JOHNSON. Okay. Well, I just wanted to know approximately how many times terms and conditions have changed. A recent report from the Stigler center observed, quote, one way in which digital platforms exploit their marketshare or their market power is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing. Do you agree with that assessment?

Mr. PERAULT. Congressman, we take privacy very seriously. It's important to us that we provide users with significant transparency and control.

Mr. JOHNSON. I understand. I guess the point I'm trying to make is the users don't really have much buy in to the situation. They either have to check the box, agreeing to the terms and conditions, oftentimes having not read it in order to get the service or maintain the service or they just go without the service.

So a user may sign up with one set of terms and conditions that's valuable time in building a social network on Facebook and then a month later be faced with a different set of terms and conditions. And because there is no real alternative to Facebook, the user has no choice but to accept those changes. Isn't that correct?

Mr. PERAULT. No, Congressman, that is not correct.

Mr. JOHNSON. There is competition with Facebook?

Mr. PERAULT. Yes, Congressman, there is. We face fierce competition for all the products and services that we offer. People come to——

Mr. JOHNSON. Who would be the competition, if I might?

Mr. PERAULT. So many of our competitors——

Mr. JOHNSON. Share that secret.

Mr. PERAULT. Many of our competitors are sitting here at this table with me.

Mr. JOHNSON. I think you're in a unique chair, in a unique position among those who are seated at the table. Each one of you occupy a unique and dominant position, but Facebook is—stands alone in terms of social media. Any other social media platform that could compete with Facebook?

Mr. PERAULT. Congressman, we certainly hope that in many ways that we are unique. There may not be an identical competitor to Facebook. We try to differentiate our services in an innovative tech industry in which we compete. But yes, there is significant competition in advertising. People can——

Mr. JOHNSON. Well, I'd like to offline I'd like to get a list from you, so that I could do some shopping around myself. And that's not to disparage Facebook's offering. I just would like to know who your competition is. It's not readily apparent.

Facebook's terms of service maintain that users, quote, "Own" end quote, their data. Yet, Facebook has repeatedly prevented users from transferring their data to certain rival platforms including Twitter, Vine, Voxer and MessageMe. How do you reconcile Facebook's stated policy that users own their data with Facebook's repeated refusal to allow users to transfer their data on to rival platforms?

Mr. PERAULT. Congressman, we do offer a data portability product and we've offered that product for a long period of time, it is called download your information. We've improved that product in the wake of the GDPR in Europe. We are actually a member of the——

Mr. JOHNSON. You can actually transfer the Facebook data to another platform?

Mr. PERAULT. Congressman, you are able to take your data out of Facebook to another platform, yes. We are also members of the data transfer project along with several other companies to try to look for ways to facilitate better data portability and our CEO Mark Zuckerberg has actually called for regulation in this area, because of many of the difficult, technical and privacy issues at stake. It is one that we are hoping to look to work with Congress on to improve the offerings for our users.

Mr. JOHNSON. All right. Thank you, sir. And I yield back.

Mr. CICILLINE. I thank the gentleman. I now recognize the gentlelady from Florida, Ms. Demmings, for 5 minutes.

Mrs. DEMINGS. Thank you so much, Mr. Chairman. And thank you to all of our witnesses for being with us today.

Mr. Sutton, bear with us. In recent years Amazon has started selling digital advertisement placements. Analysts estimate that digital ads brought in around $11 billion in business last year. Because businesses are increasingly dependent on Amazon, some of them are concerned that Amazon is using its ad business to squeeze more money. As a Bloomberg reporter recently wrote, Amazon's advertising is better understood as an additional tax the company imposes on the millions of businesses that sell through it's vast digital mall. It's one more toll extracted from sellers, according to the reporter.

Given how dependent businesses are on Amazon's platform for online sales, what, if anything, Mr. Sutton, prevents Amazon from using ads as another way to charging a toll for using its platforms?

Mr. SUTTON. Thank you for the question. We do offer advertising as a service to our sellers as an optional service that's not necessary, but that they can use to help get their products discovered. The large majority of products sold in our store are not sold through advertisements.

Again, there are many ways in which sellers have many options. We provide that as an additional one. We know they have many other options online where customers shop as well as offline.

Mrs. DEMINGS. So what would be your response to the reporter's statement that Amazon's advertising is better understood as an additional tax the company imposes on the millions of businesses that sells through its vast digital mall?

Mr. SUTTON. Respectfully I disagree. That statement is not correct. It is not a tax. It is like many services we offer that's optional. And again there are many other ways that sellers can advertise. They can sell—advertise through general purpose search, which still remains the most popular way for customers to find products online. And in fact, it is one of the reasons we are one of largest customers of Google.

Mrs. DEMINGS. You say the number is correct that you brought in about $11 billion in advertising last year? Does that sound about right?

Mr. SUTTON. I don't know that exact figure. I'm happy to follow up with it.

Mrs. DEMINGS. Okay. Mr. Sutton, who do view as Amazon's competitors with regard to third party sellers? And if you've already covered this, I do apologize, but who do you view as Amazon's competitors as it pertains to third party sellers?

Mr. SUTTON. Thank you for the question. Third party sellers have a wide variety of ways to sell. They can sell directly through brick and mortar retail stores, through their own website, and there are dozens of online marketplaces available for them as well from Walmart, to eBay——

Mrs. DEMINGS. So let's just say if I'm a third party seller, what other platforms can I list my products on that would allow them to be seen by a competing number of buyers?

Mr. SUTTON. Thank you. Again, they could list on Walmart, they could list on eBay, Target now has launched a marketplace. There are other new marketplaces, including also the ones from Chinese companies such as Alibaba, Rakuten. They are increasing in numbers. In fact, there are so many marketplaces that there is a billion dollar industry that has grown up to provide services to sellers so that they can use them to list across all marketplaces at the same time.

Mrs. DEMINGS. And you believe that those other platforms are competitive allow for competitive services.

Mr. SUTTON. Yes, absolutely.

Mrs. DEMINGS. Okay.

Mr. Chairman, I yield back. Thank you.

Mr. CICILLINE. I thank the gentlelady. I now recognize the gentleman from Colorado, Mr. Neguse, for 5 minutes.

Mr. NEGUSE. Thank you, Mr. Chair. And thank you to the witnesses for appearing today and for your testimony.

I agree with my distinguished colleague from North Dakota that antitrust analysis is obviously very fact specific, and case specific, and industry specific and so forth. I want to talk today about Facebook.

So Mr. Perault, following up on a question from the gentleman from Georgia, I think what he was getting at is this, is Facebook in your view a monopoly?

Mr. PERAULT. No, Congressman, it is not.

Mr. NEGUSE. Okay. So I assume the reason is because in your view Facebook has a number of competitors as you said, and a number of products that the company offers. Would that be a fair characterization of your view?

Mr. PERAULT. Yes, Congressman, that's correct.

Mr. NEGUSE. What is the largest social media network platform company by active users in the world? Do you know?

Mr. PERAULT. Congressman, I don't. I do know that we have 2.7 billion users.

Mr. NEGUSE. I can tell you that it's Facebook, it's number one. Do you know the third largest company is WhatsApp. Who owns WhatsApp or what company owns WhatsApp?

Mr. PERAULT. Congressman, we do.

Mr. NEGUSE. Facebook, correct?

Mr. PERAULT. Yes, Congressman.

Mr. NEGUSE. And the fourth largest social media networking platform in the world by active users is Facebook messenger. I won't make you answer the question, suffice to say that that company is also—that service is also owned by Facebook. The sixth largest is Instagram. What company owns Instagram?

Mr. PERAULT. Congressman, Facebook does.

Mr. NEGUSE. Okay. So you can understand skepticism, because when a company owns four of the largest six entities measured by active users in the world in that industry, we have a word for that and that is monopoly, or at least monopoly power.

Now with respect to my colleague the distinguished gentleman from Wisconsin, he is right that under the Sherman AntiTrust Act, a measure of whether or not a company is engaged in monopolistic activities is whether or not there is anticompetitive conduct at play. But, you know, I suspect you and I may have some disagreements on that front.

And just to give you a sense of the way in which I think a number of us are evaluating the facts before us, if you could turn to Exhibit 1.5—if the committee staff would just put that up on the screen—this is a document, to my understanding there were a number of documents published about 8 months ago, as a result of a parliamentary inquiry conducted by the U.K. Parliament with respect to Facebook and various activities of the company.

This is a platform policy, platform policy number 4. And you'll see under there highlighted subparagraph 1 the language, add something unique to the community, don't replicate core functionality that Facebook already provides. This was a policy maintained by Facebook. Is that correct?

Mr. PERAULT. That is correct. Although unfortunately I'm having trouble seeing the exhibit. As I've gotten older, my eyes have gotten worse.

Mr. CICILLINE. It is behind you as well Mr. Perault.

Mr. NEGUSE. Mine as well. We will be sure to provide you a copy.

This is no longer a policy maintained by Facebook. Is that correct?

Mr. PERAULT. Congressman, that's correct.

Mr. NEGUSE. Okay. And I presume that is because this policy facially would be construed as an anticompetitive one, correct?

Mr. PERAULT. Congressman, we have—thank you very much—the Facebook platform was designed to enable third parties to engage in complementary innovation that would benefit the people who use our services.

When we launched the Facebook platform, we did have rules of the road. We continue to have rules of the road that balance a variety of considerations including protecting the user experience, protecting privacy and protecting our investment in our products. We have reevaluated those policies over time and have changed them to fit the evolving nature of the industry in which we exist.

Mr. NEGUSE. Well I appreciate that. And I understand industries change, industries evolve and that your business has to evolve to comport with that. I would say from my vantage point, my understanding is Facebook did have a policy early in its tenure, it's Exhibit 1 in which the company welcomed developers with competing applications, including developers whose applications might compete with Facebook-built applications. That was a policy that was then repealed in favor of policy 4.1 the prior document that I just showed.

So this notion that Facebook has been open to competition as you described in your opening testimony, this notion that it's a core value of the company is not borne out by the documentary evidence that we've seen. And I think that's in part why we are having this important hearing today. I see that my time has expired.

I yield back.

Mr. CICILLINE. I thank the gentleman. I now recognize the gentlelady from Georgia, Ms. McBath.

Mrs. MCBATH. Thank you, Mr. Chairman. Thank you gentlemen for your testimony today.

I am truly deeply concerned about the success of businesses in my district. I represent Georgia's sixth congressional district and small locally owned businesses are the economic lifeblood of our communities. And they should have access to markets and consumers without facing anticompetitive constraints.

I also believe that Congress and agencies have a serious responsibility to make sure that there's real competition in the market so that startups, small businesses, and local retailers are able to compete on the merits and give people the best options they can find.

Mr. Sutton, this morning I met with seller that have had a very positive experience growing their business through Amazon. But some sellers have had a completely different kind of experience. Some sellers report that Amazon uses a variety of tactics to funnel merchants into Using Fulfillment by Amazon. International antitrust authorities are investigating whether Amazon privileges

third-party vendors that use Fulfillment by Amazon. Now does Amazon privilege vendors who use Amazon's Fulfillment services over those who chose not to?

Mr. SUTTON. Thank you for the question. Amazon's very proud of all we've done to invest and help sellers succeed. And one of those ways is we built a very successful operation and delivery system, and we opened that up and made it available for sellers to use, Fulfillment by Amazon. It is an optional service that sellers can use if they want to. We continue to invest and provide tools for them to ship directly as well.

We apply the same—we do not favor sell—products that use FBA over others. Obviously FBA is one way to provide quick delivery amongst many and we know that our customers do appreciate quick delivery, that's why we gave that as an option to our sellers to use amongst the various shipping options they have.

Mrs. MCBATH. On the second panel that we have today, Ms. Mitchell in her written testimony she highlights how Amazon abruptly and arbitrarily suspends merchants' accounts, freezing their funds and shutting down their Amazon pages. According to her statement, Amazon frequently makes these decisions without explanation, leaving merchants to navigate a black box while their livelihoods are hanging in the balance.

According to another report in The Verge, quote, "Sellers are more worried about a case being opened on Amazon than an actual court," end quote. So Mr. Sutton, how many employees does Amazon have that are dedicated to addressing these kinds of concerns?

Mr. SUTTON. Thank you. Amazon again partners with sellers and we are very proud of our success in helping them grow and now be growing twice as fast as Amazon.

Mrs. MCBATH. But how many——

Mr. SUTTON. We reluctantly take action——

Mrs. MCBATH [continuing]. But how many do you have, sir, that are——

Mr. SUTTON. We have thousands of employees dedicated to helping and address concerns from third party sellers. We absolutely do not take arbitrary action, but we do have to take action on occasion when necessary. There is a dedicated group of bad actors that attempt to sell fraudulent products or counterfeit products or even dangerous products.

And we have to take swift and immediate action to protect customers and to protect the legitimate sellers. We try to do that through a transparent process and we always provide an opportunity for sellers to appeal or to provide additional information if they think we got it wrong. In the vast number of situations they do not take advantage of those opportunities.

Mrs. MCBATH. So how do you respond to the concern from merchants who have been abruptly suspended by Amazon who they say have no way of ever reaching an Amazon employee to make their case. And so what recourse do they actually have?

Mr. SUTTON. We provide a variety of ways for them to reach out.

Mrs. MCBATH. Such as?

Mr. SUTTON. I don't know the full way. I know we have a dedicated customer team. We provide a tool, a dashboard tool so that they could see the status of their account. We have a dedicated

team that will affirmatively follow up in the more serious cases. We may communicate via email and allow them to respond and provide details via email. There are a variety of ways in which we try to always communicate and to receive communications from our sellers.

I would be happy to follow up and provide the full examples and details of that for you as well.

Mrs. MCBATH. If you could, I'd appreciate it. It is also important to me that we keep good paying jobs in our communities. Too often we hear that retailers, manufacturers and suppliers have an uphill battle due to anticompetitive prices online.

And Mr. Sutton, again numerous reports have identified instances when online platforms priced goods significantly below cost over the long-term, threatening mainstream businesses and other retailers who can't compete on those terms. And a letter that I am going ask be placed in the record for today, Mr. Chairman.

Mr. CICILLINE. Without objection.

[The information follows:]

MRS. MCBATH FOR THE OFFICIAL RECORD

RETAIL INDUSTRY LEADERS ASSOCIATION

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July 16, 2019

The Honorable David N. Cicilline
Chairman
U.S. House Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
2233 Rayburn House Office Bldg
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
U.S. House Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
2449 Rayburn House Office Bldg
Washington, DC 20515

Re: **Hearing on Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship**

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

RILA commends the Subcommittee for its careful review of existing approaches to antitrust law and enforcement. As we explain in the attached comment filed with the Federal Trade Commission, we believe that new approaches are necessary to capture what matters most about competition policy in the modern, data- and technology-driven economy, but that there is much that can be done using existing powers to remedy current conduct that is harmful to competition and consumers.

RILA is the U.S. trade association for leading retailers. We convene decision-makers, advocate for the industry, and promote operational excellence and innovation. Our aim is to elevate a dynamic industry by transforming the environment in which retailers operate. RILA members include more than 200 retailers, product manufacturers, and service suppliers, which together account for more than $1.5 trillion in annual sales, millions of American jobs, and more than 100,000 stores, manufacturing facilities, and distribution centers domestically and abroad.

RILA stands ready to work with the Subcommittee as it completes its investigation into online platforms and market power and to provide any other assistance the Subcommittee may deem appropriate and useful. Please direct questions or requests for further information about this letter and the attached comment to Nicholas Ahrens, vice president, innovation, nicholas.ahrens@rila.org.

Sincerely,

Brian Dodge
Chief Operating Officer

[redacted]

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June 30, 2019

Federal Trade Commission
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Washington, DC 20580

Re: Competition and Consumer Protection in the 21st Century Hearings (Project Number P181201)

RILA commends the Federal Trade Commission's efforts to create a comprehensive factual record through this series of hearings and its willingness to scrutinize its existing approach to antitrust enforcement and consumer protection in the rapidly transforming, 21st century economy. As we explain below, we believe that new approaches may well be necessary to capture what matters most about competition policy in the modern, data- and technology-driven economy, but that there is also a lot the Commission can do with its existing powers to remedy current conduct that is harmful to competition and consumers.

RILA is the U.S. trade association for leading retailers. We convene decision-makers, advocate for the industry, and promote operational excellence and innovation. Our aim is to elevate a dynamic industry by transforming the environment in which retailers operate. RILA members include more than 200 retailers, product manufacturers, and service suppliers, which together account for more than $1.5 trillion in annual sales, millions of American jobs, and more than 100,000 stores, manufacturing facilities, and distribution centers domestically and abroad.

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Retail Today

U.S. and global consumers are driving change in retail like never before. Ubiquitous internet access, coupled with changing consumer preferences, has led to significant disruption in the industry. This digital revolution continues to transform the way customers interact with retailers and buy products and services. And the pace and depth of these changes are both unprecedented and accelerating. Retailers are adapting to this new consumer landscape through the pursuit of transformative innovation. The convergence of retail and technology means that the retail business model has fundamentally changed, resulting in a business imperative to meet the desires of highly empowered consumers who have many choices for how and where to shop.

Customers can still reach retailers in physical stores and can now connect directly through digital media (like websites and apps) and indirectly (through internet search and other digital platforms like social media platforms). Competition in retail is now a click or voice command away, which means that retailers operate within the most competitive industry in the world. This competitive environment has empowered

[redacted]

consumers and driven traditional retailers to focus on more than the transaction. They must focus on building and maintaining long-term relationships with customers through positive interactions and experiences, both in store and digitally. Retailers face a daily referendum on the state of their relationships with customers. Unlike some tech or telecom companies whose services or platforms tend to dominate their sectors, if a customer loses trust in one brand, they can easily shop with another.

Retail Leaders Embrace And Thrive In Competitive Markets

Intense competition is the hallmark of America's core retail industry. Competition drives innovation and brings consumers both lower prices and new products and services. However, the absence of competition elsewhere in the retail ecosystem stifles the benefits that have historically resulted from this intense competition. RILA members believe the Commission has a responsibility to protect consumers by ensuring that competition exists throughout the retail ecosystem. That requires pursuing policies and enforcement actions that curtail anticompetitive business practices, remove roadblocks to innovation, and ensure the ability of all retailers to improve the customer experience, unconstrained by the market power of other actors who can shape that experience to their own benefit. We believe the Commission must focus on ensuring that competition among retailers actually benefits consumers, rather than seeing those benefits stifled by dominant players and persistent oligopolies in other parts of the retail ecosystem like digital marketplaces, technology platforms, payment networks, or telecommunications platforms.

RILA does not file this comment to complain about competition from Facebook, Google, Amazon, Visa, or any other technology or payments platform. Indeed, retail leaders comment to ask for *more* competition, not less. But all competition must be on a fair and level playing field. As Commissioner Slaughter noted in hearing remarks, "Technology is no longer simply an industry. It is a part of every industry."[1] RILA members believe FTC actions now and in the future are essential to ensuring that new and legacy anticompetitive business practices driven by technology receive the scrutiny demanded by existing antitrust laws – and swift action where they do not comply.

In RILA's August comment to the Commission at the outset of these hearings, we set out four broad topics along with several questions that we asked the Commission to consider and investigate.[2] RILA believes the robust record developed by the Commission begins to answer these questions and demonstrates a clear need for additional investigation and action by the Commission, the US Department of Justice Antitrust Division, the Federal Communications Commission, and Congress.

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[1] FTC Commissioner Rebecca Slaughter, *FTC Hearing #2: Monopsony and the State of U.S. Antitrust Law*, opening remarks from *Hearings on Competition and Consumer Protection in the 21st Century*, Federal Trade Commission, September 21, 2018. Audio, 5:56, https://www.ftc.gov/news-events/audio-video/video/ftc-hearing-2-welcome-ftc-commissioner-rebecca-kelly-slaughter-opening.

[2] Retail Industry Leaders Association, *Re: Competition and Consumer Protection in the 21st Century Hearings (Project Number P181201)*, (Comment to the Federal Trade Commission, August 20, 2018). (incorporated by reference).



How Should Competition And Consumer Protection Law Respond To Concerns About Market Power In The "Information Infrastructure"?

RILA's initial comment raised several questions about market power in the "information infrastructure." Leading retailers remain concerned about firms with significant market power within these highly concentrated industries. For example, retail leaders are particularly dependent on telecommunications platforms (ISPs) to connect with consumers through explicitly digital means like websites and apps, but also through digital tools in stores such as Internet-enabled technologies to improve backend operations and customer-facing experiences. This deeper reliance creates opportunities for beneficial partnership with ISPs. But, as retailers have experienced with the payments industry and its ever-increasing interchange fees, retailers are also concerned about becoming the target of rent-seeking by ISPs who control the flow of indispensable information to and from consumers. As digital commerce and digital tools become increasingly interwoven within the retail industry fabric, leading retailers encourage federal regulators to remain vigilant in policing the abuse by ISPs of information bottlenecks in ways that either impose excessive fees on users, or seek to skew the flow of information in potentially self-serving ways.

Relatedly, it is important that antitrust enforcement policy recognize how central information flows are to the competitive process—particularly in the digital age. While classical antitrust analysis assumes that consumer behavior is driven by prices, the reality is that consumers can only make price-driven decisions if they have accurate, trustworthy, and timely access to *information about* prices. The same is true for information about product quality, availability, and the like.

It should thus be quite concerning to the Commission that Amazon and Google control the majority of all of Internet product search[3], and can very easily affect whether and how price and product information actually reaches consumers. Moreover, these firms are extraordinarily adept at determining how small changes in the way in which information is conveyed affect consumer behavior—given that nearly everything they do is driven by big-data science and machine learning models. The Commission's approach to retail markets must thus be driven by a recognition that control over an information bottleneck by such a company has the power to skew markets and shape consumer behavior in ways that circumvent the traditional power of price competition. To put the matter as simply as possible, a firm does not need to have the power to control prices if it has the power to control effective access to price information.

To be clear, digital technology platforms and online marketplaces can provide significant benefits to consumers and sellers alike. They offer a wide range of opportunities for fast and efficient access to consumer markets while providing millions of consumers with products and services at a scale that vastly exceeds what is available in a purely physical realm. Concerns arise, however, when these platforms achieve a level of dominance that enables them to disregard those interests. Thankfully, the Commission

[3] Who is winning the shopping search race — Amazon or Google?, Retail Wire (2019), https://www.retailwire.com/discussion/who-is-winning-the-shopping-search-race-amazon-or-google/.



can respond to issues like those above, created by such dominant platforms, by using not only its antitrust powers, but its more flexible powers to control unfair or deceptive practices as well. The Commission should consider rules or enforcement actions requiring such bottleneck technology platforms to convey information to consumers in ways that are transparent and do not mislead consumers about where products come from, whether they are new or used, whether their sale by a given retailer is authorized, and how the total price from one seller compares to the prices charged by others. In this context, the Commission should be particularly focused on the possibility of self-serving behavior when a firm both controls information access on an essential platform (like Amazon's marketplace) and competes on that platform itself. Such rules need to be robust, and must recognize the capacity for very small changes in the display of advertising to have major effects on consumer perception given the feedback immediately available to data-driven companies about how users respond to experimental changes.

More generally, our view is that modern antitrust enforcement needs to be driven by a greater recognition that control over *information* can drive anticompetitive effects just as much as market power and price control. Indeed, scholars have noted that it is the *combination* of information control and market power that should worry antitrust regulators most[4]. That unhealthy combination exists at the level of the Internet's pipelines, at the level of product search, in webhosting, on social media platforms, and elsewhere. It is thus of paramount importance that the Commission focus on addressing abuses in those areas going forward.

What Competitive Concerns Are Raised By "Platform" Businesses? How Do The Antitrust Laws Apply To Data? What Avenues Exist For Detecting And Remedying Anticompetitive Data Utilization?

Platform businesses have revolutionized retail, and that disruption stems in no small part from genuine innovation that should be celebrated and incentivized. But dominant platform businesses also can pose competitive concerns that merit close scrutiny and swift action when they both control access to information and influence price. Leading retailers believe that conduct by platform providers merits not only competitive concern, but investigation and action where warranted. This is true in large part because platform businesses tend to quickly accumulate durable market power, and antitrust enforcement has thus far failed to adequately appreciate the consumer harm that market power is causing.

As RILA previously commented, platform businesses can exhibit strong network effects, and the dominant platform companies themselves appear to understand that their ideal competitive strategy thus involves building out the largest network possible by offering consumers low prices or free services, sometimes cross-subsidizing the platform business with other profit streams. Current antitrust thinking views this as mostly unproblematic—a price-war tactic that tends to benefit consumers through lowered prices and

[4] Khan, Lina and Pozen, David E., A Skeptical View of Information Fiduciaries (May 25, 2019). Harvard Law Review, Vol. 133, 2019, Forthcoming; Columbia Public Law Research Paper No. 14-622. Available at SSRN: https://ssrn.com/abstract=3341661.



because current theory views it as unlikely that these companies will be able to raise their prices later.[5] The companies that engage in these tactics are not foolish, however, and it is therefore likely that traditional antitrust analysis and its focus on consumer prices is missing something important about how users on both sides of these platforms are harmed as these businesses transition from competitive environments to dominant platforms.

Accordingly, retailers believe antitrust regulators' traditional reliance on price is ripe for reevaluation and are encouraged by recent statements by policymakers indicating a renewed commitment to evaluating non-price competition harms. In a recent speech, Assistant Attorney General Makan Delrahim discussed his perspective in the context of several foundational antitrust cases including Standard Oil[6] saying:

> Another important parallel for modern observers is that consumers actually enjoyed lower prices during the height of Standard Oil's dominance. This was likely due to, among other things, a combination of economies of scale, superior bargaining power, and overall declining input prices. It nonetheless demonstrates that price effects are not the sole measure of harm to competition under the U.S. antitrust laws.[7]

Retailers agree with this view and agree with the recommendation of 43 State Attorneys General that consideration of non-price effects should be given greater priority in technology platform market mergers.[8]

Non-price Anticompetitive Effects

Antitrust law is full of examples of innovators subsequently turning into "lazy" monopolists to the detriment of consumers and competition. And in the retail space—when it comes to both merger policy and enforcement against anticompetitive conduct—it is important that the Commission recognize this kind of development as both important proof of market power and evidence of anticompetitive effects. Two versions of this effect with particular salience to retail are the erosion in the quality of a platform's consumer experience after competition has been eliminated, and the surreptitious collection and use of consumer data by firms that do not face competition from rivals.

Start with product quality—a traditional antitrust concern that is frequently overlooked in favor of a focus on price. The pro-consumer story for platforms like Google, Facebook, and Amazon is that, while the

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[5] Retail Industry Leaders Association, *Re: Competition*, 3.
[6] *Standard Oil Co. of N.J. v. United States, 22 U.S. 1 (1911).*
[7] Assistant Attorney General Makan Delrahim, *"...And Justice for All": Antitrust Enforcement and Digital Gatekeepers*, remarks from the *Antitrust New Frontiers Conference*, June 11, 2019. https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-antitrust-new-frontiers?.
[8] National Association of Attorneys General, *Public Comments of 43 State Attorneys General* (Comment to the Federal Trade Commission, June 11, 2019), 19. https://www.regulations.gov/document?D=FTC-2019-0031-0003.



companies wield enormous power on the "seller" or "advertising" side of their platforms, consumers benefit with free or very low-cost products or services on the other. But, it is worth observing how the quality of those products and services have degraded as these companies shifted from fierce competitors to dominant monopolists. Google search used to be elegant and free from advertising; today, any search vaguely related to a product returns a page awash in different advertisements and sponsored posts, which may or may not disclose their sponsored characteristics in understandable ways. Similarly, Facebook co-founder Chris Hughes recently observed that Facebook's initial innovations—including its "simple, beautiful interfaces"—were forged by the pressure of competition.[9] Facebook's eventual dominance, however, has meant that much of that simplicity has given way to advertising and interfaces that make it difficult for users to avoid content they do not wish to see. Also, retailers may be disincentivized to innovate as more and more consumers are funneled through these platforms. The key point is hardly surprising: Even on the supposedly "free" side of these platform businesses, monopoly is making consumers worse off.

The collection of consumer data by dominant platforms holding significant market power—and its use in ways that consumers may not realize or appreciate—represents another consequence of monopoly that is masked by an excessive focus on prices. Some panelists suggested that the anticompetitive effects of technology-platform monopolists might be better seen if we put a price on the consumer data they collected.[10] Nothing so complicated is necessary to appreciate the key point.

The ever-increasing tide of revelations about the ways in which these dominant platform companies fail to protect users' privacy or manipulate their attention in unfriendly ways represents an ever-increasing trade-off for using these services. For example, because nearly two-thirds of consumers search directly on Amazon when looking for a consumer product, it has a massive amount of data on consumer shopping needs and behaviors. According to its Privacy Notice, Amazon can and has shared consumer data with many unaffiliated companies, including the largest wireless carriers. Moreover, Amazon does not offer the consumer a choice to opt-out of this data sharing. As a result, consumers are asked to make tradeoffs that they could not anticipate or understand – provide their personal data to Amazon (and potentially any other company) or not be allowed to shop on the most widely used platform in the world. Though these are non-price harms, they should easily suffice to place further acquisitions, exclusionary conduct, or deceptive interfaces and advertisements created by these dominant companies under the heaviest possible

[9] Chris Hughes, *It's Time to Break Up Facebook*, New York Times, 2019, https://www.nytimes.com/2019/05/09/opinion/sunday/chris-hughes-facebook-zuckerberg.html.
[10] Roger McNamee *FTC Hearing #3: Multi-Sided Platforms, Labor Markets, and Potential Competition*, panel remarks from *Hearings on Competition and Consumer Protection in the 21st Century*, Federal Trade Commission, (October 15, 2018), 179-180, https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf.



scrutiny—especially where this conduct tends to increase the amount of potentially sensitive data they control.

Platform Control of Digital Marketplaces Creates Anticompetitive Effects

The ways in which Amazon has begun to degrade the consumer experience on its own platform are particularly relevant for retailers, and they are particularly pernicious, because Amazon's platform frequently masks Amazon's own responsibility for problems with that experience. Dominant digital shopping platforms present a strong information asymmetry related to the sale of goods as between the marketplace on the one hand (which has complete visibility into the transaction and its fulfillment) and consumers, brands, and third-party sellers on the other (who know little about how Amazon fulfills transactions into which they have only limited visibility). The Chicago Booth Sigler Center Report outlines this platform dilemma:

> In and of itself, a platform setting the terms of trade, quality levels, services, and so on may not be problematic if the purpose of the change is to "grow the pie" in a way that complementors view as fair (i.e., not involving expropriation). For example, Amazon, Facebook, or Google know in real time which products are sold to whom, at what price, and which packaging or incentives work, which may drive their rules. However, if these rules become opaque and uncertain or the insights gleaned from an app or vendor are biased or used against it in an asymmetrical manner, then the rule changes may not be about increasing everyone's revenue, but about moving a larger share to the platform.[11]

This asymmetry can cause harm on both sides of the platform. Small sellers who presently feel that they have no choice but to operate on Amazon, because Amazon represents nearly half of the e-commerce market,[12] risk giving Amazon information that allows it to capture their business if the data shows it to be profitable or growing. Meanwhile, if the digital interface masks or obfuscates the true identity of the seller, or leaves the misimpression that an item is new and from the manufacturer, or falsely implies that a knock-off item is just like the option from a well-known brand, consumers (as well as regulators and enforcers) have no ability to uncover the truth until after their purchase. That harms consumers who do not get what

[11] Fiona Scott Morton et al., *Committee for the Study of Digital Platforms, Market Structure and Antitrust Subcommittee*, report, Stigler Center for the Study of the Economy and the State, The University of Chicago Booth School of Business, July 01, 2019, 53. https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure---report-as-of-15-may-2019.pdf?la=en&hash=B2F11FB118904F2AD701B78FA24F08CFF1C0F58F.

[12] Ingrid Lunden, *Amazon's share of the US e-commerce market is now 49%, or 5% of all retail spend*, July 13, 2018, https://techcrunch.com/2018/07/13/amazons-share-of-the-us-e-commerce-market-is-now-49-or-5-of-all-retail-spend/



they were looking for, and may not even realize it because the provenance or nature of their item has been obscured by the very information source through which they sought out the item in the first place.

This information asymmetry is a feature of such dominant digital platforms created by design both to steer consumers to particular products and to create the illusion of having a product even if the desired brand is not sold on the platform. To put the point directly, it is now part of Amazon's business model to create the impression that every brand is sold new and can be found there—even though that is not true and tends to deceive consumers. Doing so serves Amazon's interests in two ways. First, it allows Amazon to immediately capture sales from other branded retailers with pages and product-search results that incorrectly suggest that Amazon is an authorized source of products "by" well-known retailers who prefer to remain off Amazon. And, second, it allows Amazon to erode the brand loyalty through which these retailers compete with Amazon's different business model, because when consumers do not get the quality they wanted, their lack of information causes them to blame the brand they think they have purchased from, rather than Amazon.

Relationships that venerated retailers have with their customers—the "crown jewels" for these retailers—are thus being systematically undermined by dominant digital platforms such as Amazon that blur the lines between the brand and the platform. In the absence of strong antitrust scrutiny and enforcement, market actors must avail themselves of other means to address these non-price harms to their businesses and the quality of their consumers' experiences online. For example, Williams-Sonoma filed a trademark infringement lawsuit against Amazon[13] to stop Amazon from displaying Williams-Sonoma products in ways that lead consumers to believe that the products were new, or authorized, or coming directly from Williams-Sonoma.

Counterfeit goods represent another serious example of this problem. Where a platform both obfuscates origin or source and provides fulfillment services, a seller of counterfeits is harder for consumers to uncover because the item appears to have the backing of the platform in much the same way that a traditional store backs the products that are on its shelves. Moreover, a platform profiting twice from a sale through purchase and fulfillment (and potentially three times through advertising) has little incentive to protect another brand's product. Instead, the platform may try to coerce retailers and brands onto the platform with a promise to protect their valuable brands if the companies agree to sell directly through the platform. The flipside of this agreement is that Amazon will accumulate data about the competitor's business (as the Chicago Report suggests), and will now hold the customer data that is the lifeblood of the brand, eroding the brand's ability to connect with its own, most-valued customers. And that should be particularly disconcerting to antitrust regulators, because maintaining a strong, independent brand that is separate

[13] *Williams-Sonoma Inc. v. Amazon.com Inc., 3:18-cv-07548, U.S. District Court, Northern District of California (San Francisco).*



from Amazon appears to be one of the only ways that retailers can effectively compete with the platform. This perverse outcome underscores the dilemma for retailers interacting with platforms.

Anticompetitive Uses of Data

Information asymmetry and the use of data also contribute to anticompetitive conduct such as the potential misuse by dominant platforms of retailers' data to create, and then favor, their own private label products in terms of pricing and placement in ways that are possible only because of the nature of digital product placement and consumer attention spans. A report from antitrust scholars at the University of Chicago recently outlined the challenge for retailers and brands selling on Amazon:

> Likewise, by selling logistics services to many of its sellers, Amazon gains an advantage when it wishes to launch a store brand. It can analyze the data from its rivals to develop an entry plan against those sellers. It is important to measure whether, and how much, quality increases with these strategies.[14]

The ability for a super-dominant digital platform to operate a marketplace, determine demand, control placement to an extent unparalleled in the physical world, provide fulfillment, and then produce a similar product that it also has the data to target directly to specific consumers raises clear antitrust concerns because of the unique characteristics of such a platform. This has the potential to short cut innovation and the value that brings to consumers. As previously discussed, the challenge associated with digital search and the inability for consumers to differentiate create an anticompetitive outcome that does not exist for non-dominant marketplaces, online retailers, or in physical stores. In addition, the ability for such a platform to hold data not only about its competitors and their customers but also competitors' upstream suppliers through fulfillment data creates even greater anticompetitive risk.

Has Technological Change Obviated The Justification For Competitor Collaboration?

Retailers believe that technological progress has completely eliminated any justification for competitor collaboration in the credit card market. While the technological challenges associated with processing credit transactions may have justified the collaboration among bank competitors that led to the Visa and Mastercard networks a half century ago, those challenges have been drastically reduced, if not eliminated. Today, there is no reason why merchants should be required to accept every credit or debit card issued under a network brand, no matter the price imposed by the network, and no reason why merchants should not be enabled to negotiate pricing as they do with any other service provider. Banks that participate in the Visa and Mastercard networks can and should compete with each other to distinguish their products –

[14] Morton et al., *Committee for the Study*, 52.



such as by negotiating acceptance terms with merchants -- and thereby develop their own direct relationships with merchants.

Innovation is held back, however, by the Visa and Mastercard model, which became entrenched during the Mad Men era, and the supracompetitive prices that have been generated for banks via the joint fixing of interchange fees that is achieved through this model. While Visa and Mastercard are no longer owned by their member banks, the fundamental proposition remains the same: banks do not compete for merchant acceptance of their credit cards and banks all agree to accept the same interchange fees as their competitors are receiving. There is no competition among the banks in this market, and there is no regulation of the joint fees that are fixed for all issuing banks by the two dominant credit card companies. Nor is there any constraint on the exercise of market power that Visa and Mastercard wield. Technology has obviated the need there may once have been for this type of competitor collaboration; it should not be allowed to continue in this age of sophisticated technology simply because it was necessary decades ago. Leading retailers call on the Department of Justice to draw on the robust record created by this FTC process and begin a new review of this arrangement and take action to end this antiquated and anticompetitive business model.

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RILA stands ready to work with the Commission as it completes its ambitious review of all comments and testimony and to provide any other assistance the Commission may deem appropriate and useful. Please direct questions or requests for further information about this comment letter to Nicholas Ahrens, vice president, innovation, nicholas.ahrens@rila.org.

Sincerely,

Brian Dodge
Chief Operating Officer



Mrs. MCBATH. Thank you.

The Retail Industry Leaders Association notes that although intense competition is the hallmark of America's retail industry, the absence of competition elsewhere in the retail ecosystem stifles the benefits that have historically resulted from the intense competition, through this intense competition.

Mr. Sutton, once again, how do you respond to concerns that Amazon has the ability to absorb losses in any market that it chooses?

Mr. SUTTON. Thank you. Amazon faces fierce retail competition across many and including from many members of RILA who are amongst our biggest competitors, such as Walmart. Amazon has run a profitable retail business for many years. The retail business because of the competition has very thin margins, but our retail business in the United States has been profitable.

Mrs. MCBATH. Thank you. And Mr. Cohen, given the extraordinary——

Mr. CICILLINE. The gentlelady's time has expired, but if you have——

Mrs. MCBATH. Thank you.

Mr. CICILLINE. Thank you.

The chair recognizes the gentleman from Maryland, Mr. Raskin.

Mr. RASKIN. Mr. Chairman, thank you very much. I have a question for Mr. Cohen. According to data produced by Rand Fishkin. Google controls over 90 percent of the search engine market in the United States. So congratulations on that. Although this seems to fit the classical definition of monopoly Google has argued that the company's monopoly in the search market is nothing to worry about because competition is just a click away.

I just want to make sure I have got Google's position right. Is that essentially the argument against viewing it as a monopoly?

Mr. COHEN. Thank you for the question, Congressman. I would say that that definition of the market is quite narrow. And that when consumers are searching for information online there are a range of different services that they use. For example, when people are searching for products, the majority of Americans start their product searches on Amazon when they are searching for places to travel, hotels and airlines. They start with dedicated specialist competitors. So I think the market is much broader than that.

Mr. RASKIN. Well, let me followup then. I understand that Google paid Apple $9 billion in 2018 and $12 billion in 2019 for the right to be the default search engine on Safari. Is that right?

Mr. COHEN. Congressman, I'm not familiar with those numbers.

Mr. RASKIN. Okay. A billion is a big number so it is big numbers. Would Google pay these sums if there were really an effective competitive market in place?

Mr. COHEN. Congressman, I'm not familiar with those numbers. We do reach syndication agreements with a range of different partners.

Mr. RASKIN. Are you familiar with the deal?

Mr. COHEN. I'm not close to the terms of the deal. I think that if anything the prices probably reflect control or the decisions made by platforms, rather than somebody seeking to syndicate their services on those platforms.

Mr. RASKIN. Okay. I mean, my sense is that if these numbers are correct, that spending over $20 billion in 2 years to essentially cure it's place as the default search engine suggests that Google recognizes that defaults matter and that switching cost for users are high. But I appreciate your thoughts on that.

Let me come to Mr. Andeer. You are here? Thank you.

Apple's CEO, Mr. Cook, has argued that unlike your peers who run add based businesses, Apple is a company that fundamentally is privacy oriented. Do you believe that Apple is a privacy oriented business?

Mr. ANDEER. Yes, absolutely. We believe privacy is a fundamental human right.

Mr. RASKIN. Well then why has Apple allowed Google to be the default search engine on Safari?

Mr. ANDEER. Apple has with all of its products focused on what is the best consumer experience. And so when it comes to search, we conducted an open competition to see what did we think would be the best for our consumers. And consumers have always gone to Google. And so we ultimately went to Google, but we also make a number of options available to them. So it is very easy to change the default on your iPhone to any number of choices, including DuckDuckGo and other search engines that perhaps have more privacy protections.

Mr. RASKIN. Apple charges app developers a 30 percent tax on in app purchases in the first year and then 15 percent every year thereafter. In the statement submitted for the record, Spotify argues that by charging the 30 percent tax on in app purchases, Apple forces our providers to make an impossible choice, either pass the cost on to consumers or refuse to pay the commission and face a litany of technical hurdles imposed by Apple. These complaints have been echoed by other app developers as you may know.

Mr. Andeer, how did Apple arrive at the amount of a 30 percent fee? And could Apple charge a 35, or 45, or 50 percent fee for in app purchases?

Mr. ANDEER. So thank you for the question. Eighty-four percent of the apps, over 2 million apps available on the app store pay nothing to Apple. It is only a very small percentage that pay a commission. When it comes to Spotify, they are one of our most successful developers. But yet they pay a commission on less than 1 percent of their subscribers to Apple. And so they've been able to build a successful business, thanks to the app store. And we are proud of their success. We continue to invest in tools and other resources to make it very easy for developers to create great applications.

You asked how we came to the 30 percent. Ten years ago, and it is easy to forget, most software was distributed through physical distribution like CompUSA or Best Buy. Typically a developer would share up to 60, 70 percent of the retail price with the distribution channel. So we set a very aggressive price of 30 percent, only applying to digital content in an effort to compete for those developer's mindshare and it has been very successful.

Mr. RASKIN. Okay. Do I have, Mr. Chairman, for one more question?

Okay. A quick question for Mr. Perault. Facebook announced in January that it would be integrating WhatsApp. Instagram and Messenger. An announcement that coincided with growing calls in different places to break up Facebook, specifically by undoing the buy up of WhatsApp and Instagram. Facebook says the integration will let it protect users by providing end-to-end encryption. Is Facebook's integration ploy an attempt to thwart or preempt these efforts to break up Facebook?

Mr. PERAULT. Thank you, Congressman. No, it is not. We face fierce competition for the products and services that we offer. It's our understanding that there are many services in the market that offer more and more privacy Protective Services. And so our pivot towards privacy with respect to interoperating our services was because of the competition that we face in the market.

Mr. RASKIN. Okay. Mr. Chairman, I yield back. Thank you.

Mr. CICILLINE. I thank the gentleman. And the ranking member has agreed to do a second round of questions and I appreciate that indulgence.

Mr. Sutton, I want to just turn to you for a moment. In your testimony you have repeatedly emphasized that Amazon is a great partner to third party merchants. Now reports suggest that Amazon has been steadily increasing the fees it charges merchants. According to a recent article in the Washington Monthly, in 2014 Amazon fulfillment fees accounted for 17 percent of the seller's total cost.

Today Amazon has raised fees so they now launch around 27 percent of a seller's cost. Amazon has also increased storage fees by over 40 percent since 2015. Seller fees are extremely lucrative for Amazon, earning the company over $42 billion in 2018 according to the same article.

And so, Mr. Sutton, my question is given how dependent merchants are on Amazon's platform, are these steady fee hikes by Amazon a pure exercise of its outsized buyer power?

Mr. SUTTON. Thank you for the question. It is because sellers have so many options that we have to provide competitive options. And those fee estimates are not accurate. The fees that are necessary to be paid in our store to sell items have actually been steady for a number of years and slightly declining.

There are optional fees such as Fulfillment, which are competitively priced to other fulfillment options and they reflect the cost of the filling products, sending items, storing them of that nature. But those are reflective and competitive with other options sellers would have through the many other third parties that offer similar services or doing it themselves.

Mr. CICILLINE. Well, I would be anxious to receive from you the data that disputes the numbers. But let me understand the argument, you said because the seller has so many options they should therefore—that's the explanation for increased cost by Amazon on the seller, it's the exact opposite. I mean, the fact that sellers have other options would not cause Amazon to charge more money. So I don't understand your argument.

Mr. SUTTON. I'm sorry. Let me clarify.

Mr. CICILLINE. Please.

Mr. SUTTON. Because they have so many options that we partner with them and we charge fair fees. It's the reason our fees have been steady, which was the point I was trying to make. The fees for listing in our store has stayed steady or slightly declined. Some of these optional fees are based on market costs, and they have adjusted and they are competitive with other options in that space.

Mr. CICILLINE. Thank you. Over the years various reporting has documented the aggressive and predatory business tactics that Amazon employs. In 2013 Brad Stone reported that Amazon named one of its business campaigns the Gazelle Project, a strategy where Amazon would approach small publishers, and I quote, "the way that a cheetah would a sickly gazelle." end quote. Is the Gazelle Project still in place, Mr. Sutton?

Mr. SUTTON. I'm not familiar with that project.

Mr. CICILLINE. Okay. If you could get back to me with an answer. I would also like to know whether Amazon pursues similarly predatory campaigns in other parts of your business. If you could get me answers to both those questions I'd appreciate it.

Mr. CICILLINE. The final thing I want to just ask this committee's investigation is extremely important for the economy, for consumers, for those you represent. And I hope that each of the witnesses today will pledge on behalf of the companies they represent to cooperate to the fullest extent possible, and to act in good faith to respond to the committee's requests in a timely and complete manner.

I will ask you, Mr. Andeer, if you can answer that question on behalf of your company?

Mr. ANDEER. Yes, we will.

Mr. CICILLINE. And you Mr. Sutton?

Mr. SUTTON. Yes.

Mr. CICILLINE. Mr. Perault.

Mr. PERAULT. Thank you, Chairman. Yes, we will.

Mr. CICILLINE. And Mr. Cohen?

Mr. COHEN. Yes, gladly.

Mr. CICILLINE. And finally there has been some reporting of I think very disturbing efforts by a particular company to aggressively impede congressional oversight, to go so far as to hire opposition research firms to do opposition research on Members of Congress and staff of the committee.

And so I would similarly ask you in the spirit of cooperation do you commit to not engage in those tactics in response to this investigation?

Mr. Andeer.

Mr. ANDEER. Yes, we would never engage in that sort of conduct.

Mr. CICILLINE. Mr. Sutton?

Mr. SUTTON. Yes.

Mr. PERAULT. Yes.

Mr. CICILLINE. Mr. Perault, thank you. Mr. Cohen?

Mr. COHEN. Yes.

Mr. CICILLINE. Thank you.

With that, I will recognize the gentleman from North Dakota, Mr. Armstrong.

Mr. ARMSTRONG. Thank you Mr. Chair. So Mr. Andeer, the 30 percent markup on apps, that's been the same since the company started, since the app started, right?

Mr. ANDEER. Yes, it's correct. But for some apps we actually reduce that to 15 percent and of course that 30 percent only applies to less than 16 percent of the apps in the app store.

Mr. ARMSTRONG. And you said 84 percent don't pay anything, right?

Mr. ANDEER. That's correct.

Mr. ARMSTRONG. But what percentage of the total U.S. global revenue from apps come from the remaining 16 percent that do share revenue?

Mr. ANDEER. I don't know the answer to that question. I do know that developers monetize in a number of ways. And so, we have developers on the app store that monetize through advertising through selling of physical goods, through the selling of services. The value that developers collect through the app store is probably hundreds of billions, perhaps over a trillion dollars.

Mr. ARMSTRONG. So how does the Apple app store fit into your company's offerings?

Mr. ANDEER. So I think to provide some context, when we launched the first iPhone, it didn't include the App Store. We thought developers and content creators would access consumers through the Safari web browser, and we have long supported an open and free internet. We created the App Store as a complement, an alternative to the open and free internet. Now, we have done a lot to encourage developers to create as many great apps as possible. And we really look at it as a way to continue to sell devices. We're a device company at the end of the day. We're looking to convince consumers that we offer the best possible product.

Mr. ARMSTRONG. How about Apple Music?

Mr. ANDEER. Apple Music is part of that strategy. So we offer Apple Music, but we also make it very easy for competitors to access each and every IOS user through the App Store. So Spotify, Google Play Music, and dozens of others offer apps that compete with Apple Music.

Mr. ARMSTRONG. Is Apple more of a hardware business, a software business, or a platform business?

Mr. ANDEER. We think of ourselves as a products company first and foremost. So we are selling an experience to consumers. We are selling an entire product so everything from hardware, software, to services. It is the total package.

Mr. ARMSTRONG. To what degree does Apple share or not share markets with the other companies providing testimony today.

Mr. ANDEER. We compete with all of the companies on this panel in various ways, in addition to dozens the others.

Mr. ARMSTRONG. I just felt like you didn't have enough questions during the first round of questions, so I wanted to make sure, sir. And this is going to go back to go what my friend Mr. Neguse was talking about, and then I'm going to go to Mr. Perault. You can't use Facebook Messenger without Facebook, right, or can you?

Mr. PERAULT. I believe that you can, Congressman.

Mr. ARMSTRONG. Okay. So they are two separate and distinct. Do you know what percent of people that use Messenger that don't use Facebook?

Mr. PERAULT. I do not have that data. Would be happy to follow up.

Mr. ARMSTRONG. And the reason I bring it up is, when we talk about competition versus complementing, and I mean how we use this, like, I just asked you all of those things because I wouldn't know where to get anything other than the Apple App Store. I'm sure other things exist, but I don't know about them. And I think there's a lot of us that are in that situation. So, with that, I just think, as we're closing this out, I hope as we move forward these hearings become more focused, more single-topic-specific focused. And then I would just encourage everybody and the companies who are testifying to be forthright with answers, and the questions that are—I can tell you about the half the questions being asked today. Of which I'm assuming you all with your vast resources and company resources could do as well. And it sure makes it a lot easier as we go forward and we focus on specific topics or specific things it will be easier for everybody if we are more forthright, honest and transparent with our answers. With that, I yield.

Mr. CICILLINE. I thank the gentleman. I now recognize the gentlelady from Georgia, Mrs. McBath, for 5 minutes.

Mrs. MCBATH. Thank you, Mr. Chairman.

The Wall Street Journal recently reported that Google Maps is overrun with millions of false business addresses and fake names, as many as 11 million. The article also noted that Google's ad businesses actually profits from these scams while consumers and legitimate locally owned businesses suffer. Mr. Cohen given the extraordinary power that Google enjoys over these small and local businesses, what measures is Google taking to identify and remove fraudulent listings? And is it a lack of competition in online search that allows Google to be so complacent by addressing this problem head on?

Mr. COHEN. Congresswoman, thank you for the question. I'm not familiar with this Wall Street Journal report. I'm also not familiar with any claims of fraudulent listings in Google maps of that scale. We take a number of measures to address fraudulent listings. It is in our interest to present the most accurate, up-to-date information as possible to our consumers, precisely because we operate in a competitive marketplace.

Mrs. MCBATH. Can you make available to the committee the processes that you use to make sure that people aren't fraudulently——

Mr. COHEN. I would be glad to follow up once I discuss it with the experts in my company.

Mrs. MCBATH. Okay. Thank you. I yield back the balance of my time.

Mr. CICILLINE. I recognize the gentleman from Maryland, Mr. Raskin, for 5 minutes.

Mr. RASKIN. Chairman, thank you. I am concerned about business conduct discriminates against competitors online your platforms are so dominant, a decision by any one of them, whether it is deliberate or accidental, malignant or benign, can be fatal for a

business that relies on your platform in order to reach your customers. First of all, do you all agree that, in theory, each of your businesses can pick winners and losers in the marketplace? And we can go down the line. Do you agree?

Mr. ANDEER. No, I don't. I look at the facts of the marketplace in each and every single market in which we compete, whether it is music or books or video. There are companies that are far more successful in our platform than we are.

Mr. RASKIN. Okay. Mr. Sutton, what's your response?

Mr. SUTTON. Respectfully, I disagree. Amazon offers one store amongst thousands of retail options for customers who shop across them every day. Customers pick the winners and losers.

Mr. RASKIN. Mr. Perault.

Mr. PERAULT. Congressman, I disagree as well. We face fierce competition for the products and services that we offer.

Mr. RASKIN. Mr. Cohen.

Mr. COHEN. Yes, Congressman. Online people can—traffic anywhere they like, they can click on whatever services they like. We often see that in our search results new companies and new ideas are surfacing all the time that we never heard of.

Mr. RASKIN. Let's work our way back down the other way, then. Do you have processes in place for businesses to seek redress if they believe that they've been discriminated against by your platform?

Mr. COHEN. Yes, Congressman, we do.

Mr. RASKIN. Can you describe briefly what that is?

Mr. COHEN. There is a process for firms to appeal the way that they are ranked. I'm not familiar with how it works indepth, but I'd be happy to follow up with you.

Mr. RASKIN. Okay, Mr. Perault.

Mr. PERAULT. Congressman, we do have processes as well. We have an appeals process for instance, and we are looking to expand and improve that process.

Mr. RASKIN. Okay. And that appeals process, how does that work, they go to—who do they go to?

Mr. PERAULT. Congressman, pages for instance that are disabled on Facebook that are able to appeal the fact that they are disabled, we would then review that and make a determination on the appeal.

Mr. RASKIN. Okay. Mr. Sutton.

Mr. SUTTON. Most of our large competitors operate their own independent stores not through Amazon. With respect to the small- and medium-size sellers that sell through our store, we have many processes in place. We have a Seller Central that provides a lot of tools and services for them and lots of opportunities to communicate with Amazon if they have any concerns.

Mr. RASKIN. Mr. Andeer.

Mr. ANDEER. First and foremost, it is the consumers who make it very clear if they are unhappy with the experience on our products. And we have been very straightforward with wanting to offer not just our own services but third-party services as well. I would also say that we also employ hundreds of Apple employees who are focused on reviewing apps and are in constant communication with developers. And there is an escalation path within Apple to make

sure any concerns or issues are quickly escalated. And we address those each and every week.

Mr. RASKIN. Thank you for those answers.

Companies across the digital markets, nonetheless, live in fear of retaliation. I think by any of the firms that you represent. And this fear has kept some of them speaking up publicly about the anti-competitive practices that they experience and the committee has received a lot of communication for people in advance of this hearing. One business wrote: Unfortunately, we are not able to be more public at this time out of concern for retribution to our business.

Another wrote: Given how powerful Google is and their past actions, we are, quite frankly, worried about retaliation. So my question to you is, would you commit that, on behalf of your company, that you will not retaliate in any way against any of the businesses that cooperate with this committee or share requested information with us as part of the investigation. Will you all agree to a non-retaliation policy towards businesses that participate Mr. Andeer?

Mr. ANDEER. Yes, as Apple's chief compliance officer, I would take such an allegation of retaliation extremely seriously.

Mr. RASKIN. That's great to hear. Mr. Sutton?

Mr. SUTTON. Yes, we would absolutely not retaliate against anyone who cooperates with the committee.

Mr. RASKIN. Mr. Perault.

Mr. PERAULT. Thank you, Congressman. Yes.

Mr. RASKIN. Mr. Cohen.

Mr. COHEN. Yes for me, too.

Mr. RASKIN. I appreciate that because you guys have done a good job of representing your businesses, but if there were a monopoly and you asked them if they were a monopoly, they would say they are not a monopoly. So, obviously, we've got to do work that goes beyond just asking you for your opinion. You've got to talk to other people. And so, for that to be meaningful, they can't be living in fear of retaliation from you so.

Thank you very much, Mr. Chairman.

I yield back.

Mr. CICILLINE. Thank you, Mr. Raskin. We have now been notified that the ranking member of the full Judiciary Committee has called for a roll call vote. So we're going to take a quick 10 minute recess so we can all vote, and we will resume with the second panel. I want to thank the witnesses from our first panel for being here. You're excused. You are welcome, of course, to stay for the second panel, but we very much appreciate you being here today and sharing the perspective on the current state of competition in the digital marketplace.

We are in recess until the call of the chair.

[Recess.]

Mr. CICILLINE. The subcommittee will come to order. I again want to apologize to our witnesses. There is historic action on the House floor that has taken a number of our committee members away from the committee, but I'd like to get started.

And now we'll introduce our second panel of witnesses. The first witness on our second panel is Timothy Wu, the Julius Silver Professor of Law at Columbia Law School. Professor Wu is an expert

on antitrust, copyright, and communications law, and he is a contributing opinion writer for The New York Times.

He's the author of a number of important works that have framed discussions around technology and antitrust, including "The Master Switch" and "The Curse of Bigness." Professor Wu has twice been part of the Politico 50 list of individuals transforming American politics and was named to the American Academy of Arts and Sciences in 2017. Professor Wu received his bachelor of science from McGill University and his J.D. from Harvard Law School.

Our second witness on today's panel is Dr. Fiona Scott Morton, the Theodore Nierenberg Professor of Economics at the Yale University School of Management.

Dr. Scott Morton is nationally recognized as a leading scholar on issues of competition and has published articles that range widely across industries and leading economic journals.

From 2011 to 2012, she served as Deputy Assistant Attorney General for Economics at the Antitrust Division of the United States Department of Justice where she helped to enforce the Nation's antitrust laws. Dr. Scott Morton received her B.A. from Yale and her Ph.D. from the Massachusetts Institute of Technology.

The third witness on our panel is Stacy Mitchell, the codirector of the Institute for Local Self-Reliance. She has spent years working with policymakers and grassroots organizations to help develop and enact city, state, and federal policies to strengthen independent business and curb corporate power. Ms. Mitchell has appeared in publications like The Nation, The Atlantic, and The Wall Street Journal, and her works have had a significant influence on discussions around corporate consolidation. Her paper "Antitrust and the Decline of America's Independent Businesses" earned Ms. Mitchell recognition in 2017 as part of the Annual Jerry S. Cohen Award for Antitrust Scholarship. Ms. Mitchell received her B.A. from Macalester College and currently serves on the Board of the Main Center for Economic Policy.

Our fourth witness is Maureen Ohlhausen, a partner at Baker Botts LLP. Prior to joining Baker Botts, Ms. Ohlhausen led the Federal Trade Commission as Acting Chairman and Commissioner. While at the FTC from 2012 to 2018, she directed all aspects of their antitrust work. She has published dozens of articles on antitrust, privacy, IP regulation, FTC litigation, telecommunications, and international law issues.

Ms. Ohlhausen has particular expertise in the intersection of antitrust, technology, and privacy issues. She has received numerous awards for her work and scholarship including the FTC's Robert Pitofsky Lifetime Achievement Award. Ms. Ohlhausen received her B.A. from the University of Virginia and her J.D. from the Antonin Scalia Law School, formerly the George Mason University School of Law.

Today's fifth witness is Carl Szabo, vice president and general counsel at NetChoice. Before joining NetChoice, he worked as an intellectual property attorney at Wildman Harrold Allen & Dixon advising clients on privacy, e-commerce, and contractual matters. Mr. Szabo has extensive experience in taxation, privacy, copyright, and trademark law.

Before receiving his J.D., he worked at the FTC where he helped create and implement their consumer information security outreach plan. Mr. Szabo was also an adjunct professor of privacy law at the Antonin Scalia Law School. He received his B.A. from Rice University and his J.D. and Communications Law Certificate from the Catholic University of America.

Our last witness today is Morgan Reed, the executive director of The App Association. He specializes in issues involving application development as it intersects with privacy, intellectual property, competition, and innovation. Prior to joining The App Association, he served as managing director of North American sales for a Taiwan-based trading company specializing in the manufacture of technology products for American markets.

Recently, Mr. Reed has focused on developing an innovators network, organizing a team of intellectual property professionals to deliver a series of lectures across the United States focused on the importance of IP law. Mr. Reed received his B.A. and graduate degree at Arizona State University and attended the University of Utah and the National Taiwan University.

We welcome all of our distinguished witnesses on the second panel. Thank you for participating in today's hearing. Now, if you would rise, I'll begin by swearing you in. Please raise your right hand. Do you swear or affirm under penalty of perjury that the testimony you are about to give is true and correct to the best of your knowledge, information, and belief, so help you God?

Let the record show the witnesses answered in the affirmative. Thank you. You may be seated.

Please know that each of your written statements will be entered into the record in its entirety. Accordingly, I ask that you summarize your testimony in 5 minutes. To help you stay within that time, there's a timing light on your table. When the light turns green to yellow, you have 1 minute to conclude your testimony. When the light turns red, it signals that your 5 minutes has expired.

And we'll begin, Mr. Wu, with you. You have 5 minutes.

TESTIMONY OF TIMOTHY WU, JULIUS SILVER PROFESSOR OF LAW, COLUMBIA LAW SCHOOL; FIONA SCOTT MORTON, THEODORE NIERENBERG PROFESSOR OF ECONOMICS, YALE SCHOOL OF MANAGEMENT; STACY MITCHELL, CO-DIRECTOR, INSTITUTE FOR LOCAL SELF-RELIANCE; MAUREEN OHLHAUSEN, PARTNER, BAKER BOTTS LLP; CARL SZABO, VICE PRESIDENT AND GENERAL COUNSEL, NETCHOICE; AND MORGAN REED, EXECUTIVE DIRECTOR, THE APP ASSOCIATION.

TESTIMONY OF TIMOTHY WU

Mr. WU. Thank you, Chairman and other members of the committee. It is a great pleasure to be here today, and I'm very grateful that the subcommittee is conducting this work and these investigations. I believe this is one of the most important economic issues facing our country.

I think we face a vitally important question here, which is this, whether the United States will remain the place that new indus-

tries start, the place where startups get their start, the place where inventors think that they have a chance to challenge the dominant firms of their day, where innovation flourishes, where really the United States is capable of being the place, as I've said before, that new industries are started.

And I think that is something that has come into question. I think that we face across the economy an over consolidation, an over concentration of many industries, and I think this is particularly evident and, in fact, extreme in the tech industries.

So, over the last 2 hours of the first panel, we listened to something that to me could have been a hearing in the year 2005 or maybe almost like a fantasy zone. If we're to believe what the testifiers were saying—and they were under oath—we live in a time of incredibly fierce competition. I could leave this hearing, go to my garage, and start a challenger to Google, Facebook, and Amazon. There are no barriers to competition. Every competition is only one click away.

I think that everybody knows that's not true. There's no mystery anymore about whether the tech markets have flipped. There's no question as to whether there were barriers to entry and whether the tech economies have, in fact, become a very difficult place for people to get started.

People are starting to talk about the decline in the number of startups, almost unthinkable in the United States, which has always had a comparative advantage in being the place where startups will get their start.

So I think it is time for the reassertion of what I think have been incredibly successful policies from the last century, namely the antitrust laws and pro-competitive regulation on the model of the telecom laws and some of the FTC regulations.

We have a trilogy of cases in the tech space in particular, IBM, AT&T, and Microsoft, which were big section 2 cases, which were criticized at the time of being certain to interfere with competition and hurt American companies at a time when Japan seemed very threatening.

In retrospect, when you look back at the effects of these big cases, they loosened up the tech markets; they helped to contribute to an enormous boom in the tech and telecom markets that lasted and has lasted more than 30 years, and has restored the United States to a place of global leadership in the tech market.

So I think that that trilogy of cases and some of the most important procompetitive regulation at the FCC and FTC is the policy we need in this time and not a policy of trying to endorse or support national champions.

If I have time in questions, I'll address some of the things that were said earlier, but I want to address one or two right now. In the testimony we heard earlier, I think it's very notable that Facebook had trouble naming competitors. They were repeatedly asked. They couldn't name their competitor.

I think there's a very simple reason for that: They've bought their competitors. They have bought the most threatening companies to them, and that is the reason that it's so hard for them to name them. They could've said Instagram and WhatsApp, but they own them. In fact—and Facebook also said that its intent when it

bought these companies was peripherally benign. It saw them as promising companies. It wanted to incubate them.

I suggest that this subcommittee look into an email written by Mark Zuckerberg around the time of the Instagram acquisition where he stated, as has been reported in the press, that the purpose of this—and this is paraphrasing—was to eliminate a dangerous, potential nascent competitor. You have subpoena power, if I'm not mistaken, and it might not be a bad idea to get your hands on that letter.

I'll speak just in my last 20 seconds about Amazon and their testimony. Amazon swore up and down that there's nothing funny about their searches or algorithms. They would never favor their own products over another, but I think there needs to be serious scrutiny of the Amazon search engine.

The FTC in 2001 issued a ruling suggesting—or a letter saying that search should be what consumers expect. And I think we have under enforcement of the questions as to whether searches are deceptive. And I'm over my time, but I will suggest that in each of these comments there were statements that were really not reflective of the conditions of competition in this country and the conditions of innovation, and I'm so glad that the subcommittee is taking the time to look at these issues.

[The statement of Mr. Wu follows:]

Where New Industries Get Their Start: Rebooting the Startup Economy

Before the Committee on the Judiciary,
Subcommittee on Antitrust, Commercial, and Administrative Law
U.S. House of Representatives

Tim Wu
Julius Silver Professor, Columbia University School of Law
Author, "The Curse of Bigness: Antitrust in the New Gilded Age"

July 16, 2019

Chairman, Ranking Member, and Members of the subcommittee, thank you for inviting me to testify today.

For more than a century now, the key economic advantage of the United States has been its startup economy and capacity for launching new industries. This is innovation, yes, but of a particularly important kind. It is not just the improvement of mousetraps, but rather the pioneering of entire industries that, in time, come to employ millions and generate trillions. Being the place companies get their start has given the United States an extraordinary advantage over the last century, and helped make it the world's preeminent economic power.

But this advantage, which we sometimes take for granted, is now threatened by excessive consolidation in the U.S. economy. The most obvious symptom is the decline of the American startup. As a recent Brooking study shows, startup rates have declined dramatically across the economy.[1] In an extraordinary development, the number of companies shutting down has grown to match the number that are starting up.[2] The Department of Labor shows a declining number of people working for startups, while the Center for American Entrepreneurship documents a relative decline in American VC funding relative to the rest of the world. We may, in short, be entering a "startup winter."[3] This is a problem that affects many industries, but is particularly obvious in the Internet economy.

There will, of course, be those who resist the implication that anything is amiss. Some argue that all is well, that the big guys are friendly giants, and really all we need to do is stop

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[1] Jay Shambaugh, Ryan Nunn, Audrey Breitwieser, and Patrick Liu, The State of Competition and Dynamism: Facts about Concentration, Start-Ups, and Related Policies, Brookings Institute (June 2018).

[2] *Ibid.*

[3] Richard Floria and Ian Hathaway, Rise of the Global Startup City, American Center for Entrepreneurship (2018).

worrying and learn to love our national champions. When it comes to the platform economy we need not fear, because the giants will either invent everything, or buy whoever is. And venture capitalists can invest in startups confident that everyone will earn their payout.

I do not agree with this perspective. Economic structure matters, and I fear that the United States is losing a vital capacity: of being the best place for new industries to get their start. We are becoming a country of giant concerns, admirable in their way, but where incremental improvement is the norm, where bureaucracy rules, and stagnation may be inevitable. We will become a country where inventors and entrepreneurs dream of being bought, not of building something of their own. While it once seemed impossible, the Internet is becoming the case study of that development.

The solution, I believe, should be a broad effort to reboot the startup economy. That can be done not through one policy or passing any single law. It requires a thoughtful yet forceful reassertion of the bundle of pro-innovative laws and policies which have made up the best of American innovation policy over the last century. I see three essential elements in that policy:[4]

- Pro-competitive laws and regulations (also known as "competition catalysts");
- The reassertion of antitrust, including retroactive merger review; and
- The funding of visionary research projects, in the spirit of the ARPANET, both basic and applied.

These policies have several things in common. They open the economy by reducing barriers to entry — in economic jargon, "lower rivals' costs."[5] They reduce the power of older companies to control the new, allowing new industries to arise on their own. And they give newer or smaller competitors the opportunity to compete with larger concerns. Collectively, this mixture of policies and rules have had an extraordinary track record in putting the United States in a position of technological leadership in the world. It is to this, the best practices of the last century, to which we should return.

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Let me turn now to the Web, the specific topic of this hearing. Eleven years ago I was in San Francisco doing research for a book, *The Master Switch*, and thinking about the historic cycles of technological innovation.[6] In that research I noticed a pattern. Big inventions break open

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[4] Outside of the intellectual property laws, their own subject.

[5] Cf. Steven C. Salop and David T. Scheffman, Raising Rivals' Costs, 73 American Economic Review 267 (1983).

[6] Tim Wu, *The Master Switch* (Knopf: 2010).

industries, leading to the birth of new and innovative industries, and a characteristic pattern of hundreds if not thousands of startups.

But that doesn't last. The new industry is prone, after some time, to consolidation, monopolization, and in time, stagnation that can last for decades. And, importantly, once consolidation occurs, existing industries often try to co-opt or prevent the emergence of new industries — the so-called "Kronos effect."[7] That was the pattern for the telephone, radio, television, cable, automobile and many other "high tech" industries.

The question, back in the 2000s, is whether the same might happen to the web. At the time, the idea that the web might undergo consolidation seemed crazy. Many, in fact, believed it impossible. The web was intrinsically different, went the prevailing wisdom: it was open by design, and new entrants would always be "one click away." No firm could expect to hold lasting power: the 5 year-old firm was already middle-aged; the 8-year was on life support. For this was an ecosystem, not an industry, and ecosystems just don't tolerate monopoly.

Ten years later, at the risk of stating the obvious, things look a little different. History has, in fact, repeated itself and traditional economics — matters like economies of scale — have reasserted themselves. The ecosystem has been replaced, and the idea that the web is dominated by a handful of large firms is a mystery to no one.

A symbolically key moment, in retrospect, was in 2012, when Facebook bought Instagram. At the time, Facebook was about 8 years old, ancient in web terms, and seemed destined to be replaced by something like Instagram; something newer, better, and more in tune with a younger generation. But Facebook broke the narrative by buying Instagram — paying double the previous offer — and managing to get the merger past the Federal Trade Commission despite documentary evidence that the merger was intended to eliminate a nascent competitor.[8] That moment demonstrated the power of buyouts to eliminate competitive threats, and the willingness of government to let a threatened firm get away with it.

Today, the 2019, the old slogan that competition is one click away seems like a bad joke. Unlike in 2008, the big firms seem in no danger of fading under the onslaught of smaller rivals. Instead (often in violation of the antitrust laws) most of those would-be rivals have been bought or effectively tamed. I'm not alone in this assessment. Most Silicon Valley observers, from Mary Meeker through Tim O'Reilly believe that the American tech is in a lull, innovation-wise. We can tell by the conversations: instead of talking about a crazy new firm that is trying something new, the talk is all "what will Google do? What will Amazon launch?" Or, alternatively, we talk about China is up to. That, to my mind, is a sign of where things stand.

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[7] *Ibid.*

[8] Josh Kosman,"Facebook boasted of buying Instagram to kill the competition: sources," N.Y. Post, February 26, 2019.

I don't think "rely on the giants" is a good innovation policy for this country. We've tried it before: in telecommunications for almost 70 years, in the car industry for many decades, and in many other industries as well. It is not as if giant firms don't innovate, but they do so incrementally, carefully, and in a way designed to protect their existing revenue streams. Over the last century, competitive, open sectors — ecosystems — have proved themselves superior to those monopolized or dominated by a "big three" or "big four."[9]

Fortunately, it is not too late to act. The United States has faced excessive consolidation before, and found ways to encourage innovation and entrepreneurship in cycles where dominance is the pattern. Looking back at the 20th century, three major tools were employed.

The first was regulatory: so called "competition catalysts" laws and regulations that limit the power of monopolists or other dominant firms exercise power beyond its market, and to treat fairly those who depend on it.[10] The telecom laws and net neutrality are the key examples of this approach, but there are others as well, like the rules that force optometrists to issue written prescriptions so that you can buy glasses anywhere.[11] In telecom, the government fostered the growth of industries "on top" of AT&T's network (and "at the ends"), limiting AT&T to providing transmission. That policy led to the birth of the first dial-up network providers, AOL and Compuserve, and ultimately, in the 1990s what we now call the mass Internet.

The second is the use of antitrust, the topic of this hearing. The United States brought a trilogy of tech cases — AT&T, IBM, and Microsoft — that I see as foundational in terms of shaking up industry and creating room for new firms and new industries to grow.[12] At the time, for each of those cases, the naysayers suggested that the law was obsolete, that monopoly was inherently fragile, or that to interfere with America's national champions would simply hand the future to Japan — a country that knew how to support its tech companies, not attack them.[13]

Yet in retrospect, the breakup of AT&T, and the challenges to IBM and Microsoft helped create the tech economy we now take for granted, along with American leadership in the sector. This is not to say that the engineers, entrepreneurs and capital markets are undeserving of the credit they are given. But it is to say that technologies like the personal computer, the emergence of a software industry, the ISP industry, the web, and even the very companies we discuss today benefited from the economic structure created by both regulatory action and antitrust.

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[9] On whether monopoly or competition generates more competition, see Jon Baker, Beyond Schumpeter vs. Arrow: How Antitrust Fosters Innovation, 74 Antitrust L. J. 575 (2007).

[10] For a survey of these rules and laws, see Tim Wu, Antitrust via Rulemaking: Competition Catalysts, 16 Colorado Technology L. Rev. 33 (2017).

[11] *Ibid.*

[12] See Tim Wu, The Curse of Bigness (2018).

[13] See Tim Wu, Don't Fall for Facebook's 'China Argument,' The New York Times Dec. 10, 2018.

"I do not believe in trust-busting for trust-busting's sake," as Robert Jackson once said. But I do believe, after a century of experience, that industries do consolidate, that today's vibrant and dynamic industries can get too large and begin to stagnate. The American car industry, for example, was considering a highly innovative industry in the 1950s, but by the 1970s was showing severe signs of consolidation and lack of entry.

One key tool we need to make more use of is retroactive review of mergers that have led to anticompetitive consequences. Today, almost all merger review is prospective; but predictions are hard, especially about the future. The antitrust agencies are, I believe, beginning to develop ways to look at mergers retrospectively under Section 7 of the Clayton Act, or consider a merger as part of a program of monopoly maintenance under Section 2 of the Sherman Act, but this a key for fixing a big blind spot in antitrust enforcement.

The third is government's own investment in innovative research projects. The Internet, we often forget, began as a bold and visionary project funded by the federal government. Importantly, it didn't have a business model, nor need to make money — instead, it served as a platform for others to launch from, including all of the platforms who are here today. If the Apollo moon project remains the most visible example of government-backed engineering achievement, the spin-offs and spillovers from the Internet project have clearly yielded more, overall for the American people than any other.

One of the best ways to see the advantage of this bundle of policies is by comparison. It is almost natural to worship great and powerful companies, and they have a way of becoming favorites of govemment. But the nations who fully embraced and supported their tech powers in the 1970s and 80s — Europe and Japan — have fallen behind. The United States forced its companies to face the heat of competition created opportunities for the new and the unknown, and has benefited greatly from that approach.

In fact, what makes the United States so distinctive is that, just about every decade, it produces new winners. We aren't waiting around seeing what IBM and Hewlett-Packard, the powers of the 1970s will do next, and we should not have an innovation policy that consists of depending on what Google, Facebook and Amazon will do or who they will buy.

In closing, we must never forget that the story of America's preeminence in the tech industry is not a story of just one actor or set of actors. It has been a joint project that involves engineers, entrepreneurs, managers, investors, venture capitalists, and also wise action and thoughtful setting of the ground rules by government. It is a grave mistake to confuse wisdom with doing nothing; for doing nothing is its own form of industrial policy, one that has not served us in the long run.

Mr. CICILLINE. Thank you, Professor Wu.

And I assure you that the committee is not bound by the characterizations of the witnesses about the nature of the markets or the lack of competition. That's the purpose of the investigation, and we'll take you up on your suggestions.

Next, I recognize Dr. Fiona Scott Morton for 5 minutes.

TESTIMONY OF FIONA SCOTT MORTON

Ms. SCOTT MORTON. Thank you. Thank you, Chairman Cicilline, for the invitation to testify today. I agree with my colleague that we have just heard four very careful corporate discussions. From an economist's perspective, there were a number of concerns that they failed to mention, those in particular that negatively impact competition and innovation.

Digital platforms provide tremendous benefits, and yet they've also created problems, such as insufficient competition, and that leads to too little innovation and entrepreneurship. I urge you as a committee to use this investigation to identify what types of antitrust enhancements and regulatory tools are needed to both jump start competition in this sector and protect it going forward to the benefit both of consumers and small businesses.

As is detailed in the report that I submitted as my testimony, there are a number of characteristics of platforms that tend to drive them toward concentrated markets, very large economies of scale. Consumers exacerbate this with their behavioral biases. We don't scroll down to the second page. We accept defaults. We follow the framing the platform gives us and instead of searching independently.

And what that does is it makes it very hard for small companies to grow and for new ones to get traction against a dominant platform. And without the threat of entry from entrepreneurs and growth from existing competitors, the dominant platform doesn't have to compete as hard.

If it's not competing as hard, then there's several harms that follow from that. One is higher prices for advertisers, many of these platforms are advertising supported. Then there's higher prices to consumers who may think that they're getting a good deal by paying a price of zero, but the competitive price might well be negative. The consumers might well be able to be paid for using these platforms in a competitive market.

Other harms include low quality in the form of less privacy, more advertising, and more exploitative content that consumers can't avoid because, as Tim just said, there isn't anywhere else to go.

And lastly, without competitive pressure, innovation is lessened, and in particular it's channeled in the direction the dominant firm prefers rather than being creatively spread across directions chosen by entrance. And this is what we learned both from AT&T and IBM and Microsoft is that when the dominant firm ceases to control innovation, there's a flowering, and it's very creative and market driven.

So the solution to this problem of insufficient competition is complimentary steps forward in both antitrust and regulation. Antitrust must recalibrate the balance it strikes between the risk of over enforcement and under enforcement. The evidence now shows

we've been under enforcing for years, and consumers have been harmed. We have advances in both the theory and empirical tools that demonstrate how we can better identify those harms and measure them.

Digital platforms in particular do raise a number of practical enforcement challenges, for example, measuring quality adjusted prices, okay. That's hard. But Congress could enable the agencies to bring these cases nonetheless by articulating through statute the risks that Congress wishes courts to weigh and the evidence they should accept.

For example, if a dominant platform wants to acquire a nascent entrant when there's uncertainty over how close a competitor that entrant is going to become in the future, how should courts treat that uncertainty? Okay, today, that uncertainty essentially defaults to buy anybody small you want. That's our rule.

Congress could change that default to you only get to buy the nascent entrant if the dominant firm proves to the court that the acquisition will benefit consumers, and then only in that case can the merger occur. So the defaults that we use in court really matter, and Congress can write laws that change those defaults.

Congress could bring enforcement of the antitrust laws more in line with modern evidence and the resource intensity of modern investigations by shifting burdens of proof to defendants in certain settings. That would likely increase accuracy because the dominant or acquiring firm has the understanding and evidence of its business model that's needed to assess the impact of the conduct or merger.

Lastly, regulation is a critical complement to more robust antitrust enforcement. Congress could give a regulator tools that allow it move quickly, something that litigation typically does not do, and effectively when dominant platforms pose a harm to competition. For example, a regulator could oversee a requirement that platforms don't harmfully discriminate between their own services and those of rivals.

If an agency established a violation of the antitrust laws and determined that the best method of restoring competition was, for example, mandatory interoperability between the dominant firm and small entrants, a regulator could oversee and monitor that interoperability and make sure it happened. Other remedies that require monitoring might be data sharing, unbundling of services, or data porting from one service to another.

A regulator could also establish base line conditions for competition so that entrepreneurs can enter a more level playing field and small businesses can grow. So, for example, an open standard from micro payments to consumers would be helpful.

In conclusion, strengthening both antitrust enforcement and regulatory oversight of digital platforms is necessary in my view to achieve competition in this sector so that it best serves the American people. Thank you.

[The statement of Ms. Scott Morton follows:]

Testimony of Fiona M. Scott Morton, Ph.D.

Theodore Nierenberg Professor of Economics
School of Management
Yale University

Before the
House Judiciary Committee
Subcommittee on Antitrust, Commercial, and Administrative Law

On

"Online Platforms and Market Power Part 2:
Innovation and Entrepreneurship"

July 16, 2019

Framing:

I attach as one element of my testimony a report entitled "Committee for the Study of Digital Platforms: Market Structure and Antitrust Subcommittee." The report was finalized last month and is the result of work by a committee that I chaired for the University of Chicago Booth School of Business's Stigler Center on Regulation. The report will provide more details, more explanation, and useful citations for the points I will make in my live testimony.

Remarks:

Digital platforms combine economies of scale, low marginal costs, economies of scope through data and an installed base of users, network effects, multi-sidedness, and sometimes a global reach. All of these attributes together tend to generate concentrated markets, or market structures containing few firms. With the addition of inertial (or "sticky") consumers these markets feature high entry barriers which make it difficult for new firms to enter the market to create competition.

The harms from insufficient competition appear in prices that are higher than competitive prices, quality that is lower than competitive quality, and less innovation than consumers would benefit from in competitive markets. Prices for advertising may have markups; consumer prices may be marked up from a negative price to a zero price (free). Quality may be degraded through additional advertising, reductions in privacy, or addictive and exploitative content. Reductions in innovation occur because the inventive to move both faster and more creatively is generated by an entrant or competitor – and they are not present in the market. The incumbent firm, perhaps while spending money on R&D and innovation, is not spending as much, or achieving as much, as it would in the presence of competitors who threaten to take away its customers with a more innovative product.

The remedies to these harms are both antitrust enforcement and regulatory actions; these are complements in generating and protecting more competition in the digital sector. Improved antitrust enforcement could protect nascent or potential competitors from being purchased by the entrenched incumbent and could defend them from anticompetitive exclusionary conduct. A digital regulator could break down entry barriers to new entry by establishing, for example, open standards for micropayments, personal identities, and data portability. A regulator could mandate that consumers can control their own data, or that interoperability be established in a particular sector, both of which could allow entrants to easily attract consumers.

Innovation and entrepreneurship are strongly affected by antitrust enforcement. A venture capitalist has little incentive to invest in an innovative startup that will implicitly or explicitly compete head-on with an entrenched platform if it will be subject to anticompetitive exclusion. A VC might want to invest if the resulting business could create a strong enough threat of increased competition that the platform feared losing its monopoly rents. In that case the platform might agree to purchase the entrant instead - for a share of those monopoly rents. Such mergers lessen competition. Reforming merger review to take into account the competitive power of nascent threats to the platform, and accepting the uncertainties that such assessments necessarily involve, could benefit consumers by preventing mergers that lessen innovation.

There is an argument that acquisition of a competing entrant by a dominant platform is the reason the entrepreneur was funded in the first place, so acquisitions must be a stimulant to innovation. First, note that these mergers occur when the entrant has a business that is very similar to the incumbent's; it competes with the platform either now or in the future, and that is why the entrant is a threat and worth purchasing. The acquisition is thus stimulating entry into the same activity as the existing platform, which may not require much innovation. Secondly, if antitrust enforcement were to strengthen, while the incumbent would have a harder time buying the entrant because merger law would be tougher, *it would also have a harder time excluding the entrant* because antitrust enforcement would be protecting the entrant. Thus, the entrant could earn returns for its investors by taking share from the incumbent and gaining share for itself. This stream of profits would stimulate innovation.

If an entrepreneur develops a complement to the platform, rather than a substitute, the merger may not lessen competition but instead create a better product that benefits consumers. It can be difficult to determine at an early stage whether an entrant is a complement or a substitute to the entrenched platform. Even more importantly, the platform may realize that the entrant is a complement today but a likely substitute – a competitor – in the future. This will lead the platform to attempt to acquire the entrant at a time when it is both difficult for the enforcement authorities to understand that future competition is threatened, and to prove it under the current antitrust regime.



George J. Stigler Center for the Study of the Economy and the State
The University of Chicago Booth School of Business

Committee for the Study of Digital Platforms

Market Structure and Antitrust Subcommittee

Report

01 July 2019

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for the Study of the Economy and the State

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DISCLAIMER:

The purpose of these preliminary reports is to identify what are the new challenges digital platforms pose to the economic and political structure of our countries. These reports also try to identify the set of possible tools that might address these challenges. Yet, there is potential disagreement among the members of the committees on which of these problems is most troubling, which tools might work best, whether some tools will work at all or even whether the damage they might produce is larger than the problem they are trying to fix. Not all committee members agree with all the findings or proposals contained in this report. The purpose of these preliminary reports, thus, is not to unanimously provide a perfect list of policy fixes but to identify conceptual problems and solutions and start an academic discussion from which robust policy recommendations can eventually be drafted.

*** The Committee in-person meetings were partially supported by a grant from the Alfred P. Sloan Foundation, whom we also thank for supporting this project**

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I. Introduction

When the global, interactive, many-to-many communications network called the internet became available for broad public use in 1995, people were overjoyed with the new power at their fingertips. It is easy to forget that in the early years of the internet, that power was limited to visiting shops and getting news from the relatively small number of enterprises that had built websites on the World Wide Web. Over the past 25 years, that power has exploded with head-spinning velocity. Today, there is no area of human life that has not been affected by the technological innovations made possible by the internet. We now buy goods and services, do banking, pay bills, find information, and talk with multiple groups of friends and acquaintances on the web. The speed, scale, and scope of the internet, and of the ever-more powerful technologies it has spawned, have been of unprecedented value to human society.

History teaches us that social institutions must adapt after major technological advances. In just the past century, we saw this after the introduction of the automobile, the airplane, radio and television, and cell phones, to name but a few examples. New occupations—for example, bus drivers—arise to replace others—for example, buggy whip producers. At the same time, new behavioral norms and expectations replace those associated with past technologies—consider the social and economic changes wrought by the automobile, or the changes in both the rules and norms of the workplace in the age of mobile devices. As unintended and unforeseen social problems and harms arose, society responded with governance mechanisms aimed at addressing the problems or harms without impeding the clear benefits associated with the advances. These have ranged from the adoption of new social norms to the creation of new laws and regulations. Examples abound, encompassing everything from crosswalks and traffic lights to legal remedies addressing unfair competition in the marketplace. Ideally, the goal is to steer technological advances to ensure widespread benefit without attendant widespread harms—to protect and preserve innovation and advancement while minimizing harms so that all of society reaps net benefits. Such a goal often involves government intervention and always involves tradeoffs as society wrestles with the prevalence and cost of harms and how to balance them against the prevalence and size of benefits. While often messy, this is a healthy and desirable debate.

This working group came together to address specific problems arising from the digital platforms' reach, scale, scope, and use of data. We were asked to examine concerns stemming from the market structure contemporary platforms have created, and to investigate their competitive behavior, including the consequences of network effects that can create barriers to entry for new innovators and entrench incumbents. The global nature of many of today's platforms, a result of their scale, scope, and business models, creates novel complexities and considerations, particularly a concern that the digital platform may be a unique combination of economic forces that require both new analysis and new public policy. Regulatory authorities throughout the world are now turning their attention to these same questions. This report

contributes to this international analytical project by providing some of the necessary frameworks and inputs. We intend it to be a complement to other recent work, as experts across the world wrestle with how to ensure that markets remain open and healthy, allowing beneficial technological and social advancements to continue. Many of our conclusions and suggestions echo the findings of reports that have come out in the past year, and we hope they will be helpful to those reports not yet released. The list of antitrust experts and agencies working on this problem includes Australia, the United Kingdom, Germany, the European Commission, France, Israel, and Japan.[1]

The issues are global in their scope, and these various jurisdictions are all engaged in analyzing how best to ensure that societies in general, and competition in particular, continue to thrive in the Digital Age. Our charge was restricted to market structure and competition, while other committees considered the equally important topics of the impact of digital platforms on politics, the media, and the nature of privacy. We note that monopolies can concentrate political power, reduce media plurality, and provide insufficient competition on dimensions such as privacy. In this way the findings of this report and the others are linked and quite consistent. Digital markets and platforms have already delivered great benefits to consumers, and the global concerns that have surfaced relating to actual or potential consumer harms may require action to ensure that the benefits are not undermined. Our report concludes that with deliberate government action to protect competition and consumers, the benefits from innovative firms could be even greater and more equitably spread, ensuring that the public is not short-changed in firms' pursuit of profit. Accordingly, this report is offered in the spirit of ensuring a future of continued technological and economic progress and social well-being as we move further forward into the Digital Age.

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[1] *See* JACQUES CREMER, YVES-ALEXANDRE DE MONTJOYE, & HEIKE SCHWEITZER, EURO. COMM'N, DIRECTORATE-GENERAL FOR COMPETITION, COMPETITION POLICY FOR THE DIGITAL ERA (Apr. 4, 2019), http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf [hereinafter EC COMPETITION REPORT]; JASON FURMAN ET AL., H.M. TREASURY (U.K.), UNLOCKING DIGITAL COMPETITION: REPORT OF THE DIGITAL COMPETITION EXPERT PANEL (March 13, 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf [hereinafter U.K. COMPETITION REPORT]; AUSTL. COMPETITION & CONSUMER COMM'N, DIGITAL PLATFORMS INQUIRY: PRELIMINARY REPORT (Dec. 2018), https://www.accc.gov.au/system/files/ACCC%20Digital%20Platforms%20Inquiry%20-%20Preliminary%20Report.pdf [hereinafter AUSTRALIA COMPETITION REPORT]; Japanese Ministry of Economy, Trade, & Industry, Fundamental Principles for Rule Making to Address the Rise of Platform Businesses Formulated, (Dec. 18, 2018), https://www.meti.go.jp/english/press/2018/1218_002.html; HEIKE SCHWEITZER ET AL., GERMAN BUNDESMINISTERIUM WIRSCHAFT UND ENERGIE, MODERNISING THE LAW ON ABUSE OF MARKET POWER: REPORT FOR THE FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY (Apr. 9, 2018), https://www.bmwi.de/Redaktion/DE/Downloads/Studien/modernisierung-der-missbrauchsaufsicht-fuer-marktmaechtige-unternehmen-zusammenfassung-englisch.pdf [hereinafter GERMAN COMPETITION REPORT SUMMARY]; L'AUTORITÉ DE LA CONCURRENCE [FRENCH COMPETITION AUTHORITY], PORTANT SUR L'EXPLOITATION DES DONNÉES DANS LE SECTEUR DE LA PUBLICITÉ SUR INTERNET [ON THE EXPLOITATION OF DATA IN THE INTERNET ADVERTISING SECTOR] (Mar. 6, 2018), http://www.autoritedelaconcurrence.fr/pdf/avis/18a03.pdf [hereinafter FRENCH COMPETITION REPORT]; Press Release, The Israel Antitrust Authority invites interested members of the public to submit their comments, towards an inquiry into competition issues in the digital economy, Reishut HaTachrut [Israel Antitrust Authority] (Apr. 9, 2018), http://www.antitrust.gov.il/eng/subject/177/item/35246.aspx.

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Executive Summary

a. Attributes

The market structure and antitrust report begins by discussing the characteristics of digital markets. These markets often have extremely strong economies of scale and scope due to low marginal costs and the returns to data. Moreover, they often are two-sided and have strong network externalities and are therefore prone to tipping. If so, the competitive process shifts from competition *in* the market to competition *for* the market. This combination of features means many digital markets feature large barriers to entry. The winner in these settings often has a large cost advantage from its scale of operations and a large benefit advantage from the scale of its data. An entrant cannot generally overcome these without either a similar installed base (network effects) or a similar scale (scale economies), both of which are difficult to obtain quickly and cost-effectively.

Additional barriers to entry are, ironically, generated by the very consumers who are harmed by them. Consumers do not scroll down to see more search results, they agree to settings chosen by the service, they single-home on one platform, and they generally take actions that favor the status quo and make it difficult for an entrant to attract consumers. In general, the findings from the behavioral economics literature demonstrate an under-recognized market power held by incumbent digital platforms.

The theme that runs throughout the report is the difficulty of entry into digital platform businesses once an incumbent is established. Whether the entrant is vertical or horizontal, has succeeded to some degree, is nascent, is a potential entrant, or is a large platform in an adjacent space, its existence improves consumer welfare. Either the entrant provides more choice, different features, and a chance of higher quality, or the threat of those outcomes spurs the incumbent to provide lower prices, higher quality and innovation, and to do so more quickly.

The role of data in digital sectors is critical. Personal data of all types allows for targeted advertising to consumers, a common revenue model for platforms. The report shows that the returns to more dimensions and types of data may be increasing, which again advantages incumbents. Consumer data in the United States is not regulated in any way that gives useful control or privacy to consumers; and additionally, most consumers have little idea what is being collected about them and re-sold. One way in which digital platforms often exploit their market power – and increase their profits – is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing, but which give the platform freedom to monetize consumers' personal data.

Digital platforms are characterized by free services. "Free" is not a special zone where economics or antitrust do not apply. Rather, a free good is one where the seller has chosen to set

a monetary price of zero and may set other, non-monetary, conditions or duties. It is possible that a digital market has an equilibrium price that is negative; in other words, because of the value of target advertising, the consumer's data is so valuable that the platform would pay for it. But the difficulty of making micropayments might lead a platform to mark up this negative competitive price to zero. As a result, barter is a common way in which consumers pay for digital services. They barter their privacy and information about what restaurants they would like to eat in and what goods they would like to buy in exchange for digital services. However, in principle, that information has a market price that can be analyzed.

b. Harms

Market power, consumer biases and an ad-supported platform model can generate significant consumer harms. First, market power in advertising markets will result in markups paid by advertisers. Secondly, while behavioral economists have studied consumer biases and firm responses in offline markets, these are swamped by what digital businesses can learn by using high-dimensional, large datasets to explore every nook and cranny of consumers' many behavioral shortcomings and biases in real time. Framing, nudges, and defaults can direct a consumer to the choice that is most profitable for the platform. A platform can analyze a user's data in real time to determine when she is in an emotional "hot state" and then offer targeted sales. These tactics reduce the quality of the zero-price content the user experiences on the platform.

In addition to *de novo* entry, platforms fear disintermediation by a partner or complement. If a platform's partner is able to directly access and serve the platform's customers, it might take them off the platform entirely, reducing the platform's profit. A platform that has total control of demand due to control over framing of consumer choices, policies for complements, and technical standards can steer customers to content and complements of most benefit to it. The most privately beneficial content might be owned by the platform itself rather than provided by independent firms that could extract rent or even challenge the platform's market power in the future. To the extent that consumers single-home, they may not be aware of such steering, or may not have competitive alternatives to which they can turn if they are aware.

Today's platforms understand that in some settings they can obtain higher margins if they either, make all of the necessary complements themselves, or, position themselves as a mandatory bottleneck between partners and customers. In particular, digital platforms are often very careful to maintain complete control over the user relationship so that they do not face any threat of disintermediation from a complement. These technological and policy choices can be used to reduce the possibility of successful entry by direct competitor. Other strategies such as exclusive contracts, bundling, or technical incompatibilities can also be used by platforms to restrict entry of competitors. Some of these strategies could be violations of existing antitrust law, as discussed below.

Insufficient competition and entry result in harms to investment and innovation. There is significant theoretical and empirical research that concludes that anticompetitive creation or maintenance of market power will cause a reduction in the pace of innovation. The lessening or blocking of innovative entry is of particular concern given its value to consumers. A VC will usually be wary of outright investing in an innovative startup that will implicitly or explicitly compete head-on with a tech giant. In that case, the best hope might be to be the preferred innovator of a complement and sell its business to the platform at an early stage. However, if entry barriers were reduced, the entrepreneur would not have to settle for a small fraction of the platform's profits, but could compete for all of them and try to replace the platform. This possibility would generate a much larger incentive to innovate.

c. Solutions

While some markets may self-correct, the findings of this report suggest that rapid self-correction in markets dominated by large digital platforms is unlikely.

While US antitrust law has long been flexible in combatting anticompetitive conduct, there is increasing concern that it has been underenforced in recent years. Antitrust law and its application by the courts over the past several decades have reflected the now outdated learning of an earlier era of economic thought, and they appear in some respects inhospitable to new learning. Antitrust enforcement better suited to the challenges of the Digital Age may therefore require new legislation.

Technology platforms present particular challenges for antitrust enforcement. Markets tip and the resulting market power is durable, so even effective antitrust enforcement is unlikely to generate fragmented markets. Nonetheless, enforcement that protects competition on the merits in the first stage and prevents exclusionary conduct in the second stage will help ensure that market-participants make unfettered choices among competing platforms and that entry and innovation are not inhibited by private rent-seeking.

Economists and lawyers will have to develop tools to explain to courts the role of behavioral biases in the creation of market power and in their effect on the quality of content. The existence of zero money prices means that measurement of quality will be critical. The law needs better analytical tools to take into account the impact of potential and nascent competitors and competition. Market definition will vary according to what consumers are substituting between, whether there is competition on the platform between complements, or competition between platforms, or competition between a platform and potential or nascent competitors regarding possible future markets. The need to identify the specific anticompetitive exclusionary conduct and analyze it may raise enforcement costs given all the possible variants of exclusionary conduct possible in digital markets.

This report details the particular areas where antitrust law will need reform in order to adequately deliver competition to consumers. The report also suggests the establishment of a specialist competition court to hear all private and public antitrust cases which would allow judges to develop some expertise. The committee believes that vigorously enforcing the antitrust laws under these conditions would be likely to increase entry in digital platform industries, competition, and consumer welfare. Moreover, such enforcement would likely result in remedies to restore competition that has already been lost, as well as serve as a deterrent to future anticompetitive conduct.

However, because technology platforms present the enforcement challenges detailed above, even effective enforcement may not be enough to generate competitive digital markets in a timely fashion. Therefore, the report suggests that Congress should consider creating a specialist regulator, the Digital Authority. The regulator could be tasked with creating general conditions conducive to competition. The committee also suggests separating out some types of regulation that will apply to virtually all market participants while other regulation will apply only to companies with bottleneck power. "Bottleneck power" describes a situation where consumers primarily single-home and rely upon a single service provider, which makes obtaining access to those consumers for the relevant activity by other service providers prohibitively costly.

The Digital Authority could routinely collect data on digital transactions and interactions, with an emphasis on data from businesses with bottleneck power. These data – made public to the extent possible – would allow policy makers and researchers to assess the performance of the sector. The DA could have a mandate to create "light touch" behavioral nudges when they will make markets more competitive. An example of a regulation that would enhance competition is data portability. The DA could set up rules that allow users to easily port their data from one service provider to another and monitor compliance. The DA may also promote open standards in such areas as micro-payments and digital identities. Should Congress request it, the DA could oversee a mandate for interoperability in any market where market power has become entrenched and threatens long term harm to competition. The Report also suggests that the DA could carry out a parallel merger review that would be set up to incorporate necessary antitrust reforms and modern standards.

Some regulations could apply only to firms that meet the DA's definition for bottleneck power. Because the cost of false negatives is high and there is uncertainty, the public interest requires the DA to take a more interventionist approach in these settings. The DA could have merger review authority over even the smallest transactions involving digital businesses with bottleneck power because nascent competition against these entities is very valuable for consumers. Non-discrimination rules could protect against a complement that is a potential competitor of the platform itself, or one that operates only on the platform as a rival provider of content.

When a company has been found liable for violating the antitrust laws, part of the current process is that antitrust authority devises a remedy to restore the lost competition. Data sharing, full protocol interoperability, non-discrimination requirements, and the unbundling of content from a platform are all tools that the regulator, in conjunction with the antitrust authority, could apply and monitor over time in order to restore competitive markets.

II. IMPORTANT FEATURES OF THE DIGITAL BUSINESS ENVIRONMENT

Digital technologies are a central driver of future prosperity, hopefully delivering waves of innovation, efficiencies, and consumer welfare. These technologies have revolutionized the way consumers shop and communicate, the way businesses deliver value, the way people work together in collaboration, and—the subject of this report—the overall dynamics of competition.

These transformative changes, while immensely beneficial, have also triggered growing concerns about the power of a small number of firms to control and influence billions of lives. As an increasing volume and range of commercial activities have been digitalized, society has witnessed the emergence of certain key platforms and gatekeepers and a shift in market dynamics.

This section outlines the key features of the digital environment to set the foundation for the discussion of problems and solutions.

a. The Structure of Digital Markets

i. An Economic Perspective on the Digital Market Structure

Despite the predictions of some early observers that the internet would create competitive—even perfect—markets,[2] certain digital firms have been able to acquire significant market positions and preserve them over time. Many of the most innovative internet-derived digital markets, such as search engines, social networks, network operating systems, ecommerce, and ride-sharing, are highly concentrated and have been dominated by one or a few firms for a number of years. The lack of entry of competitors in these important markets—despite high profits—suggests either barriers to entry or exclusionary conduct, or both. We first discuss the nature of entry barriers in digital platforms and why they are difficult for an entrant to surmount.

1) A Unique Setting Subject to Tipping

From an economic perspective, there is no single new characteristic that would make competition in digital platforms different from more traditional markets. Rather, it is the coincidence of several factors at a scale that has not been encountered before that makes the problem unique and requires new analysis of market structure and market power. In particular,

[2] *See, e.g.*, Erik Brynjolfsson & Michael D. Smith, *Frictionless Commerce? A Comparison of Internet and Conventional Retailers*, 46 MGMT. SCI. 563, 563 (2000) ("The conventional wisdom regarding Internet competition . . . is that the unique characteristics of the Internet will bring about a nearly perfect market."); Jeffrey R. Brown & Austan Goolsbee, *Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry*, 110 J. POL. ECON. 481, 482 (2002) ("The traditional economic view suggests that . . . the Internet should reduce search costs for consumers and thereby reduce prices and make markets more competitive.").

the platforms with which this report is most concerned demonstrate extremely strong network effects, very strong economies of scale, remarkable economies of scope due to the role of data, marginal costs close to zero, drastically lower distribution costs than brick and mortar firms, and a global reach.

Markets with these combined features are prone to tipping—a cycle leading to a dominant firm and high concentration. Digital markets are prone to tipping for two primary reasons. First, because fixed costs play such an important role in digital markets, these markets feature especially large returns to scale. Second, many digital markets are driven by network effects that strengthen large incumbents and weaken new entrants.

When markets are prone to tipping, the competitive process shifts from competition *in* the market to competition *for* the market. In that case, consumers may only benefit from competition among several firms for the relatively short time period in which the firms compete to be the ultimate winner of very large economic profits. The winner's monopoly profits serve as the inducement for entry and investment. After a market has tipped, a potential rival for the market can only overcome the incumbency advantage of established networks through significant innovation. However, even an innovative entrant may not be able to create competition that benefits consumers in the presence of the factors that led to the tipping, leaving open a role for public policy to allow for competition for the market. Moreover, a competitor is even less likely to enter the market if the incumbent platform is able to leverage its powerful position to disadvantage or exclude potential entrants.

There are many well-known problems that follow from lack of competition, including higher prices, less innovation, and lower quality in all its forms. Policy may be needed to address the cause of such symptomatic problems. In the view of this committee, protecting entry for existing and potential competitors is the most important way to protect or improve consumer welfare in digital platforms. Initial competition for a market should be conducted on the merits without any anticompetitive practices, and later entrants should face a level playing field and no exclusionary conduct as they contest the market. Regulation may be required to prevent incumbents from erecting improper barriers to entry.

As it is traditionally recognized, the reward for the winner's innovative activity is the ability to extract rent from the platform through the exercise of market power.[3] However, we highlight three deviations from this principle. First, the winner must have "won" on the merits of its product, without the use of any anticompetitive conduct. Correcting illegal practices by dominant firms that have won in a tipped digital market can be difficult, but is necessary or the firm will earn profits from its illegal behavior—and harm consumers along the way. Second, the reward of the entire market that propelled the winner to innovate must be available to the next entrant. If

[3] *See* United States v. Alcoa, 148 F.2d 416, 430 (2d Cir. 1945) ("The successful competitor, having been urged to compete, must not be turned upon when he wins.") (Hand, J.).

the incumbent is able to withhold those rents by excluding the entrant, or reduce those rents by limiting the entrant's share, then the pace of innovation will slow. The economic literature demonstrates that vibrant innovation and entry is the most important source of consumer welfare over time—hence the focus of the report on ensuring that entry functions well both when a market is created and thereafter.[4] Third, there are sources of platform rents that society may determine through appropriate regulation should not be part of the winner's reward. For example, investments in complements offered on the platform may be best incentivized and encouraged to compete if the platform owner is not entitled to exclude them. (As used in this report, a complement is a good or service offered on or through the platform that increases the value of the platform to a consumer.) Digital markets at issue today may not have featured free entry and lack of anticompetitive conduct in the past. This report covers that case by describing how antitrust can be used to look backward, as well as forward, for antitrust violations. We also suggest regulation that can look forward to protect entrants, and thereby consumers, in these other cases.

2) Increasing Returns to Scale

Digital markets are used to exchange information goods and services. Typically, information goods involve increasing returns to scale because their production requires a fixed cost and no or little variable cost.[5] In other words, when an additional user is served, costs do not go up proportionately. For example, an eBook, once produced, can be distributed at almost no cost to all users with access to the internet. The same holds for information services that are subject to fixed design and development costs and fixed maintenance and updating costs; Google can update Google Calendar for 100 million users with similar fixed expenses as would be needed for only a fraction of such users.

In contrast to traditional media or cultural markets that have had to incur physical distribution costs, digital markets are largely able to avoid such costs. The fact that information services can be delivered to any geographic location with no or minimal cost is one reason for the abundance of such services. The capacity to reach a large scale at small cost changes the nature of business growth. While a traditional business often starts with local implementation followed by gradual expansion through investment as reputation and financial resources increase, many online businesses aim at rapid large-scale expansion. This rapid growth may reduce the length of the competition-for-the-market phase, as market winners can establish dominance and begin exercising their market power quickly. It took only five years for Facebook, the "move fast and

[4] *See, e.g.*, Joseph Farrell & Paul Klemperer, *Coordination and Lock-In: Competition with Switching Costs and Network Effects*, *in* 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (Mark Armstrong & Robert Porter eds., 2007). https://www.sciencedirect.com/science/article/pii/S1573448X06030317; Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses: Evidence from the Mobile App Market*, (Harvard Business School Working Paper 18-036, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=284853.

[5] Increasing returns to scale occur when the average unit cost decreases when sales expand.

break things" company, to go from a million users in 2004, the year of its founding, to more than 350 million users in 2009, when it overtook MySpace for good.[6]

The implications for market structure are well known: increasing returns to scale lead companies to invest in fixed costs in order to have the best product to attract customers.[7] Then, with a larger customer base, the firm can enjoy lower average costs per consumer, allowing it to make an offer to consumers that is attractive in both quality and price. The increasing returns to scale create barriers to entry: New firms cannot offer the quality of the incumbent without the same large-scale operation to pay for the fixed costs. But the firm can only achieve a large scale if quality is high. Thus, a potential entrant, foreseeing that it will not be profitable at the smaller scale, will not enter the market to challenge the incumbent.

3) Economies of Scope

Platforms also have powerful economies of scope in the form of their relationships with users and brands. In digital markets specifically, scale offers an additional advantage. Firms can apply machine learning to extensive data sets to improve their products and expand their activities into new areas. Because machine learning yields better insights when it is trained on larger datasets, firms with access to large amounts of data can raise the quality of their services in ways that smaller firms cannot. This creates a form of dynamic economies of scale, allowing large firms with large amounts of data to raise product quality at lower costs than small firms. Firms may also be able to leverage the data, or the insights due to machine learning, that they receive from an existing service to enter into an adjacent market with a higher quality product, demonstrating a novel form of economies of scope. Combining mapping software in a platform that already offers email, for example, allows that platform to offer a higher quality restaurant recommendation product. Moreover, firms serving a larger customer base with a greater variety of products are able to generate more advertising revenue per consumer through more effective targeting.[8] The development of machine learning technologies and data analysis is a source of increasing returns to scale and scope that can contribute to digital market concentration.

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[6] *See* Chloe Albanesius, *More Americans Go to Facebook Than MySpace*, PC MAG. (June 16, 2009), https://www.pcmag.com/news/241432/more-americans-go-to-facebook-than-myspace; Ami Sedghi, *Facebook: 10 Years of Social Networking, in Numbers*, GUARDIAN (Feb. 4, 2014), https://www.theguardian.com/news/datablog/2014/feb/04/facebook-in-numbers-statistics. *See also* Steven Levy, *Mark Zuckerberg on Facebook's Future, From Virtual Reality to Anonymity*, WIRED (Apr. 30, 2014), https://www.wired.com/2014/04/zuckerberg-f8-interview (reporting Mark Zuckerberg noting that "[w]e've changed our internal motto from 'Move fast and break things' to 'Move fast with stable infrastructure'").

[7] *See generally* JOHN SUTTON, SUNK COSTS AND MARKET STRUCTURE (1991).

[8] Such economies of scope are leading to a rapid expansion of the capture and use of personal information by firms. For example, many large firms are starting to expand beyond internet platforms in order to collect more data from consumers. The rise of voice-assistant products (including Microsoft's Cortana, Apple's Siri, Google's Google Voice, and Amazon's Alexa) can enable firms to gather information from offline consumer behavior and then feed that information into online advertisement-targeting algorithms. One study estimates that major internet platforms, data brokers, credit card companies, and healthcare data companies derived nearly $76 billion in 2018 from selling personal consumer information directly or indirectly via targeted ads. Robert Shapiro & Siddhartha Aneja, *Who*

4) Network Effects

Most information services involve some form of positive network effects, in which consumer benefit grows as the number of users increases. The simplest network effects flow directly from interacting with other users, as in social networks or peer-to-peer services, such as eBay or Venmo, where the more users there are on the network, the richer the users' experience is likely to be. (In these examples the platforms choose not to be interoperable, so the network effects apply to a single firm, rather than an industry.) Multi-homing lessens network effects because a consumer can enjoy the size of both networks, rather than having to choose one. For example, a consumer that carries both Visa and American Express credit cards can shop at stores that accept either card, or both. Many other network effects are indirect, in that they are mediated by a "complement" to the network. A complement is a good or service that increases the value of another good or service to a consumer. For example, the ability to not only make calls, but also to play music on a handset increases the value of the handset to users. Complements today often come in the form of applications ("apps") or a specific type of content. The more complements a platform has, the more popular it is with users. Just as customers of a popular app store receive an indirect network effect when more and better developers are attracted to app stores with big customer bases, customers of a widely-used social media site benefit from the many games designed for that social media site, which in turn are driven by the large number of consumers. These network effects can also be seen in recommendation systems or driving directions that exploit larger datasets of users' purchasing behavior or travel paths to offer higher quality advice.

Markets with network effects are prone to concentration because consumers benefit from being on the same network as other users. No one wants to be on their own social media site. However, when network effects are exhausted relatively quickly (as can occur, for example, in messaging apps[9]) or when there is heterogeneity in preferences (e.g. teenagers prefer not to be on the same social network as their parents[10]), the market structure may be oligopolistic.

Owns Americans' Personal Information and What Is It Worth?, FUTURE MAJORITY (Mar. 8, 2019), https://assets.futuremajority.org/uploads/report-for-future-majority-on-the-value-of-people-s-personal-data-shapiro-aneja-march-8-2019.pdf.

[9] To send a message to someone, a user only needs that single person to be on a particular messaging app, rather than everyone they would want to send a message to. This explains why many messaging apps can live alongside one another—WhatsApp, Snapchat, SMS, and Facebook Messenger all have significant customer bases. *See Most Popular Mobile Messaging Apps Worldwide as of January 2019*, STATISTA (Jan. 2019), https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps.

[10] *See* Mark Sweney, *Is Facebook for Old People? Over-55s Flock in as the Young Leave*, GUARDIAN (Feb. 12, 2018), https://www.theguardian.com/technology/2018/feb/12/is-facebook-for-old-people-over-55s-flock-in-as-the-young-leave.

Some indirect network effects are multi-sided: A user of one type (e.g., a buyer) benefits from the participation of other types of users (e.g., sellers). For instance, in ecommerce platforms, which intermediate trade between sellers and buyers, a buyer does not directly benefit from the presence of other buyers but does benefit from the presence of more sellers—who are in turn attracted by the presence of the buyers. Multi-sided network externalities are prominent on the internet for two reasons. First, business models like ecommerce are plentiful. Second, and more importantly, a great deal of activity on the internet is financed by paid advertising on the relevant site. Advertising-financed services are platforms exploiting two-sided network effects between advertisers and consumers. Advertising can be more valuable when there are more consumers viewing a site, while consumers are attracted by content that may be of higher quality when financed by many advertisers competing for space.

On multi-sided platforms, one or more sides may be subsidized if their participation attracts paying customers on the other side. Thus, we may see a monetary price of zero in one part of a very lucrative business model. Shoppers on eBay can buy without paying fees because eBay understands that fees would drive them away, whereas their presence draws in sellers who can be charged fees. Users of Gmail pay a monetary price of zero but allow Google to read their email so that advertisers can market to them based on personal information. Google can then charge a high price for the ads. Payment platforms such as credit cards or PayPal similarly charge end consumers low or negative fees because a large group of consumers bring in retailers who pay the payment platform for access.

Network effects can lead to consumer-friendly competition at early stages. Economic theory and market observation indicate that during the phase when competitors are all trying to tip the market towards themselves, they compete intensely. This phase is characterized by vigorous competition between firms trying to build market shares and generate bandwagon effects. For example, Uber and Lyft have hotly contested the market for ride-sharing—and spent billions of dollars subsidizing riders' fares along the way.[11] One 2016 estimate suggested that payments from Uber customers covered only about 40% of the cost of their rides.[12] If network effects are

[11] *See* Shannon Bond & Nicole Bullock, *Uber IPO Prospectus Shows Ride-Hailing Revenues Stalled*, FIN. TIMES (Apr. 11, 2019), https://www.ft.com/content/c68d3662-5c76-11e9-939a-341f5ada9d40 (Uber "has lost $12bn from its operations in total since 2014"); *id.* ("'We will not shy away from making short-term financial sacrifices where we see clear long-term benefits,' wrote Dara Khosrowshahi, [Uber's] chief executive."); Megan McArdle, *Uber and Lyft Are Losing Money. At Some Point, We'll Pay for It.*, WASH. POST (Mar. 5, 2019), https://www.washingtonpost.com/opinions/uber-and-lyft-are-losing-money-at-some-point-well-pay-for-it/2019/03/05/addd607c-3f95-11e9-a0d3-1210e58a94cf_story.html (In 2018, Lyft "lost more than $900 million after expenses").

[12] *See* Izabella Kaminska, *The Taxi Unicorn's New Clothes*, FIN. TIMES (Dec. 1, 2016), https://ftalphaville.ft.com/2016/12/01/2180647/the-taxi-unicorns-new-clothes. Many of the paradigmatic firms of the dot.com bubble also followed this strategy of subsidizing for growth—often sending the firm to oblivion. *See* Greg Bensinger, *In Kozmo.com's Failure, Lessons for Same-Day Delivery*, WALL ST. J. (Dec. 2, 2012), https://blogs.wsj.com/digits/2012/12/03/in-kozmo-coms-failure-lessons-for-same-day-delivery.

strong, however, the market will tip in favor of one competitor, who then becomes the monopolist.

5) Low Marginal and Distribution Costs

Digital goods often have low to zero marginal costs of expansion to another user, as mentioned above. Distribution costs, one of the major expenses of expanding in a brick and mortar world, are largely also zero on the internet. Indeed, poor internet infrastructure in the United States and elsewhere may be the main distribution cost for many digital platforms.[13] Some digital platforms do have positive distribution or marginal costs such as a piece of hardware, ecommerce warehouses, or maintenance of scooters for example.

6) Global Reach

Lastly, many of the digital platforms we discuss in this report have a global reach. Those that are focused on licensed digital content, rather than user-generated content, must negotiate licensing and other legal issues in new jurisdictions. Reaching consumers in many languages is another cost of expanding globally, as is dealing with local transportation regulations. However, the total cost of expansion is generally lower than in traditional brick and mortar businesses.

ii. Barriers to Entry and Expansion

In this section, we explore the implications of the characteristics discussed above and the possible effects of the increased market power created by barriers to entry. Outlined below are some of the drivers that make market power more sustainable and disruption less likely in digital markets.

1) Cost and Benefit Barriers to Entry

As mentioned above, network effects and scale economies are two significant barriers to entry. The winner in these settings has a massive cost advantage from its scale of operations, and a massive benefit advantage from the scale of its data. An entrant cannot generally overcome these without either a similar installed base (network effects) or a similar scale (scale economies), both of which are difficult to obtain quickly and cost-effectively. It is possible for an entrant to arrive with scale and an installed base because it is a competing digital platform. Such entrants may create effective competition for an incumbent platform that benefits consumers.

[13] *See, e.g.*, Drew FitzGerald, *Facebook Looks to Build Underwater Ring Around Africa*, WALL ST. J. (Apr. 7, 2019); Michael Sheetz, *Here's Why Amazon Is Trying to Reach Every Inch of the World With Satellites Providing Internet*, CNBC (Apr. 7, 2019), https://www.cnbc.com/2019/04/05/jeff-bezos-amazon-internet-satellites-4-billion-new-customers.html; Press Release, Think Big With a Gig: Our Experimental Fiber Network, GOOGLE (Feb. 10, 2010), https://googleblog.blogspot.com/2011/03/ultra-high-speed-broadband-is-coming-to.html.

Barriers to equivalent data resources, a side effect of not having the history, scale, or scope of the incumbent, can inhibit entry, expansion, and innovation.[14] The same effects that drive the quality of digital services higher as more users join—a positive feedback loop—makes the strong stronger and the weak weaker.[15] Data feeds the development of algorithmic and AI training processes that enables more profitable exploitation of consumer attention through advertising. A data advantage over rivals can enable a company to achieve a virtuous circle of critical economies of scale leading to network effects, and a competitive balance in its favor, leading to the gathering of yet more data. A new entrant is likely to experience this in reverse—a vicious cycle—as it fails to surmount the entrance barrier.

Choosing a business model that is scalable, and has strong economies of scale, is of paramount importance to creating entry barriers. A social media platform that chose to monitor harmful content might need to hire many workers to keep ahead of users that game the algorithms. Hiring workers is costly, slows down the ability to grow, and makes the platform less profitable both in the short run and in the long run by limiting economies of scale. A platform aiming to tip the market in its favor quickly will not choose this business model if it can gain consumers at lower cost.

Because cost and benefit barriers are so powerful, digital platforms have powerful incentives to pull slightly ahead of any rival. Due to the positive feedback loop described above, a small advantage can turn into a large one. This powerful incentive to disadvantage a competitor raises the possibility that some competitors will choose to violate the antitrust laws in order to stay ahead. In general, to maintain or improve their competitive advantage, incumbents have strong incentives to limit openness or interoperability and to be averse to data-portability policies. For example, in a recent case, the upstart ethernet switch firm Arista alleged that the incumbent Cisco encouraged openness and interoperability while it was dominant, but once a rival mounted a serious challenge, claimed copyright protection on the previously open user interface, thus cutting off the entrant from locked-in users.[16]

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[14] The key themes below are discussed in greater detail in ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM DRIVEN ECONOMY (2016). *See also* Ariel Ezrachi & Maurice E. Stucke, *Digitalisation and Its Impact on Innovation: Report Prepared for the European Commission* (DG Research & Innovation Working Paper, July 2018) (on file with authors).

[15] *See Data-Driven Innovation for Growth and Well-Being: Interim Synthesis Report*, OECD (Oct. 2014), http://www.oecd.org/sti/inno/data-driven-innovation-interim-synthesis.pdf, at 29 (citing CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY (1999)).

[16] *See* Jan Wolfe, *Arista to Pay $400 Million to Cisco to Resolve Court Fight*, REUTERS (Aug. 6, 2018), https://www.reuters.com/article/us-cisco-arista-settlement/arista-to-pay-400-million-to-cisco-to-resolve-court-fight-idUSKBN1KR1PI; Don Clark, *Arista Networks Files Antitrust Claims Against Cisco*, WALL ST. J. (Jan. 25, 2016), https://www.wsj.com/articles/arista-files-antitrust-charges-against-cisco-1453754642.

2) Barriers to Entry Created by Consumer Behavior

Market power is, ironically, generated by the very consumers who are harmed by it. Consumers do not replace the default apps on their phones, do not scroll down to see more results, agree to settings chosen by the service, and take other actions that may look like poor decisions if those consumers like to choose among options and experience competition. Often the actions needed to generate choice for the consumer seem trivial, such as a download and installation, opening another app, or a few clicks. Consumers make these "mistakes" because of inherent behavioral biases such as discounting the future too much and being too optimistic. The situation is worse when the information needed to counteract bias is hard to obtain. For example, consumers tend not to run the same search on a different search engine to compare the results, so they may never find out the relative quality of the default search engine they use.

Research into behavioral biases and their consequences is several decades old and has already produced ample and convincing evidence of the nature and existence of these biases on the part of consumers. In 2002, Daniel Kahneman received the Nobel Prize in Economic Sciences for his pioneering work on behavioral economics.[17] Fifteen years later, the Nobel Prize was awarded to Richard Thaler in recognition of the progress of research in this domain and of the huge amount of knowledge that has been produced.[18]

In his Nobel lecture, Thaler pointed to the key insight from Kahneman and Amos Tversky: people exhibit "bounded rationality," meaning that in a complex world they use consistent rules of thumb to make predictions and decisions. Thaler called on economists to use "psychological realism" to improve their understanding of human decision making.[19] That psychological realism combined with the economics toolkit produced the field of behavioral economics.

Behavioral economics has had a profound influence in the conduct of economic policy that will become even more prevalent as more knowledge is digested and applied.[20] It is of great relevance for our understanding of internet economics because, as information flows improve and some physical barriers are removed, human factors are more likely to provide the frictions that have increasing effects on market outcomes. These frictions in decision-making, and the fact that consumers can be manipulated to take advantage of their biases, render consumers sticky—

[17] *Daniel Kahneman—Facts*, NOBEL PRIZE (2019), https://www.nobelprize.org/prizes/economic-sciences/2002/kahneman/facts.
[18] *Richard Thaler—Facts*, NOBEL PRIZE (2019), https://www.nobelprize.org/prizes/economic-sciences/2017/thaler/facts.
[19] Richard H. Thaler, *From Cashews to Nudges: The Evolution of Behavioral Economics*, 108 AMER. ECON. REV 1265, 1266-1267 (2018).
[20] *See, e.g.*, Cass R. Sunstein, *The Storrs Lectures: Behavioral Economics and Paternalism*, 122 YALE L.J. 1826 (2013); Richard H. Thaler & Cass Sunstein, *Libertarian Paternalism*, 93 AMER. ECON. REV. PAPERS & PROCEEDINGS 175 (2003).

that is, people are slower to move to a superior product than they would be absent the manipulation. This in turn makes demand less contestable and less favorable for an entrant.

One lesson from behavioral economics is that small differences (nudges) in how choices are presented can have large effects on what choices people make.[21] A nudge to use a particular browser as a default, for example, can entrench a platform's browser. Another lesson is that consumers overweight their immediate benefit relative to their welfare in the future. A consumer searching for a solution to a particular problem will be inclined to click or use the first result or recommendation, rather than searching on another page or scrolling down to examine many listings. The tendency to choose in this manner entrenches the market power of the platform that can control the display of content. Similarly, consumers' preference for instant gratification may lead them to sign away privacy rights they otherwise say they value.[22] This allows incumbent platforms to gather data from these consumers that further entrenches their market position. In general, the findings from behavioral economics demonstrate an under-recognized market power held by incumbent digital platforms.

A second way consumers create entrenched market power is by single-homing. A multi-homing user, for example, checks the price of a ride on both Uber and Lyft each time she needs a car. A user that single-homes bestows market power on the platform she uses exclusively because advertisers and other content providers *can only* get the user's attention by going through that platform. While users sometimes have the ability to employ multiple services, there is usually a convenience cost to doing so. Making multi-homing easier will be a key element in encouraging competition.

3) Barriers to Entry Created by an Incumbent Rival

Because platform market power is higher when users single-home, platforms try to get users to do so. Sometimes this results in higher quality services: A mapping service can alert a user that it will take 45 minutes to get to the airport when it sees a flight entry on the user's calendar. If the user buys those services from different platforms, she does not get the alert and experiences lower quality. However, it is often possible for the data from one service to be read by a rival, so platforms may also encourage single-homing by preventing interoperability.

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[21] *See* Thaler, *supra* note 19, at 1283.

[22] *See* Alessandro Acquisiti et al., *The Economics of Privacy*, 54 J. ECON. LIT. 442 (2016); Alessandro Acquisti et al., *Privacy and Human Behavior in the Age of Information*, 347 SCIENCE MAG. 509, 510 (2015); Alessandro Acquisiti, *Privacy in Electronic Commerce and the Economics of Immediate Gratification* (Fifth ACM Conference on Electronic Commerce, 2004), https://www.cs.drexel.edu/~greenie/privacy/privacy-gratification.pdf; *see also Americans' Attitudes About Privacy, Security, and Surveillance*, PEW RESEARCH CTR. (May 20, 2015), https://www.pewresearch.org/wp-content/uploads/sites/9/2015/05/Privacy-and-Security-Attitudes-5.19.15_FINAL.pdf, at 17 (reporting that 74% of survey respondents believe it is "very important" to be "in control of who can get info about you").

By limiting a rival's access to data, dominant firms can make exclusive reliance on their service either inevitable or the clearly best decision. Sharing data or allowing access to certain pieces of information is often feasible at a technical level, but it is not normally in the interest of the platform that could lose its users. For example, Google has been able to limit its users from visiting (multi-homing on) competitors such as Yelp by displaying their information in the search window directly.[23] To some extent, the limited switchability to the rival is driven by asymmetric information in two places. First, consumers are generally not aware of, or attentive to, the costs of failing to switch; for example, the quality of the content and the extent to which the platform steers consumers to inferior content or product choices may be hard to see. Second, there is often no way to compensate the consumer directly with lower prices—as an entrant such as Warby Parker can do by selling eyeglasses directly to consumers at a lower price—because the money price of services from a platform is often fixed at zero for both the incumbent and the rival.[24]

For all of these reasons, digital platform market power can become entrenched. The United Kingdom, the European Commission, Australia, and Germany have all published reports concluding that digital platforms' market power has indeed become entrenched.[25] Surmounting the existing barriers to entry created by consumer behavior, cost structure, public policy, and any past anticompetitive conduct is extremely difficult. This fact has direct effects on consumers: *without entry or the credible threat of entry, digital platforms need not work hard to serve consumers because they do not risk losing their consumers to a rival.*

b. How Big Data Affects Digital Products and the Sale of Advertisements

i. What Makes Data Big? And Does Big Data Harm Consumers?

1) Targeted Advertising

Technology firms claim that they perform machine learning on big data, and that doing so gives them both a competitive edge over rivals and allows them to better tailor their services to their consumers. How might this work in practice? Consider a search engine with information about a

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[23] *See* Charles Duhigg, *The Case Against Google*, N.Y. TIMES MAG. (Feb. 20, 2018). https://www.nytimes.com/2018/02/20/magazine/the-case-against-google.html

[24] *See, e.g.*, Competition Decision, Case COMP/AT.39740—*Google Search* (June 27, 2017), http://ec.europa.eu/competition/antitrust/cases/dec_docs/39740/39740_14996_3.pdf. Indeed, as the U.K. Competition and Markets Authority has found, even in industries where prices exist but there are substantial search frictions, consumers do not make choices that would give them substantial savings. *See* note 32, *infra*, and associated text.

[25] *See* U.K. COMPETITION REPORT, *supra* note 1, at 75; EC COMPETITION REPORT, *supra* note 1, at 112; AUSTRALIAN COMPETITION REPORT, *supra* note 1, at 35; GERMAN COMPETITION REPORT SUMMARY, *supra* note 1, at 2.

given user's search history, including the fact that this user recently searched for a specific pair of Nike running shoes. The ad service can more effectively spend advertisers' budgets by showing the user ads focused on running-related products (or similar shoes to those the user searched for). Advertisers will get a greater return on investment because more of their ads will be shown to users who have demonstrated interest in running products—possibly very similar running products to the ones being advertised. Moreover, users may actually prefer seeing ads for other running products compared to more generic ads. The more personalized matching of advertisement to potential customer would appear to help both the producer and consumer of the advertisement.

This simplified example of personalized advertisement uses very little information about a particular user (only that she had a particular search query) and little to nothing about other users or another augmenting dataset, with the exception of a database of running-related items. Indeed, this level of personalization could be similarly achieved in many low-tech spaces (e.g., running products advertised in running magazines, whose readers have expressed interest in running simply by reading the magazine). What is different about personalized advertisement if the ad server has much more data at its disposal?

Box I
Platform vs. Brick-and-Mortar Advertising and Targeting

Traditional brick-and-mortar stores and online platforms differ greatly in their advertising and personalization capabilities.

At the highest level, local grocers tend not to force shoppers to identify themselves when they shop, rarely verify identification if used, and rarely have the ability to merge purchase history with other detailed information from other aspects of their customers' lives to design targeted advertising. Online retailers, on the other hand, almost always require account creation for purchasing, verify this information for each transaction, and have direct or easy access to detailed non-shopping information about their customers.

Local grocery stores are capable of some data collection and personalization. For example, they normally know that a majority of their customers live relatively close to the grocery store, so they can rely on their knowledge about the general demographics of the neighborhood population. The stores may also ask that consumers use a loyalty card to receive discounts, which then allows them to track per-customer purchasing patterns, offer particular customers with certain purchasing patterns particular coupons or free products, and see the result of such offers on a user's purchase history. Nonetheless, the effectiveness of these methods is limited in comparison to digital shops. Consumers normally retain the option to buy full-priced groceries without tracking (pay in cash), or to intermittently switch their cards with other people they know (for example). More importantly, even if grocers used fingerprints or other unique identifiers to remove the possibility of anonymity, the data they would track would still be entirely comprised of grocery purchase history for its customers.

Platform vs. Brick-and-Mortar Advertising and Targeting (Cont.)

This limitation does not apply to digital platforms. Online groceries require a customer to make an account prior to allowing any purchase. Thus, all purchases belong to a particular account, which also contains identifying information about a customer including their search history, billing, shipping, and email addresses. This ensures that (potentially) all search history and all purchases sent to a particular address (or paid for with a certain mailing address) can be collated and analyzed by the seller and used to design offers or other services for a customer. If this seller has a broader set of services than just grocery retail (for example, the seller is Google or Amazon), the information they can collate together with this purchase history might include email transcripts, calendar information, or search and purchase history of non-grocery products, amongst others. All of this information can allow for much more aggressive marketing to a particular consumer, based on many aspects of their lives beyond their historical grocery shopping habits. A grocery store can take advantage of hungry shoppers by placing a representative selection of junk food in the checkout line. A digital platform, by contrast, can design an individualized tempting "checkout offer" based on that particular consumer's purchase history, current behavior, time of day, and the emotional content of recent communications.

2) Dimensions Along Which Data Can Be Big

In order to discuss the use-cases of large-scale datasets in online personalized advertising, it helps to define in what sense a dataset can be big. Big data commonly refers to two very different properties of a dataset: either that the dataset has many people's data in it, or that the dataset has a great deal of information about each person in the dataset. For simplicity we refer to the former as "large population datasets" and the latter as "high dimensional data." These distinct ways in which a dataset can be big enable very different uses.

Large population datasets allow the possessor to infer both unknown attributes of current users, and statistical facts about individuals not currently in the dataset. If the dataset contains many instances of users' queries along with their locations at the time they made those queries, an advertiser could use future users' locations to help predict what those users might search for or be interested in seeing advertisements about. Numerous statistical techniques can be used to show that, for a large population dataset, simple statistics that hold true on the dataset should also hold true for fresh users, assuming they come from a similar pool as those in the dataset. For example, if 30% of queries in the database originating from Cape Cod searched for lobster rolls, there is a 30% chance that a query made by a future user based in Cape Cod will be for lobster rolls, assuming the user is visiting in a similar time frame that the dataset was gathered in, arrived at the search engine in a manner similar to other dataset users, and the number of queries in the dataset originating in Cape Code is sufficiently large. If the dataset has many queries but

fairly few from Cape Cod, statistical techniques will provide lower confidence in their ability to predict future queries emanating from Cape Cod.

High-dimensional datasets allow for different uses than large-population datasets do. Suppose a dataset contains only a few users, but each user's entry contains their entire email history. A quick read of a user's recent emails could give an advertiser a very clear window into what *that* user might be looking to purchase. The richness of a given user's data entry can describe in great detail many facts about her, including her future travel itineraries, plans for large purchases, information about her career and social networks, and so forth. Looking only at that user's information, a deft advertiser could likely select any number of products this user would be much more likely than an average person to find interesting. Hotels in Cape Cod would much prefer to advertise to a user if her recent emails describe travel plans to Cape Cod. However, if only three or four users belong to the dataset, an advertiser can learn very little about new users from studying the rich but poorly-populated dataset; again, statistical techniques have much lower confidence when the datasets they operate on are small.

The most useful datasets, from the perspective of an advertiser or other service provider, are large in both senses: they contain rich information about a huge number of people. This is even more true when the rich information contains different types of data, for example, email, location, and search queries. A dataset of this type allows the provider to both learn high-level population statistics (for which it needs a large population in its dataset) and to carefully tailor its ads to each individual in its dataset (because it has very rich information about users in the dataset). Even more interestingly, the complexity of population-level statements one can make from such a dataset increases. This occurs both because each user's data has more dimensions, so there are more relevant hypotheses to explore, and because as the number of users in the dataset grows, so does the statistical significance of any particular statement that holds for the dataset. It is possible that we will see in the future a trend towards better algorithms allowing platforms to use less data and still target well.[26] However, it seems that data with enough volume and specificity will always be needed to develop these algorithms.

3) Accuracy (and Utility) May Display Increasing Returns

Entrants could have an opportunity if marginal returns were to fall as providers' datasets grow, because the incumbent's marginal cost of acquiring new data would eventually exceed the marginal value. But a simple model shows this may not be the case. Given a fixed dataset of a particular number n of individuals with a certain number k of features (also referred to as

[26] For example, during the 2019 ANTITRUST AND COMPETITION CONFERENCE - DIGITAL PLATFORMS, MARKETS, AND DEMOCRACY: A PATH FORWARD, Hal Varian, Google's chief economist, pointed out to the Imagenet Large Scale Visual Recognition Challenge 2017 as an example of this trend – see http://image-net.org/challenges/LSVRC/2017/index ; See also Varian's presentation at https://www.youtube.com/watch?v=mlBWWHoouH8

attributes), the dataset owner does not face decreasing marginal returns with respect to either n or k.[27]

Why might datasets show increasing marginal returns in either the number of features or the number of rows already present in the dataset? For a formal treatment of this question, please see the discussion below which works out in detail a particular example in the advertising domain. Informally, imagine you are trying to sell a service to people who live in Manhattan and are planning a wedding. Knowing either that a person lives in Manhattan, or that they are planning a wedding, may make almost no difference in determining their willingness to use the service because both are very low-probability events, while having both pieces of information together allows the Manhattan wedding planner to easily pinpoint interested consumers. More generally, as a firm accumulates more information about more people, its marginal returns to new data need not fall.

This last point helps us understand why data has increasing marginal returns. Even if the dataset is large enough that it allows a company to make accurate inferences about a given population, the company will always benefit from having specific information about a given individual, allowing it to become more and more confident about what the consumer wants, and to better tailor its services and ads.

Companies therefore have no incentives to stop looking for and accumulating new pieces of data, entrenching incumbents with large datasets vis-à-vis entrants with smaller databases. Consumers on the internet leave numerous traces of their activities across a range of applications (for example, their location, what they buy, who they talk to, and what they say), and technology allows platforms to identify and analyze these traces. The amount of data on individual behavior that can be collected, merged, analyzed, and stored is rising, and the combination of different dimensions of data generates valuable information about individuals' tastes and behaviors. As individuals rely more and more on a platform to organize their lives through their online social, cultural, or economic activity, their data become more informative about their future choices and firms are willing to pay to influence those choices. Furthermore, the emergence of the Internet of Things means that platforms will have access to yet more data generated by home appliances, cars, and other devices. Indeed, consumers' devices can now track eye movement, mouse movement, body movement, and body position. In parallel with the evolution of the internet that made tracking of billions of individuals possible, advances in data mining and artificial intelligence have enabled firms to learn more from data than was conceivable a few decades ago.[28]

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[27] This holds even in "natural" settings, where each member of the dataset is drawn identically from a normal distribution.

[28] Jaron Lanier, a creator of virtual reality, has warned of the problems associated with a "surveillance economy" in which users of digital tools and platforms would be enticed to give up personal data in exchange for "free" products and access. *See* JARON LANIER, WHO OWNS THE FUTURE? (2013). The data, Lanier argues, could then be monetized

Many digital markets have tipped and therefore there are only a few entrenched platforms able to gather this breadth of data. As Alessandro Acquisti and colleagues concluded in a recent study, "a few 'gatekeeper' firms [will be left] in a position to control the tracking and linking of . . . behaviors across platforms, online services, and sites."[29] When data exhibit increasing returns to dimensionality and size, platforms that can track many users across those dimensions will have economies of scale and scope; they will be able to sell more valuable advertising.

Nonetheless, this targeting can also raise the quality of services provided by platforms. When they can identify individual tastes at fine levels and personalize their services to this taste, they often improve people's lives. Search engines can better answer queries or find a nearby destination, cultural and news websites are able to suggest well-suited content, and ecommerce websites can improve matching between buyers and sellers. These are all part of the consumer benefit described previously.

4) Types of Data

The definition of what constitutes a consumer's data can become complicated. Suppose the consumer's data and those of similar consumers allowed the service to infer characteristics about the consumer (for example, that she has a tattoo) without any action or communication on the topic by the consumer. Is this piece of information part of the "consumer's" data, or is it the intellectual property of the algorithm owner?

The Vestager Report and the Furman Report categorize data as volunteered , observed, or inferred. Volunteered data is intentionally provided by the user to the service -- for example, when a user provides their favorite TV shows to a service in order to receive recommendations. Observed data, such as the history of shows that the consumer actually watches, are automatically gathered by a service. Some observed data may not be intentionally provided by users if they do not understand the privacy protections in the service -- for example, location tracking of a person using a video app. Finally, the service can process volunteered and observed data to *infer* additional information about the user or a group of users.[30] We include (but do not always distinguish among) all these types of data in this report's discussions.

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by the owners of the platforms and applications, largely through the sale of the data to advertisers and others finding value in the users' personal characteristics and proclivities.

[29] Acquisti et al., *supra* note 22, at 444.

[30] *See* EC COMPETITION REPORT, *supra* note 1, at 25. Famously, Target claims to have been able to predict a customer's pregnancy before she knew about it. *See* Charles Duhigg, *How Companies Learn Your Secrets*, N.Y. TIMES (Feb. 16, 2012), https://www.nytimes.com/2012/02/19/magazine/shopping-habits.html.

Box II
Why Data Has Increasing Marginal Returns

For a particular dataset, suppose the first feature is the one the owner wants to predict for future users. For example, this feature might refer to whether or not a user will book a particular hotel if shown an advertisement for it. If k=2, and the second feature represents the home zip code of a user, there might be some limited ability to predict interest in a hotel based on this zip code being sufficiently far from the hotel. If k=3, consider the case where the third feature refers to the annual household income of each person.

With both zip code *and* income available, we can express much more complex prediction rules for interest in hotel X. For example, we could predict that a user will book the hotel if

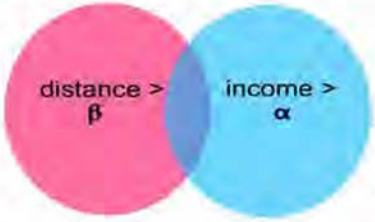
$$\alpha \cdot distance + \beta \cdot income \geq \gamma,$$

for some $\alpha, \beta, \gamma \geq 0$. If the *true* relationship between these three features is in fact linear, then the utility of gathering the income variable will be marginally decreasing in the set of other (linearly relevant) features.

However, it might be that the best prediction of whether a hotel will be booked is a nonlinear function of distance and income; perhaps a person will book exactly when they live far enough away *and* make at least a certain amount of money:

$$distance \geq \alpha \text{ and } income \geq \beta$$

where users with distance > α and income > β make up 10% of the distribution. Suppose 40% of the users have distance > α, and 40% of the users have income > β.



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Why Data Has Increasing Marginal Returns (Cont.)

Knowing a user's zip code (and corresponding distance) gives some limited ability to predict when both the income and distance are sufficiently large, but knowing both the zip code and income will allow them to perfectly predict the 10% of the population that might have interest in staying at the hotel. For this reason, the utility of data owners need not be marginally decreasing in the set of features they have.

To be explicit, fix an advertising firm for the hotel. If the advertising firm purchases the ability to see each potential advertisee's zip code, then showing the advertisement to customers as a function of their distance is now possible. For example, the advertiser could only show the advertisement to customers whose distance is more than β, increasing the probability that the ad is shown to an interested party from 10% to 25%. If the firm then acquired the ability to estimate each advertisee's income, it could use both features together and only show the advertisement to customers with both income > α and distance > β.

This would raise the probability that a targeted advertisee would be interested in the ad from 25% to 100%. The two features are otherwise identical, and so it would also be the case that first acquiring income and then distance would raise the probability of an advertisement reaching an interested customer from 10% to 25% to 100% if one started with no features, then added income, then distance. Therefore, the utility increase which comes from adding distance first is .15 * (value of showing the ad to an interested customer), while the utility increase from adding distance after first acquiring income is .75 * (value of showing the ad to an interested customer). That is, the distance feature is more valuable *after* first learning about income (and vice versa). This shows that the value of features may not be marginally decreasing in the set of features accrued thus far.

One can also use the same sort of relationship to argue that the dataset owner's utility need not be marginally decreasing in n, the number of people in the dataset. Again, suppose one can only predict interest in the hotel with the conjunction of zip code and income information, but that this relationship is not a priori known to the dataset owner, and they are instead trying to *learn* how to predict hotel interest based on a dataset they have available to them. Using statistical techniques, it won't be possible to learn rules of this form (if x and y then z) to a high degree of accuracy unless the dataset has sufficiently large n. The utility of adding additional people to the dataset can *increase* as the dataset grows, depending on the owner's utility for accuracy of the learned model.

ii. Data Control and Ownership

1) Status Quo

In the United States at present, a consumer has no property or control rights over their data. This stands in contrast to Europe, where the GDPR sets a standard for what a digital business can do with a consumer's data.

In the U.K., regulators have sought to give consumers *useful* control over their financial data. After a lengthy investigation showed that consumers rarely switch banks despite large gains to doing so, regulators sought to use Open Banking to give people the ability to seamlessly move between banks.[31] The Open Banking Initiative allows consumers to obtain, see, and transmit their banking activity in a standardized and secure fashion to regulated and approved third-party firms.[32] This is an example of data portability. Theory suggests that consumers will use that power to move their business to banks that lower prices and improve services. If Open Banking causes more competitive outcomes, it may provide a strong model for regulated portability and interoperability in other markets.[33] The Vestager Report defines protocol interoperability and data interoperability as stronger than data portability because they allow continuing communication between two services. It defines full protocol interoperability as a complete linking of the two services in a way that reduces network effects. We will return to these concepts below.

Data intermediaries collect consumers' information that they then sell to third parties. These intermediaries may be large websites obtaining the information through their service to consumers, or data brokers. Data have specific features that make this market unusual. For example, data are "non-rivalrous" meaning a broker can sell the same dataset to many buyers and still retain it, unlike, for example, the sale of apples. Once you've sold an apple, you're out an apple; once you've sold a given piece of information to one buyer, you can sell it again to another buyer. A key feature of data in this context is that data may be either directly shared with the buyer, or withheld (to prevent the buyer from achieving its own economies of scale and scope) but embedded into a service the buyer wants, such as targeting advertising.[34]

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[31] *See* Alasdair Smith et al., RETAIL BANKING MARKET INVESTIGATION: FINAL REPORT, U.K. COMPETITION & MARKETS AUTHORITY (Aug. 2016), https://assets.publishing.service.gov.uk/media/57ac9667e5274a0f6c00007a/retail-banking-market-investigation-full-final-report.pdf, at xiii-xiv.

[32] *See* U.K. COMPETITION & MARKETS AUTHORITY, THE RETAIL BANKING MARKET INVESTIGATION ORDER 2017 (2017), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/600842/retail-banking-market-investigation-order-2017.pdf; *see also* OPEN BANKING LTD., OPEN BANKING: GUIDELINES FOR PARTICIPANTS (2018), https://www.openbanking.org.uk/wp-content/uploads/Guidelines-for-Open-Data-Participants.pdf; Rowland Manthorpe, *What is Open Banking and PSD2? WIRED Explains*, WIRED (Apr. 17, 2018), https://www.wired.co.uk/article/open-banking-cma-psd2-explained. Third party firms that customers can elect to give data access are regulated and approved by the Financial Conduct Authority. *See* Press Release, U.K. Fin. Conduct Auth., FCA Finalises Revised Payment Services Directive (PSD2) Requirements (Sept. 9, 2017), https://www.fca.org.uk/news/press-releases/fca-finalises-revised-psd2-requirements.

[33] There are some signs that Open Banking has seen early success. *See* U.K. COMPETITION REPORT, *supra* note 1, at 70.

[34] *See* Dirk Bergemann & Alessandro Bonatti, *The Wild West of Information Markets: What We Need to Know Before Law and Order Can Rule*, VOX (Oct. 11, 2018), https://voxeu.org/article/wild-west-information-markets; Dirk Bergemann & Alessandro Bonatti, *Markets for information: An Introduction*, (Cowles Foundation Discussion Paper No. 2142, Aug. 29, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3240310.

2) Externalities

What can a person do with ownership over her data? The previous section describes two ways in which data might be used: First, it might be used to tailor services to a given person; second, it might be used to learn patterns that hold on average for the population from which the dataset was drawn. The former does not necessarily transfer any knowledge about one customer to the treatment of another, while the latter aims to learn about some fraction of a dataset and use that information to affect interactions with future customers. Note that this use of data creates externalities between consumers. Purchase or travel patterns by one person are used to create recommendations or suggestions for similar people, where "similar" is determined by machine learning. For this reason, the value of an individual person's data is more than the value of using it to market to them. A customer whose data predicts the behavior of many other consumers is very valuable to a platform.

3) Deletions

One might simplistically think that "owning" one's own data gives a person the ability or right to delete it. The ease with which a customer's data can truly be deleted depends on the way the firm has created and is using that data. If a user's own data is used only to personalize her experience, deleting her data will mean that the dataset—and the service's subsequent behavior—has no trace of the customer ever belonging to the dataset. If, however, the service used the customer's data to inform population-wide behavior (by analyzing the dataset including this customer and storing the results of those analyses), merely deleting the customer's data from the dataset does not truly erase her presence—her data will still have a lasting effect on the future behavior of the service.

For example, suppose the service scans the dataset for one representative user from each zip code and remembers the purchasing history of each representative user. Even if the service removes the initial entry corresponding to a particular user in the original dataset, if the service still uses this set of representative users' purchasing histories, some of the user's data can still remain in the system. While this example may seem contrived, many machine learning methods do some amount of memorization of some subset of their training data.[35]

Beyond memorization, there are other, more subtle ways in which a user's data can affect the long-term behavior of a system and what information the system holds on to. The natural tool to restrict how much a system's information is affected by one user's data is to impose *differential privacy*. Loosely speaking, differential privacy restricts the statistics created from the dataset to not reveal if any particular person or observation is in the dataset.

[35] For example, support vector machines are explicitly recorded as a small number of datapoints on which the model was learned.

4) Transparency, Choice, and Fraud

According to the Federal Trade Commission, the market for data suffers from a lack of transparency.[36] Most consumers have no idea how much information is being collected about them, sold, and used to make a profit.[37] One way in which digital platforms exploit their market power is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing. The terminology in these contracts is legal and the documents are often lengthy; the consequence of the different clauses is difficult to understand and foresee. Moreover, the user of a device or platform makes a choice to sink investments (posts, calendars, media, and so on) in a particular platform at a moment in time when a particular user agreement is in force. After the device or platform updates its terms of service, a user may be locked in. Having bought a phone, they won't immediately want to switch; having built a network of friends, they often won't want to leave. Thus, the user does not have the same set of choices as she did the first time she hit "agree," and some agencies have argued this is no longer a free choice.[38] Lastly, a digital platform may describe its data-use policy in its terms of service and then deviate from that, rendering the initial statement fraudulent [39]

Box III
Digital Identities

Perhaps the next major shift in digital competition will be the quest to control the identification market. Once we create an account with any digital platform, we create a digital identity which incorporates select data on age, sex, address, email address, preferences, and, frequently, much more. These digital identities help companies identify and tag users to the data they generate, be it transactional, social, simple web navigation or even meta data. Digital identities work like access and tracking mechanisms, allowing a user to surpass a wall in exchange for enabling the company to link the data to a given dataset (e.g., using a Facebook login to access a website).

Identity data and control is highly valuable and platforms can monetize it in many ways. They can use it to personalize services and charge subscription fees, provide advertising or market intelligence, or as a way to increase bottleneck power and charge companies for user access . The more privacy protection technologies grow and limit widespread data collection online, the more being the single identification point for users will grow in importance and value.

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[36] FED. TRADE COMM'N, DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY: A REPORT OF THE FEDERAL TRADE COMMISSION (2014), https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

[37] *See id.* at 42.

[38] *See* Press Release, Bundeskartellamt, Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources (Feb. 7, 2019), https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/07_02_2019_Facebook.html (determining that Facebook's take-it-or-leave-it under agreements constitute "abuse of market power").

[39] *See, e.g.*, Tony Romm & Elizabeth Dwoskin, *U.S. Regulators Have Met to Discuss Imposing a Record-Setting Fine Against Facebook for Privacy Violations*, WASH. POST (Jan. 18, 2019), https://www.washingtonpost.com/technology/2019/01/18/us-regulators-have-met-discuss-imposing-record-setting-fine-against-facebook-some-its-privacy-violations.

iii. Digital Platforms are Characterized by Free Services

"Free" is not a special zone where economics or antitrust do not apply.[40] A free good is one where the seller has chosen to set a monetary price of zero and may set other, non-monetary, conditions or duties. Zero is a number, just like 10 is a number. If a competitive price is $10 while the realized price is $15, there is a $5 markup above the competitive price. This is the same harm the consumer bears when the competitive price is -$5 (at this price the digital platform is actually paying the consumer for her data and information in addition to providing her with services) and the realized price is $0.

Barter is a common way in which consumers pay for digital services. They barter their privacy and information about what restaurants they would like to eat in and what goods they would like to buy in exchange for digital services. The platform then sells targeted advertising, which is made valuable by the bartered information. But, in principle, that information has a market price. It is not easy to see if the value of any one consumer's information is exactly equal to the value of the services she receives from the platform. However, many digital platforms are enormously profitable, and have been for many years, which suggests that in aggregate we do know the answer: the information is more valuable than the cost of the services. The economics literature has modeled this setting and is able to define a data markup.[41]

The current inability to use both positive and negative prices for digital goods means that the policy discussion cannot focus on dollars alone as the unit of cost. Rather, digital platforms should be analyzed using both price and quality. "Quality-adjusted price" is a metric often used by economists in this situation. If a platform's price is fixed at zero and the quality of the service improves, then its quality-adjusted price has fallen. Conversely, if a platform's price remains zero but its quality falls, its quality-adjusted price has risen. When the price is fixed at zero, it is possible to track quality-adjusted price over time: the movement in quality accurately reflects quality-adjusted price.[42]

Online platforms offer many services for zero monetary price while they try to raise participation in order to generate advertising revenue. Free services are prevalent on the internet in part

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[40] See, for example, the current head of the U.S. Department of Justice's Antitrust Division describing the challenge faced by his division of defining markets when goods are free. Makan Delrahim, U.S. Assistant Att'y General, "I'm Free": Platforms and Antitrust Enforcement in the Zero-Price Economy, Address at Silicon Flatirons Annual Technology Policy Conference at The University of Colorado Law School (Feb. 11, 2019), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-keynote-address-silicon-flatirons (arguing, without regard for quality effects, that traditional antitrust market definition cannot work because "[w]e cannot look at the effects of a five percent increase in price because five percent of zero is still zero"). *See also id.* (arguing that "[c]hoosing variables for measuring market shares also can be more complicated where shares of revenue is not an option").

[41] *See* Dirk Bergemann et al., *The Design and Price of Information*, 108 AMER. ECON. REV. 1 (2018).

[42] The European Commission has noted the importance of assessing product quality in zero-price settings. *See* Samson Y Esayas, *Competition in (Data) Privacy: 'Zero'-Price Markets, Market Power, and the Role of Competition Law*, 8 INT. DATA PRIVACY L. 181 (2018).

because internet firms can harness multi-sided network externalities. While the low price can be a blessing for consumers, it has drawbacks for competition and market structure in a world where institutions have not arisen to manage negative prices. Because there is currently no convenient way to pay consumers with money, platforms are able to mark up the competitive price all the way to zero. This constraint can effectively eliminate price competition, shifting the competitive process to quality and the ability of each competitor to generate network externalities. Depending on the context this may favor or impede entry of new products. For example, entry will be encouraged when a price of zero leads to supra-competitive profits, and impeded when a zero price prevents entrants from building a customer base through low price. Moreover, unlike traditional markets where several quality layers may coexist at different price levels (provided that some consumers favor lower quality at low price), markets where goods are free will be dominated by the best quality firm and others may compete only in so far as they can differentiate their offers and target different customers. This strengthens the firm's incentive to increase quality through increasing fixed costs in order to attract customers (known as the Sutton sunk cost effect) and further pushes the market toward a concentrated market structure.[43]

It is a puzzle that, to date, no entrepreneur or business has found a way to pay consumers for their data in money. For example, a consumer's wireless carrier could aggregate micropayments across all manner of digital destinations and apply the credit to her bill each month. It may be that adverse selection, transaction costs, and coordination difficulties create too large a barrier for today's entrepreneurs, though technical solutions like a verifiable digital identity, mentioned above, would combat adverse selection.[44] Furthermore, a carrier that could bargain effectively with platforms on behalf of its subscribers for high payments would likely gain subscribers. Notice that an easy method to pay consumers, combined with price competition for those consumers, might significantly erode the high profits of many incumbent platforms. Platforms likely have no economic incentive to work diligently to operationalize negative prices.

[43] *See* SUTTON, *supra* note 7.
[44] *See* ERIC A. POSNER & E. GLEN WEYL, RADICAL MARKETS: UPROOTING CAPITALISM AND DEMOCRACY FOR A JUST SOCIETY (2018).

III. PROBLEMS ARISING IN DIGITAL MARKETS

The changing market dynamics, outlined above, raise doubts about the market's ability to ensure ongoing innovation and competition. Increased concentration levels, market power, network effects, and control over data and analytics have in many digital markets tipped the market in favor of the incumbents.

The theme we return to throughout this report is the difficulty of entry into digital platform businesses once an incumbent is established. Whether the entrant is vertical or horizontal, has succeeded to some degree, is nascent, or is a potential entrant, its existence improves consumer welfare. Either the entrant provides more choice, different features, and a chance of higher quality, or the threat of those outcomes spurs the incumbent to provide lower prices, higher quality and innovation, and to do so more quickly.

By focusing on this feature of digital platforms, we are highlighting the *cause* of the market power, not its result. Absent entry barriers of the type discussed above, the tremendous amount of profit available in these markets would stimulate entry. Protecting competition in these markets requires protecting competitors. Entry and potential entry create more competitors (in expectation), and that increase depends on competition working effectively so that a meritorious entrant can successfully dethrone the incumbent.

The categories of economic harms to consumer welfare from digital platforms are the standard ones: price, quality, and innovation. The report will primarily emphasize quality and innovation harms due to their greater complexity and generality. For example, by excluding competitors, dominant firms do not need to innovate as hard as they otherwise would be required to keep their customers. Likewise, when platforms do not face competition, they will be able to reduce quality, for example, by decreasing privacy protections, without losing customers or revenue.[45] When a service reduces quality without lowering price, it is *raising* quality-adjusted prices, which harms consumers. For example, if a phone service were to lower the quality of service but keep monthly fees the same, it would have raised quality-adjusted price. Because many digital services are purchased with barter, the monetary price paid by consumers is zero, and quality-adjusted prices cannot be directly seen the way a nominal price can be. On the advertiser side of the platform, where monetary prices *are* charged, harms to competition exist in the more ordinary form of higher markups for ads and other services. These markups are eventually paid by consumers because they are built in to the prices of the goods and services that are advertised online.

[45] *See* Agustin Reyna, *The Psychology of Privacy—What Can Behavioural Economics Contribute to Competition in Digital Markets?*, 8 INT. DATA PRIVACY L. 240 (2018).

a. Quality Harms

i. Personal Data and Behavioral Economics

1) Behavioral Economics

As discussed above, behavioral economics helps improve our understanding of real consumer choices and suggests that consumer exploitation is common. There are a number of systematic consumer biases that, when incorporated into economic analysis, affect outcomes and welfare. For instance, individuals can be subject to salience effects, putting excessive weight on the most salient information. Confirmation bias can lead them to change their preferences to conform with past choices.[46] Consumers are often biased toward the status quo even when it is no longer optimal.[47] Perhaps the most important consumer biases are impatience and lack of self-control. The former refers to the discounting of any payoff that occurs further in the future than the present. The latter is closely related and refers to the extent to which individuals fail to resist short-term impulses in order to achieve long-term goals. The literature in behavioral antitrust argues that status quo, salience, and impatience are the most relevant for antitrust analysis.[48] Platforms that analyze their consumers' behavior can exploit these biases by framing choices to make certain information salient, designing a status quo that is profitable, inducing addictive behaviors, generating sales through impulsive consumption, and exploiting consumers' disinclination to search. These strategies are common in the brick and mortar world. For example, the candy aisle in supermarket check-out lines, or the rug store that has a special 50%-off sale every day.

2) Using Machine Learning to Take Advantage of Consumers

There are now decades of economic research demonstrating consumer bias and firm responses in offline markets.[49] For example, gyms offer subscription memberships rather than pay-per-visit

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[46] *Confirmation Bias*, WIKIPEDIA (Mar. 22, 2019), https://en.wikipedia.org/wiki/Confirmation_bias ("Confirmation bias is the tendency to search for, interpret, favor, and recall information in a way that confirms one's preexisting beliefs or hypotheses."); *see, e.g.*, Thaler, *supra* note 19, at 1266 ("People guess that in the United States today gun deaths by homicide are more frequent than gun deaths by suicide, although the latter are about twice as common. The bias comes because homicides are more publicized than suicides, and thus more 'available' in memory.")

[47] William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. RISK & UNCERTAINTY 7, 8 (1988) ("[D]ecision makers exhibit a significant status quo *bias*. Subjects in our experiments adhered to status quo choices more frequently than would be predicted by the canonical model.").

[48] *See* Amelia Fletcher, *The EU* Google *Decisions: Extreme Enforcement or the Tip of the Behavioral Iceberg?*, COMPETITION POL. INT. ANTITRUST CHRON. (Jan. 2019), https://www.competitionpolicyinternational.com/wp-content/uploads/2019/01/CPI-Fletcher.pdf.

[49] *See, e.g.*, DANIEL KAHNEMAN & THOMAS GILOVICH, HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT (2002); Nicholas Barberis & Richard Thaler, *A Survey of Behavioral Finance*, *in* HANDBOOK OF THE ECONOMICS OF FINANCE (René M. Stulz & George Constantinides eds., 2003); *see also, e.g.*, Daniel Kahneman, Jack L. Knetsch, & Richard H. Thaler, *Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193 (1991).

knowing that members will not come as often as they anticipate,[50] and credit cards offer teaser rates knowing that consumers plan to have no debt in 6 months' time.[51] However, the strategies firms have used to date are swamped by what digital businesses can learn by using high-dimensional, large datasets to explore every nook and cranny of consumers' many behavioral shortcomings and biases in real time. This strategy is of serious concern when combined with an understanding of the digital platform business model discussed above. The platform's goal is to use its knowledge of consumers, combined with its market power (and the resulting lack of consumer choice), to extract profit. Some of that profit may come from value creation, or "expanding the pie," but some will come from transfers to the platform from both the consumer side and the advertiser side. Because individuals are subject to behavioral biases, consumers are vulnerable to a platform's exploitative behavior. Additionally, when individuals are workers, as they often are in the "gig" economy, these tools can be used to advantage the platform against the worker.

Digital businesses not only have more information than traditional firms, but they have more variations of products or services and the ability to control the environment and the timing of choices and offers. For example, a firm can hide a component of a good's price to let consumers discover prices only once they have invested significant time and effort into buying the good. This strategy can be differentially employed depending on the consumer's past willingness to pay. Framing, nudges, and defaults can direct a consumer to the choice that is most profitable for the platform. A platform can analyze a user's data in real time to determine when she is in an emotional "hot state" and offer a good that the user would not purchase when her self-control was higher. Consider a supercomputer tracking a consumer, via her cell phone, around the town until she is tired and frustrated in some way, and at that moment presenting her ads and information about junk food. This type of exploitation could depend on input from devices such as eye-tracking sensors, the ability of AI to understand the emotion expressed in texts and email, and all the other data the platform has about the consumer combined at a very large scale. This same tactic can be used to gain advantage against an independent contractor, e.g. a driver, whose behavior and location can be tracked for long periods.[52] In addition, machine learning applied to big data may help differentiate well-informed and sophisticated consumers or workers from poorly informed or more naive consumers, raising the possibility of further exploitation of those least prepared to resist it.

Internet firms make frequent use of digital defaults, framings, and nudges. When a user is signing up for a new service, the sign-up form may automatically check the box that permits the service to send the user emails.[53] A user can opt-out of receiving emails by unchecking the box.

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[50] *See* Stefano DellaVigna & Ulrike Malmendier, *Paying Not to Go to the Gym*, 96 AMER. ECON. REV. 694 (2006).
[51] *See* Oren Bar-Gill & Ryan Bubb, *Credit Card Pricing: The CARD Act and Beyond*, 97 CORNELL L. REV. 967 (2012).
[52] https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html
[53] This is no longer permitted in the European Union. *See* Regulation (EU) 2016/679 of the European Parliament and the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data

but doing so is harder than sticking with the default. The results of a search that fits onto one page may all be sponsored, whereas finding the organic links requires paging down. *Homo economicus* is hardly influenced by defaults—to a rational agent, scrolling down or unchecking a box is trivial—but real people are influenced. Nudges are not unique to digital products; for example, an employer offering a default health care plan to its employees nudges employees towards choosing that plan—employees can select a different plan, but doing so is harder than sticking with the default.[54] What is noteworthy, however, is the platform's detailed, personalized, minute-by-minute control over their interface. This control enables platforms to create a façade of competition, choice, and autonomy when in fact users are being directed with behavioral techniques.[55]

With big data and machine learning, firms are able to understand and manipulate individual preferences at a scale that goes far beyond what is possible in traditional markets. This capability is qualitatively new. The environment is characterized by extreme asymmetries of information and analytical capacity between the platform and the user. This enables firms to charge higher prices (for goods purchased and for advertising) and engage in behavioral discrimination, allowing platforms to extract more value from users where they are weak.[56] The problem is only growing; platforms continue to make investments to extract data, encourage stickiness and addiction, and promote ever-greater use, in order to run data analytics and enable more precise targeting.[57]

The economic literature suggests that competition by itself cannot resolve the issue raised by the exploitation of behavioral biases or poor consumer information. This is because staying profitable in a competitive environment may force firms to exploit behavioral bias to achieve maximal profitability. Firms abstaining from doing so may be driven out of the market. Rather, competition causes a shift of surplus to wiser consumers; profit from exploitation of biased consumers is used to compete for well-informed consumers. For consumers who can guard against exploitation, there are therefore significant gains to be had from competition. But this

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and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation), 2016 O.J. (L 119/1), § 32 ("Silence, pre-ticked boxes or inactivity should not . . . constitute consent.").

[54] Thaler, *supra* note 19, at 1283. Default settings have very large effects, for example, in voluntary organ donation decisions. Countries with an op-in default generally have the vast majority of the nation's adults enrolled to donate, while countries with default opt-out decisions see the opposite result. *See* Eric J. Johnson & Daniel Goldstein, *Do Defaults Save Lives?*, 302 SCIENCE 1338 (2003).

[55] *See* ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION: THE PROMISE AND PERILS OF THE ALGORITHM DRIVEN ECONOMY (2016) (comparing the façade of choice and autonomy on digital platforms to the Truman Show).

[56] For a discussion of the use of online price and behavioral discrimination, see Maurice E. Stucke & Ariel Ezrachi, *How Digital Assistants Can Harm Our Economy, Privacy, and Democracy*, 32 BERKELEY TECH. L.J. 1239 (2018); Maurice E. Stucke & Ariel Ezrachi, *Alexa et. al., What Are You Doing with My Data?*, 5 CRITICAL ANALYSIS L. 148 (2018).

[57] Haley Sweetland Edwards, *You're Addicted to Your Smartphone. This Company Thinks It Can Change That*, TIME (Apr. 13, 2018, 10:28 AM), http://time.com/5237434/youre-addicted-to-your-smartphone-this-company-thinks-it-can-change-that.

will not be true for all people; some will be taken advantage of under perfect competition if consumer protection regulations are insufficient. Hence, while this report focuses on the competition problems created by powerful platforms, related issues raise broader consumer protection concerns that cannot be solved through greater competition.

ii. The Harms from an Advertising-Supported Business Model

1) Market Power Leads to Markups

Access to high-quality data, scale, and scope has allowed a few large platforms to offer efficient targeting services for advertising and to dominate the advertising market. Facebook, Google, and, increasingly, Amazon act as gatekeepers to the online advertising market. The three platforms provide access to billions of users, as well as a data-rich environment, essential for modern online advertising. Being in control of the data and the assets—users—creates market power. That market power generates a profit margin which, for ad-supported platforms, comes from the sale of advertising. One of the characteristics of the digital advertising environment is its opacity: major platforms are able to leave bidders and publishers in the dark with respect to the true success, costs, and profits from placement of advertising. This can be exacerbated when the platform also supplies buyer or publisher tools and analytics. Opacity is partially a consequence of market power. Market power can be used to discourage, or even prevent, multi-homing by buyers. One additional concern is that this opacity may give firms not only the normal ability to exercise market power in intermediation but also to engage in fraud.[58] Lack of transparency also undermines buyers' ability to measure the effectiveness of digital advertising and therefore to understand its true value relative to price.[59]

A report by the French Competition Authority estimated that publishers received 40% of advertiser sales, with intermediaries collecting the rest.[60] What justifies such a large markup for intermediaries? Without detailed study we cannot know for sure. However, reasons likely include the fact that very few platforms can target customers (who may be single-homing) using detailed and accurate data, so advertisers cannot take advantage of competition. The platforms do

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[58] *See, e.g.*, Suzanne Vranica & Jack Marshall, *Facebook Overestimated Key Video Metric for Two Years*, WALL ST. J. (Sept. 22, 2016), https://www.wsj.com/articles/facebook-overestimated-key-video-metric-for-two-years-1474586951; Mike Shields, *Facebook Says it Found More Miscalculated Metrics*, WALL ST. J. (Nov. 16, 2016), https://www.wsj.com/articles/facebook-says-it-found-more-miscalculated-metrics-1479303984; Cyrus Farivar, *Advertisers Allege Facebook Hid the Fact That No One Watches Video Ads*, ARSTECHNICA (Oct. 17, 2018), https://arstechnica.com/tech-policy/2018/10/advertisers-allege-facebook-hid-the-fact-that-no-one-watches-video-ads (reporting allegations that Facebook's "average viewership metrics were not inflated by only 60-80 percent; they were inflated by some 150-900 percent").

[59] This in turn obscures the size of the platforms' markup. *See* SELECT COMMITTEE ON COMMUNICATIONS, HOUSE OF LORDS, 1ST REPORT OF SESSION 2017–19, HL PAPER 116, U.K. ADVERTISING IN A DIGITAL AGE 14, § 29 (2018), https://publications.parliament.uk/pa/ld201719/ldselect/ldcomuni/116/116.pdf; David Pidgeon, *Where Did the Money Go? Guardian Buys its Own Ad Inventory*, MEDIA NEWSLINE (Oct. 4, 2016), https://mediatel.co.uk/newsline/2016/10/04/where-did-the-money-go-guardian-buys-its-own-ad-inventory.

[60] FRENCH COMPETITION AUTHORITY REPORT, *supra* note 1, at 40, § 82.

not sell the data to advertisers, but promise to place the ad in front of the requested demographic. The advertiser lacks transparency or any ability to learn about its customers and potential customers. Moreover, a platform that operates in the advertising placement business holds the keys to a second black box through its control of the pricing process.[61] The integration of the business of running the price-discovery mechanisms as well as tools for each side of the platform enables opacity, which helps maintain market power. When a platform bundles services such as advertising placement and return-on-investment analysis with advertiser data such as completed purchases, it can further enhance its market power.[62] The platform generally never shares the data with advertisers or publishers, but keeps it to itself, preventing disintermediation by a brand or publisher, further sustaining its large profit margin.

2) Incentives Created by Markups

Ad-supported platforms' high markups provide a powerful reason to try and keep users online for another minute in order to show more ads. These profits push platforms to design their firms around "engagement"—an obsession with keeping users on their system for as much time, and with as much attention, as possible.[63] As much of the behavioral literature cited above shows, advertising-supported digital businesses can use consumer biases to hold people's attention in ways that ultimately harm them. Early empirical work has found such effects in social media. In a recent working paper, Hunt Allcott and colleagues found that Facebook users who were paid to leave the site for four weeks wound up with higher subjective well-being than similarly situated people randomly assigned to a group not offered the payment.[64] Users who took the break from Facebook had a "large and persistent reduction in Facebook use after the experiment," along with reduced political polarization and news knowledge.[65] For the platform, engagement serves two reinforcing purposes. First, the more time a user spends on a platform, the more the platform knows about her. Second, the longer a user is on the platform, the greater its income from ads and services. Thus, the more time a user is on the platform, the more ads the platform can sell, and the more it can charge per ad.

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[61] For example, Google's ownership of the ad platforms formerly known as DoubleClick and AdWords. *See* Todd Spangler, *Google Killing Off DoubleClick, AdWords Names in Rebranding of Ad Products*, VARIETY (July 27, 2018), https://variety.com/2018/digital/news/google-doubleclick-adwords-rebranding-1202859088.

[62] *See generally* Einer Elhauge, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397 (2009).

[63] *See, e.g.*, Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, BLOOMBERG (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant ("The company spent years chasing one business goal above others: 'Engagement,' a measure of the views, time spent and interactions with online videos.").

[64] Hunt Alcott et al., *The Welfare Effects of Social Media* (NBER Working Paper No. 25514, Apr. 2019), https://web.stanford.edu/~gentzkow/research/facebook.pdf.

[65] *Id.* at 1.

This financial incentive may explain the growing use of tracking and the creation of ecosystems that are based on the ability to manipulate the user into staying longer on the platform.[66] This opens the door to exploitative tactics or content as a method of increasing engagement. Furthermore, a second element to the large margin earned by a platform may be the low cost of the purchased content that keeps users on the platform. An important question (addressed more fully by the Media committee) is whether the prices for that content are set competitively. In a bargaining environment, the market power of the platform may allow it to negotiate a price for content that is below competitive levels, potentially creating dynamic harm to input providers.[67]

The financial incentive created by a large markup can lead to anticompetitive behaviors as well as exploitative ones. Platforms may seek to reduce interoperability and awareness of outside options. For example, platforms may exclude certain services or increase friction in accessing third parties' services. High search and switching costs are used to "lock in" users and reduce the ability of competitors to access those users. Platforms may adopt strategies to reduce multi-homing to obtain more market power over their users. We will return to this theme below.

3) Resulting Quality of Content

As discussed in detail below, the cheapest way to keep users on a platform is to present content as being more attractive than users thought at the moment when they were ready to leave the platform, or to make departure more costly in other ways, so that users stay longer. (See a similar discussion in the Privacy Report.) The platform is essentially degrading the quality of the content offered in a way that present-biased human beings find engaging. As discussed further below, content that instantly engages most effectively is content that generates outrage, not necessarily content that is truthful or thoughtful. Simple strategies such as more advertising minutes per minute of content also lower quality. Low-quality content represents an increase in the quality-adjusted price of platform services experienced by consumers.

This business model, and the opacity that accompanies it, makes it difficult for either advertisers or consumers to realize they are being charged a markup and makes entry into these advertising markets extremely difficult. Because the advertiser side is where a platform earns its revenue, this is obviously a key entry barrier. The question of how an enforcer or regulator might enable entrants to overcome this barrier to entry is an important part of the discussion in Section III.B of the report.

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[66] *See* Maurice E. Stucke & Ariel Ezrachi, *The Subtle Ways Your Digital Assistant Might Manipulate You*, WIRED (Nov. 29, 2016, 8:00 AM), https://www.wired.com/2016/11/subtle-ways-digital-assistant-might-manipulate.
[67] *See* Maurice E. Stucke & Ariel Ezrachi, *Looking Up in the Data-Driven Economy*, COMPETITION POL'Y INT'L (May 15, 2017), https://www.competitionpolicyinternational.com/looking-up-in-the-data-driven-economy.

4) Welfare and Efficiency

When analyzing the impact of online advertising and the behaviors it creates, one should keep in mind that antitrust aims to promote effective competition for the benefit of consumers. Competition authorities tend to treat advertisers as any other customers of a service. The premise is that market power in advertising channels impedes the ability of brands to reach consumers and inform them about their products. Such a treatment of the welfare from advertising relies on the implicit view that i) the role of advertising is solely to inform consumers; and ii) competition in the advertising market leads to efficiency. The economic literature tells us that both assumptions are questionable, as does observation of digital markets.[68] In competition policy, when assessing the impact of a decision or a regulation involving advertising, it is important to focus on the final impact on consumers and market efficiency rather than on the advertisers' surplus.

On the one hand, targeted advertising to wise and well-informed consumers is welfare-improving insofar as it allows advertisers to send the right information to the right people, improving their choices and fostering competition among suppliers. On the other hand, in the modern economy this simple model becomes more complex because of the cost to the consumer, namely loss of privacy. There is an open empirical question as to whether the tradeoff is worthwhile to consumers.[69] We discuss the problem of measuring welfare in a setting where consumers are manipulated below.

iii. Online Exploitation and Addiction

1) Human Reward Systems

Digital platforms' manipulation of their users—in part designed to get users addicted—is getting a considerable amount of attention from the public. These actions lower the quality of a platform and harm users.

As discussed above, some platforms have deliberately incorporated features that feed human "reward" centers into their products to induce users to give more and more of their time—and data—to the platform. These tools are designed for scale—they become even more valuable the more traffic they carry and the more users they garner—and hence the competition among producers has been described as a competition for eyeballs.[70] Because the digital tools and

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[68] *See, e.g.*, Anderson, S. P., Waldfogel, J., & Stromberg, D. (Eds.). *Handbook of Media Economics, vol. 1A* (2016). Elsevier; Goldfarb, A., & Tucker, C. Digital economics. *Journal of Economic Literature*, *57*(1), 3-43 (2019).
[69] *See, e.g.*, Elizabeth Aguirre et al., *Unraveling the Personalization Paradox: The Effect of Information Collection and Trust-Building Strategies on Online Advertisement Effectiveness*, 91 J. RETAILING 34 (2015); Justin P. Johnson, *Targeted Advertising and Advertising Avoidance*, 44 RAND J. ECON. 128 (2013).
[70] *See, e.g.*, Doni Bloomfield, *High-Speed Ad Traders Profit by Arbitraging Your Eyeballs*, BLOOMBERG (Nov. 7, 2014). https://www.bloomberg.com/news/articles/2014-11-07/high-speed-ad-traders-profit-by-arbitraging-your-eyeballs.

networks have been designed for use at scale, and because there is relatively little cost and considerable benefit associated with adding more users, producers want as much user engagement as they can get. The creators of digital products have benefited from social science and neuroscience findings that concern, for example, how certain colors or mechanics can feed a user's dopamine, much as nicotine does.[71] The Center for Humane Technology, which calls the problem the "hijacking of our society," describes the issues as follows:

> Facebook, Twitter, Instagram, and Google have produced amazing products that have benefited the world enormously. But these companies are also caught in a *zero-sum race for our finite attention*, which they need to make money. Constantly forced to outperform their competitors, they must use increasingly persuasive techniques to keep us glued. They point AI-driven news feeds, content, and notifications at our minds, continually learning how to hook us more deeply—from our own behavior.[72]

This business model is based on acquiring a large volume of data to generate income, and it has led to unprecedented investment in addiction—ensuring continuing use of the interface. From diaper apps,[73] to rewarded ads (in which viewers are given in-app rewards, such as another "life" in a video game, in return for watching an ad)[74] internet firms harness their knowledge of second-to-second individual responses alongside social science learnings about human biases for maximum attention.[75] Researchers do not yet know the full extent of the harm (or potential harm) that may come from this sort of addiction and manipulation, but they are now actively engaged in relevant research.[76] What is known is that a business that depends on users staying online to watch ads and have their preferences harvested will focus its resources on keeping

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[71] *See* Edwards, *supra* note 57.
[72] Ctr. for Humane Tech., *Our Society is Being Hijacked by Technology*, HUMANE TECH (2018), http://humanetech.com/problem.
[73] Edwards, *supra* note 57.
[74] *Rewarded Ads: A Win for Users, Developers, and Advertisers*, GOOGLE ADMOB (2018), https://admob.google.com/home/resources/rewarded-ads-win-for-everyone.
[75] The video app TikTok may have taken this approach to its logical conclusion. *See* John Herrman, *How TikTok is Rewriting the World*, N.Y. TIMES (Mar. 10, 2019), https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html ("TikTok assertively answers anyone's *what should I watch* with a flood . . . [the app] has stepped over the midpoint between the familiar self-directed feed and an experience based first on algorithmic observation and inference. . . . It's an algorithmic feed based on videos you've interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you've explicitly told it you want to see. It's full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.").
[76] *See, e.g.*, Daria J. Kuss et al., *Problematic Mobile Phone Use and Addiction Across Generations: The Roles of Psychopathological Symptoms and Smartphone Use*, 3 J. TECH. BEHAVIORAL SCI. 141 (2018); José De-Sola Gutiérrez et al., *Cell-Phone Addiction: A Review*, 7 FRONTIERS PSYCHIATRY 175 (2016) (noting "a consensus about the existence of cell-phone addiction, but the delimitation and criteria used by various researchers vary"). The field is still nascent and there is no consensus that internet addiction exists or is a distinct psychological condition. *See* Francesca C. Ryding & Linda K. Kaye, *"Internet Addiction": A Conceptual Minefield*, 16 INT. J. MENTAL HEALTH & ADDICTION 225 (2018) (criticizing the cavalier use of the term "internet addiction" without a firmer grasp of the problem); Kristyn Zajac et al., *Treatments for Internet Gaming Disorder and Internet Addiction: A Systematic Review*, 31 PSYCH. ADDICTIVE BEHAVIORS 979 (2017).

users online—for example, with intelligent and flexible algorithms.[77] The algorithm will learn from, and respond to, these basic human preferences, thereby delivering—perhaps along with good content—a large quantity of low-quality content.[78]

2) Examples

There are many examples of exploitation of consumers who have sunk costs in a platform and may not be fully informed. For example, app designers have enticed children into playing free games that are built around in-app purchases, leading children to make large purchases without parental knowledge or permission. The U.K.'s consumer protection agency, the Office of Fair Trading, found that such purchases could be pricey: "A My Little Pony game, for example, offer[ed] users a virtual 'mountain of gems' for a real-life £69.99."[79] Regulators around the world have cracked down to force companies to refund large payments that children make on their parents' phones.[80] More disturbing examples of low-quality content are YouTube recommended videos that lead the viewer towards false or dangerous content.[81] Prior to having these patterns made public and criticized, a Google search about the earth's geology would lead to a chain of recommendations that resulted in "flat earth" content;[82] YouTube would offer

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[77] Beginning in 2014, Twitter followed Facebook in centering around algorithm-selected content rather than simply displaying tweets from accounts a user chooses to follow in reverse chronological order. *See* Will Oremus, *Twitter's New Order*, SLATE (Mar. 5, 2017), http://www.slate.com/articles/technology/cover_story/2017/03/twitter_s_timeline_algorithm_and_its_effect_on_us_explained.html.

[78] *See* Paul Lewis, *'Fiction is Outperforming Reality': How YouTube's Algorithm Distorts Truth*, GUARDIAN (Feb. 2, 2018), https://www.theguardian.com/technology/2018/feb/02/how-youtubes-algorithm-distorts-truth; Paul Lewis & Erin McCormick, *How an Ex-YouTube Insider Investigated its Secret Algorithm*, GUARDIAN (Feb. 2, 2018), https://www.theguardian.com/technology/2018/feb/02/youtube-algorithm-election-clinton-trump-guillaume-chaslot; *see also Aim of the Project*, ALGOTRANSPARENCY, https://algotransparency.org/methodology.html?candidat=Francois%20Fillon&file=ytrecos-presidentielle-2017-06-10.

[79] Hilary Osborne, *OFT Warns Free Online Games Pressure Children Into In-app Purchases*, GUARDIAN (Sept. 26, 2013), https://www.theguardian.com/money/2013/sep/26/free-online-games-children-apps.

[80] *See* Press Release, U.K. Competition & Markets Authority, CMA Refers 3 Games to the ASA (June 4, 2015), https://www.gov.uk/government/news/cma-refers-three-childrens-online-games-to-the-asa; Press Release, Fed. Trade Comm'n, Apple Inc. Will Provide Full Consumer Refunds of At Least $32.5 Million to Settle FTC Complaint It Charged for Kids' In-App Purchases Without Parental Consent (Jan. 15, 2015), https://www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million; Press Release, Euro. Union, In-app Purchases: Joint Action by the European Commission and Member States is Leading to Better Protection for Consumers in Online Games (July 18, 2014), http://europa.eu/rapid/press-release_IP-14-847_en.htm.

[81] *See* Bergen, *supra* note 63.

[82] *See* Casey Newton, *How YouTube Helps Flat-Earthers Organize*, VERGE (Feb. 20, 2019), https://www.theverge.com/interface/2019/2/20/18232524/youtube-flat-earth-recommendation-algorithm-conspiracy; Press Release, Google, Continuing Our Work to Improve Recommendations on YouTube (Jan. 25, 2019) (noting that the company was planning to "begin reducing recommendations of borderline content and content that could misinform users in harmful ways—such as videos promoting a phony miracle cure for a serious illness, claiming the earth is flat, or making blatantly false claims about historic events like 9/11"); *see also* Kevin Roose, *YouTube Unleashed a Conspiracy Theory Boom. Can it Be Contained?*, N.Y. TIMES (Feb. 19, 2019), https://www.nytimes.com/2019/02/19/technology/youtube-conspiracy-stars.html.

teenage girls interested in diets videos about how to get anorexia, and so forth.[83] It is important to realize that this content is not chosen by human curators at the platform. Rather, the algorithm learns what content people will click on, and what content will cause them to stay on the platform longer, through many millions of small experiments; that is the content that is suggested and viewed. Exploitation and addiction caused by the optimization of the platform is a harm to consumers because they are likely watching lower-quality content than they would choose if they were fully informed in advance about how the content is chosen, or perhaps if they had alternative platforms to choose among.

iv. Privacy

Another worry is that the privacy of consumers on digital platforms is violated; this too is a decline in the quality of the product. For example, Facebook recently announced that it will merge the infrastructures of Facebook Messenger, WhatsApp, and Instagram. As the New York Times noted, "[t]he integration plan raises privacy questions because of how users' data may be shared between services. WhatsApp historically required only a phone number when new users signed up. By contrast, Facebook and Facebook Messenger ask users to provide their true identities. Matching Facebook and Instagram users to their WhatsApp handles could harm those who prefer to keep their use of each app separate."[84] Germany's competition regulator responded to this announcement by prohibiting Facebook from combining data from different sources (such as WhatsApp or Instagram) with data from Facebook.com without a user's explicit and voluntary consent.[85] Facebook's eagerness to get third-party apps connected to its network has led to mass data leaks, exposing sensitive information from hundreds of millions of people.[86] And Facebook is hardly alone.[87]

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[83] *See* Nicholas Tompson, *When Tech Knows You Better Than You Know Yourself*, WIRED (Oct. 4, 2018), https://www.wired.com/story/artificial-intelligence-yuval-noah-harari-tristan-harris/ (reporting Tristan Harris, head of the Center for Humane Technology, arguing that "[t]he problem is [YouTube] doesn't actually care about what you want, it just cares about what will keep you next on the screen. The thing that works best at keeping a teenage girl watching a dieting video on YouTube the longest is to say here's an anorexia video").

[84] Mike Isaac, *Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger*, N.Y. TIMES (Jan. 25, 2019), https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html.

[85] *See* Bundeskartellamt, *supra* note 38.

[86] *See, e.g.*, *Data on 540 Million Facebook Users Exposed*, BBC (Apr. 4, 2019), https://www.bbc.com/news/technology-47812470; *Millions of Facebook Passwords Exposed Internally*, BBC (Mar. 21, 2019), https://www.bbc.com/news/technology-47653656.

[87] *See, e.g.*, Douglas MacMillan & Robert McMillan, *Google Exposed User Data, Feared Repercussions of Disclosing to Public*, WALL ST. J. (Oct. 8, 2018), https://www.wsj.com/articles/google-exposed-user-data-feared-repercussions-of-disclosing-to-public-1539017194; Chaim Gartenberg, *Twitter Advising All 330 Million Users to Change Passwords After Bug Exposed Them in Plain Text*, VERGE (May 3, 2018), https://www.theverge.com/2018/5/3/17316684/twitter-password-bug-security-flaw-exposed-change-now.

b. The Assessment Problem

i. Measuring Consumer Welfare in a Behavioral World

Each of these issues results in fundamental difficulties in applying standard antitrust analysis—which is related to the assessment of the welfare effects of various practices or of a merger—to digital markets. Adequate measures of volume, quality, and consumer surplus may be difficult to obtain. The number of users choosing a certain option may not reflect their true preferences if the platform can make that choice a default that is difficult to see or to change. The number of clicks on ads may not correlate with greater welfare if higher volume of clicks is obtained by exploiting lack of self-control and addictive behaviors.

Given the prevalence of behavioral effects in the digital economy, the measurement of consumer welfare must be carried out very carefully. As we have mentioned, behavioral economics is now a well-established discipline that can help sort different online behaviors and business practices. Incorporating this knowledge into the legal practice's toolbox may help develop better measures of output and quality.[88] We caution, however, that the legal structure of US antitrust law is not well set up to accommodate this complexity as it opens the door for judges to weigh all manner of social concerns as well as traditional economic effects. We see two approaches that might be more fruitful. First, the fastest route to more accurate measures of welfare might well be for a digital regulator to limit the business models that serve harmful content, the way regulators limit the harm from mortgages by restricting debt to income ratios, the harm from prescription drugs by requiring access through a physician, and the harm from automobiles by requiring airbags and crash tests, to name a few examples. If platforms had little or no incentive to deliver harmful content to consumers, the standard consumer welfare toolkit would be more accurate in this market. Second, harmful content is also, from the viewpoint of the consumer's long run or ex ante self, low-quality content. Analytical paradigms in antitrust analysis commonly deal with low quality and quality-adjusted prices, and could incorporate the role of exploitative content in this way.

Another reason to be pessimistic about measuring traditional surplus concepts is related to the barter nature of the exchange: Users barter attention and personal data for services. With a "free" service, consumers are paying for any expansion of activity with their attention to content. When facing a zero-money price, and when quality is difficult to observe, consumers are not receiving salient signals about the social value of their consumption because the price they believe they face does not reflect the economics of the transaction, and they are ignorant of those numbers.

[88] For a view of the role behavioral economics can play in legal practice, see THE OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW (Eyal Zamir & Doron Teichman eds., 2014).

ii. Assessing the Social Welfare of Advertising

Behavioral economics also calls for careful use of standard economic surplus measures when applied to the supply of advertising. Unlike supply of goods, higher value of advertising need not imply higher social value. As discussed above, when advertising efficacy relies on psychological nudges that bring people into consumption they would consciously avoid otherwise, more advertising may well mean less consumer welfare.

Moreover, while price competition directly benefits consumers, competition through persuasive advertising may waste resources.[89] To see this point, consider the following example: Two firms share the market equally without advertising. If one then uses advertising and shifts the demand toward that firm (perhaps by some psychological effect), it will then have a larger share of the market. However, if both firms decide to advertise, they will continue to share the market equally. If the advertising cost is not too large, both firms will advertise in order to preserve their market share. Therefore, despite advertising spending, the equilibrium sales and consumption are the same as without advertising. Here, allowing for advertising only induces wasteful spending, which in our setting is captured by the platform as profit. This is an extreme example, but it highlights that a higher volume of advertising—and greater platform profits—may not indicate an increase in social welfare in the same way we normally think a higher output of, for example, shoes, would indicate.

c. Harms to Investment and Innovation

i. Rents

Successful platform-style strategies pre-date the internet. For example, the key to Microsoft's business was the orchestration of ecosystem-wide innovation—the personal computer industry—to benefit its own core offering as well as complements provided by third-party partners.[90] The strategy we highlight in this section of the report is a successful platform's choice of how much rent to expropriate from these complementors. For example, Microsoft turned PC hardware—an essential complement to an operating system—into a commodity business with the main exception of the microprocessor made by Intel. However, PC applications software—again an

[89] Although subtler, the same point has been shown to hold in the economic literature about informative advertising that conveys useful information about products such as existence, location, and other product characteristics. *See* Kyle Bagwell, *The Economic Analysis of Advertising*, *in* 3 HANDBOOK OF INDUSTRIAL ORGANIZATION (Mark Armstrong & Robert Porter eds., 2007), https://doi.org/10.1016/S1573-448X(06)03028-7; Simon P. Anderson & Régis Renault, *Advertising Content*, 96 AMER. ECON. REV. 93 (2006). In this case advertising brings real value to consumers. But competition to steer consumers from other suppliers and/or to preserve market share may still lead to excessive spending on advertising.

[90] *See* ANNABELLE GAWER & MICHAEL A. CUSUMANO, PLATFORM LEADERSHIP: HOW INTEL, MICROSOFT, AND CISCO DRIVE INDUSTRY INNOVATION (2002) (detailing the characteristics of these types of platforms).

essential complement to the OS—remained (in part) an area where other firms could enter, compete, and earn profit.

The level of market power attached to a successful platform is so high that it often gives the platform owner the ability to expropriate almost the entire surplus available on its platform. And the ability to add that surplus to its existing core profit is the incentive to do so. For example, Microsoft's actions to favor Word over WordPerfect expropriated surplus from an existing software complement to its operating system. Importantly, in this example, WordPerfect was not a potential entrant into, or substitute for, a PC operating system, so there was not an exclusionary theme. The distinction between complementors that could disintermediate the platform and are therefore potential rivals, and those that cannot is critical for the antitrust analysis below. When the platform owner takes steps to disadvantage complementors who have no market power, the complementors may resist by using non-market (political and legal) strategies. Such complainants were part of the antitrust cases against Microsoft. We see this response to current platforms by firms in Europe today.

Chamath Palihapitiya, a venture capitalist, has quoted Bill Gates as arguing that a platform exists whenever "the economic value of everybody that uses it exceeds the value of the company that creates it."[91] In that world, complementors earn rents. By contrast, Ben Thompson, a tech journalist, argues that Facebook and Google are what he calls aggregators—firms that completely control the relationship between suppliers and users.[92] His point is that this control allows the aggregator to exercise market power over one side of the platform, control access by the other side, and extract all the rents. This emphasis on the creation of complementor rents and their distribution or expropriation is a theme that runs through this Report.

When and how a platform appropriates the rents of its complementors varies and may engender different responses from complementors. At root, the reason the complementor is there in the first place is because the platform originally needed content to attract consumers, so it invited the complementors onto the platform. Businesses selling widgets on ecommerce sites, games on social media, and mapping apps on handsets, are all examples of complements that were critical to successfully launching a platform. The complementors make these investments thinking they will obtain a return, and that expected return leads to efficient levels of investment. If investments were made knowing that the returns would be zero, there might well be dynamic harm because the platform would not be able to get off the ground. (Or alternatively, the owner of the platform would have to vertically integrate into many applications and provide them

[91] Interview by Semile Shah with Chamath Palihapitiya, CEO, Social Capital (Sept. 16, 2015), http://haystack.vc/2015/09/17/transcript-chamath-at-strictlyvcs-insider-series.

[92] Ben Thompson, *Tech's Two Philosophies*, STRATECHERY (May 9, 2018), https://stratechery.com/2018/techs-two-philosophies (contrasting platforms, such as Microsoft and Apple, which "need 3rd parties to make them useful and build their moat through the creation of ecosystems," with aggregators, such as Facebook and Google, which "attract end users by virtue of their inherent usefulness and, over time, leave suppliers no choice but to follow the aggregators' dictates if they wish to reach end users").

itself.) A significant source of discontent today seems to come from complementors who invested believing that they could capture surplus with a good product and who are later expropriated by the platform. A second discontented group are the complementors that existed in the brick and mortar world and now have no choice but to use a dominant platform, so they have no bargaining power despite providing valuable products or services.

If the expropriation is accomplished using a tool that is anticompetitive, it may violate competition laws. In the United States, this antitrust violation can be established when the complementor may be able to disintermediate the platform and is therefore a potential rival, for example, Netscape and Windows.[93] If such a move is not a violation of competition law but violates the expectations of market participants, it may be viewed as unfair. On the other hand, if the platform has significantly improved quality or engaged in innovation, market participants may think the platform fairly earned those rents.

Digital platforms have a variety of rent-extraction strategies that seem to be loosely related to the social scrutiny they are receiving.[94] For example, the news industry had no choice but to use Facebook. But Facebook has been reluctant to share any of its profits with news companies—and its market power has meant it hasn't had to.[95] Interestingly, when content providers have market power, the platform cannot always extract rents, even when it has a high market share. Take the hypothetical case of a fragmented travel platform industry in a geography where the airline market is concentrated. In that setting airlines could disintermediate a travel site by withholding their participation in the site, or by favoring their own sales channels. The equilibrium division of platform rents in this case will favor the powerful content providers, the airlines, rather than the platforms.[96] Market participants observe that Facebook has slowly commoditized most companies which supply attention to its users—from news and content markets to games and apps, companies' profits deriving from Facebook have slowly diminished as Facebook appropriated most of the gains.[97] These trends may be part of the reason there is growing attention to Facebook's business model today.

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[93] The antitrust theories of harm that cover this case are discussed below.

[94] *See, e.g.*, Josh Dzieza, *Prime and Punishment: Dirty Dealing in the $175 Billion Amazon Marketplace*, VERGE (Dec. 19, 2018), https://www.theverge.com/2018/12/19/18140799/amazon-marketplace-scams-seller-court-appeal-reinstatement (discussing the fear Amazon sellers have of the firm and its ability to shut them down with little or no explanation); Izabella Kaminska, *Amazon (sub)Prime?*, FIN. TIMES (Mar. 20, 2019), https://ftalphaville.ft.com/2019/03/20/1553085361000/Amazon--sub-Prime-.

[95] *See* Ben Thompson, *The Buzzfeed Lesson*, STRATECHERY (Jan. 28, 2019), https://stratechery.com/2019/the-buzzfeed-lesson ("[C]ontent suppliers are absolutely commoditized: Facebook doesn't need to do anything to keep them on the platform, because where else will they go? Might as well keep the money for itself.").

[96] For a related setting, see Fiona Scott Morton et al., *Benefits of Preserving Consumers' Ability to Compare Airline Fares*, (unpublished manuscript, 2015) (on file with authors).

[97] *See, e.g.*, Thompson, *supra* note 95; Pete Brown, *More Than Half of Facebook Instant Articles Partners Have Abandoned It*, COLUM. J. REV. (Feb. 2, 2018), https://www.cjr.org/tow_center/are-facebook-instant-articles-worth-it.php; Harrison Weber, *Facebook Kicked Zynga to the Curb, Publishers Are Next*, VENTUREBEAT (June 30, 2016), https://venturebeat.com/2016/06/30/facebook-kicked-zynga-to-the-curb-publishers-are-next.

Today's prominent tech companies most likely learned from older tech businesses that those older businesses had "lost," or shared, a too-high percentage of profits with their ecosystems. While older businesses were continually confronted with questions about what to own versus what to cede to partners on their platform, without today's technological advancements (including advanced data analytics and greater computational power), older platforms were not as swift and flexible in capturing value as current digital platforms can be. The increased scale and scope of control has provided modern digital platform owners with increased power over their ecosystems. Today's platforms understand that they can obtain higher margins if they either make all of the necessary complements themselves or position themselves as a mandatory bottleneck between partners and customers—leading to many platforms taking a significant commission on sales on their platform or extracting value through barter of information. In particular, today's digital platforms are very careful to maintain complete control over the user relationship so that they do not face any threat of disintermediation. These choices can be used to reduce the possibility of successful entry by an innovator in the platform's space. The next section turns to this problem of entry.

d. Harm to Entry, Including Disintermediation

i. The Practical Consequence of Entry Barriers

When evaluating entry as the main source of competition against a platform, as discussed above, the entrant has a significant disadvantage relative to the platform. Venture capitalist investors will often evaluate a startup based on its ability to either access or build enough data swiftly enough, all with the aim of reaching enough insights to take advantage of all the forces discussed above. In other words, a new entrant starved of data, quantitatively and qualitatively speaking, relative to a tech giant, is at a significant competitive disadvantage, and investors will be unlikely to invest if they view that data deficit as insurmountable. Although it can be attractive for a VC to invest in a firm that may be acquired by Facebook, Google, or Amazon, the road to a successful acquisition is fraught with danger, most notably the ability of any of these three giants to replicate a specific feature, functionality, or business model should other considerations such as intellectual property rights, team quality, defensibility, or time to market not weigh against such copycat strategy. Additionally, investors do not always fare well in these acquisitions.[98]

ii. Incumbent Incentive to Leverage Entry Barriers

There is growing evidence that conglomerate digital platforms are in an advantaged position to stop or block entry by more focused rivals when compared to traditional businesses. Companies like Alphabet, Amazon, and Facebook operate in multiple business verticals (for example, mail,

[98] *See, e.g.*, Rachel Kraus, *Amazon Bought Eero for $97 Million and Employees Still Got Screwed*, MASHABLE (Apr. 5, 2019), https://mashable.com/article/amazon-eero-wifi-router-sale/#HN0veV33jPqc ("Ultimately, thanks to a 'last in, first out' philosophy, Eero's Series D investors, led by Qualcomm, will recoup 84 percent of their investments. The seed round and Series A-C investors will all get back 31 cents on the dollar.").

maps, and search), collecting different dimensions of data on a consumer (for example, identity, location, and purchase intent) which give faster intelligence on competitive threats and new chinks in the platform's competitive armor. These companies can then derive superior insights into what firms they should block, which they should buy, and how they should grow strategically. This gives the platform an advantage over a rival entrant considering the same set of opportunities, and increases their abilities to exclude such rivals. A rival platform with similar economies of scope, data insights, and installed base may be a more formidable entrant.

If large digital platforms have both the incentive and ability to purchase and block entrants that compete with them, or might compete in the future, the question is whether they have done so. The evidence that platforms have bought a series of potential competitors in recent years is anecdotal but fairly robust.[99] For example, many observers believe that Instagram and WhatsApp might well have been serious competitors for Facebook.[100] The evidence that platforms have blocked potential entrants is likewise anecdotal[101] and was used in the Android and AdSense cases the European Commission has brought against Google.[102] More formal research in this area is essential.

iii. Disintermediation and Foreclosure of Potential Platform Entrants

In addition to *de novo* entry, platforms fear disintermediation by a partner. If a platform's partner is able to directly access and serve the platform's customers, it can overtake the platform. Disintermediation can also occur through commoditizing services so that one side (normally the end consumer) is willing to substitute away from the platform—leading to a loss of profits.

The threat of disintermediation has important implications for the analysis of market entry and foreclosure. Modern platforms have an incentive to regularly thwart companies that compete with them for user demand. A platform that has total control of demand can steer customers to content and complements it owns rather than to those provided by independent firms that might challenge its market power. And because of potential harm to competition and complements, US regulators have often been tasked with preventing discrimination, foreclosure, and similar strategies in specific industries.[103] Without a great deal of insight into the technology and the strategy of the platform, foreclosure will be difficult to observe by outsiders. Technological tools such as mobile hardware technologies, advances in computing power, communications technologies, application

[99] *See* U.K. COMPETITION REPORT, *supra* note 1, at 49, tbl.1A.
[100] Tim Wu, *The Case for Breaking Up Facebook and Instagram*, WASH. POST (Sept. 28, 2018), https://www.washingtonpost.com/outlook/2018/09/28/case-breaking-up-facebook-instagram.
[101] *American Tech Giants Are Making Life Tough for Startups*, ECONOMIST (June 2, 2018), https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups.
[102] Press Release, Eur. Comm'n, Antitrust: Commission Fines Google €1.49 Billion for Abusive Practices in Online Advertising (Mar. 20, 2019), http://europa.eu/rapid/press-release_IP-19-1770_en.htm.
[103] *See* Lina Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. R. (forthcoming 2019), https://papers.ssrn.com/id=3180174.

programming interfaces (API), cloud computing technologies, and data analytics enable a strategy of keeping the attractive content from establishing a relationship with the user and thereby possibly entering as a competitor. Platforms have bluntly moved to prevent disintermediation and have engaged in foreclosure to block potential rivals. For example, Facebook acted to suppress the growth video-capture-and-sharing app Vine when Vine attempted to link its users to their Facebook friends.[104] Facebook CEO Mark Zuckerberg personally approved the decision to prevent Vine users from finding friends on the app via Facebook.[105]

Exclusive contracts and loyalty contracts can also be used to achieve exclusion. For example, a long-term contract that requires an advertiser not to use an entrant can foreclose demand from that entrant, leading to exit. An exclusive contract with a global reach can prevent an able niche competitor from growing larger and obtaining economies of scale. Bundling of services by the incumbent platform can be designed to exclude entry or foreclose existing rivals. Contracts between platforms and advertisers that allow for individual negotiation can protect an incumbent from losing individual targeted sales to an entrant without requiring the incumbent to lower its prices across the board. An incumbent platform with market power will often have the incentive and ability to undertake these strategies and thereby preserve its profit.

iv. Foreclosure of Complements to Capture Rents

One critical place to control the relationship is platform access. Amazon and Facebook regularly make decisions over which app or vendor is able to sell or is denied access to their stores and customers. Platforms often have a financial incentive to steer customers to particularly profitable products and can use the power of defaults and ordering to accomplish that effectively. Vendors operate in a risky environment where the platform's whims can determine its future as much or more than consumer satisfaction. If it chooses, a platform can steer demand elsewhere and the vendor loses access to its customers—because these customers are another company's users who single-home and buy from the default choice at the top of the page. Provided the consumer continues to find the totality of the platform experience positive, this bargaining power allows the platform to dictate business terms. The Vestager Report describes the setting clearly:

> Other platforms impose rules and institutions that reach beyond the pure matching services and shape the functioning of the marketplace and, potentially, the relationship between the various platform sides, e.g. by regulating access to and exclusion from the platform, by regulating the way in which sellers can present their offers, the data and APIs they can access, setting up grading systems, regulating access to information that is generated on the platform, imposing minimum standards for delivery and return policies,

[104] *See* Adi Robertson, *Mark Zuckerberg Personally Approved Cutting Off Vine's Friend-finding Feature*, VERGE (Dec. 18, 2018), https://www.theverge.com/2018/12/5/18127202/mark-zuckerberg-facebook-vine-friends-api-block-parliament-documents.

[105] *See id.* Several years after buying Vine, Twitter shut it down. *See* Casey Newton, *Why Vine Died*, VERGE (Oct. 28, 2016), https://www.theverge.com/2016/10/28/13456208/why-vine-died-twitter-shutdown.

providing for model contracts, imposing price controls and MFN clauses, etc. Such rule-setting and "market design" determine the way in which competition takes place.[106]

The way competition takes place determines the level of profit achieved by the platform and each complement. In and of itself, a platform setting the terms of trade, quality levels, services, and so on may not be problematic if the purpose of the change is to "grow the pie" in a way that complementors view as fair (i.e., not involving expropriation). For example, Amazon, Facebook, or Google know in real time which products are sold to whom, at what price, and which packaging or incentives work, which may drive their rules. However, if these rules become opaque and uncertain or the insights gleaned from an app or vendor are biased or used against it in an asymmetrical manner, then the rule changes may not be about increasing everyone's revenue, but about moving a larger share to the platform.

Merchants or vendors can find themselves banned, demoted in search results, or required to bear higher costs without the ability to move to a competing platform because either there is none or because the customers single-home, will not depart the platform because of the loss of one vendor, and cannot be reached elsewhere. The EC's Android case describes the disadvantage faced by independent apps that compete with the Google apps that are included in the mandatory bundle.[107] Twitter has vertically integrated into video streaming by foreclosing the rival service Meerkat.[108] Likewise, by selling logistics services to many of its sellers, Amazon gains an advantage when it wishes to launch a store brand. It can analyze the data from its rivals to develop an entry plan against those sellers. It is important to measure whether, and how much, quality increases with these strategies.

It is not clear what profits such complementors expected or achieved from the platform relationship, nor if there was significant relationship-specific investment required. Vendors may be less likely to enter the market at all, or to innovate, if they know they must distribute through a particular platform and their most successful products will be quickly copied. Businesses that could grow on a platform and increase the platform's attractiveness to consumers will be unwilling to invest if their profits are not secure, and this may be a source of dynamic inefficiency. However, platforms have an incentive to attract good complements in order to

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[106] EC COMPETITION REPORT, *supra* note 1, at 60.

[107] The recent Spotify complaint against Apple in Europe is another example. *See* James Vincent, *Spotify Files Antitrust Complaint Over 'Apple Tax,'* VERGE (Mar. 13, 2019), https://www.theverge.com/2019/3/13/18263453/spotify-apple-app-store-antitrust-complaint-ec-30-percent-cut-unfair.

[108] *See* Feng Zhu, *Friends or Foes? Examining Platform Owners' Entry Into Complementors' Spaces*, 28 J. ECON. & MGMT. STRAT. 23, 23 (2018) ("Meerkat, a mobile app that enabled Twitter users to broadcast live video streaming to their followers, vanished after Twitter acquired its competitor Periscope and cut off Meerkat's access to Twitter's social graph."); *see also* Chris Welch, *Tumblr 'Truly Disappointed by Twitter's Decision' to Block Friend-Finding On the Blogging Service*, VERGE (Aug. 22, 2012), https://www.theverge.com/2012/8/22/3261270/tumblr-removes-twitter-find-people-you-know. Twitter acquired Periscope, a competing startup, and then decided to shut out Meerkat. On October 2016, Meerkat was shut down. Currently, Periscope is fully integrated with the Twitter platform and claims 1.9 million daily users (last updated and released info as of 2017).

attract users. This incentive limits the platform's desire to expropriate complementor rents under some circumstances.

e. Harm to Innovation

i. Competition Promotes Innovation

There is significant theoretical and empirical research that concludes that anticompetitive creation or maintenance of market power will cause a reduction in the pace of innovation.[109] This result is intuitive in the sense that firms "run faster" when they face competitors; competing firms will try to offer a better product on any dimension consumers care about, including innovation. Engaging in successful innovation is certainly both feasible and common for a large platform with its enormous collection of data and other assets. These companies routinely spend large sums on R&D, launch new products and services, and are more able than other competitors to derive superior insights into how they should innovate based on the data collected from aggregating demand and advances in machine learning and advanced data analytics. However, the relevant counterfactual is whether the pace of innovation would be faster if platforms faced more robust competition.

ii. Entry Barriers and Innovation

The lessening or blocking of innovative entry is of particular concern given its value. A VC will usually be wary of outright investing in an innovative startup that will implicitly or explicitly compete head-on with a tech giant. Given the tech incumbents' ability to block or foreclose a threatening entrant, the chance of successful entry is tiny. VCs would rather invest in businesses that are creating new categories or solving common technical issues. Take Google's search engine as an example. To our knowledge there is only one search engine that has reached a successful market size as a standalone business: Duck Duck Go. Google search is the dominant firm in this category with high entry barriers, despite the enormous size of this market, VC investors apparently do not want to fund an entrant. By contrast, VCs are attracted to startup teams that solve a specific issue for Google (and have a chance of buyout) as opposed to funding a team that wants to compete head to head. This dynamic leads to a self-fulfilling prophecy. Reduced VC investment due to the inability to enter successfully in fact causes less entry; and less investment also causes less differentiated innovation in the sector. This can be seen increasingly by evidence of platform acquisitions.[110] Despite very high and stable profit margins, markets like social media and search have faced little entry.

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[109] For a comprehensive survey of the innovation literature, see the literature summarized in Giulio Federico, Fiona Scott Morton & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption* (NBER Innovation Policy and the Economy, Working Paper, 2019) (on file with authors).

[110] The number of potential competitors purchased by the tech giants is large. For example, Amazon has purchased Zappos, Fabric, CDNow, Quorus, Audible, Goodreads, and Quisdi; Facebook has acquired WhatsApp, Instagram,

As discussed above, large tech platforms can combine enormous financial resources with data resources. Digital platforms have an ability to produce free cash flows at a speed and level that is entirely new because of the combination of almost zero marginal cost, instant distribution, and global reach. This advantage creates both the incentive and the ability for the digital platform to outspend, to out-invest, or to acquire incumbents or new competitors. Incumbents have the incentive and ability to stand in the way of possibly disruptive innovation. With deep pockets, they can purchase possible future disruptors in order to align the path of innovation with their strategies or otherwise control it. This story is widely believed to be the reason that Facebook purchased Instagram and WhatsApp.[111]

Alternatively, platforms may create "kill-zones" around themselves.[112] For example, Facebook and Twitter's aggressive API foreclosure, acquisition of competitors, and copying of new services have boosted their market power.[113] Facebook even acquired a mobile phone monitoring app, Onavo, which allows it to spot up-and-coming rivals and buy them or snuff them out.[114] While investment in innovation will continue, the type of innovation that will be funded will be broadly determined by the incumbent and its strategies. Disruptive innovation in markets that are characterized by high concentration levels and network effects is likely to be reduced compared to a competitive market. One of the few sources of entry in digital platforms comes from rival platforms that enter each other's markets, as these large firms are more able to overcome entry barriers of all kinds.

FriendFeed, and tbh; Google has bought Nest Labs, DoubleClick, YouTube, Waze, AdMob, Teracent, BeatThatQuote.com, Admeld, and Tenor. *See List of Mergers and Acquisitions by Amazon*, WIKIPEDIA (Apr. 12, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Amazon; *List of Mergers and Acquisitions by Facebook*, WIKIPEDIA (Mar. 25, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Facebook; *List of Mergers and Acquisitions by Alphabet*, WIKIPEDIA (Apr. 12, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet. At times, these firms have barely bothered to disguise their anticompetitive purpose. *See* Jacob Kastrenakes, *Facebook is Shutting Down a Teen App it Bought Eight Months Ago, Along with Two Others That Languished*, VERGE (July 2, 2018), https://www.theverge.com/2018/7/2/17528896/facebook-tbh-moves-hello-shut-down-low-usage.

[111] Tim Wu, *The Case for Breaking Up Facebook and Instagram*, WASH. POST (Sept. 28, 2018), https://www.washingtonpost.com/outlook/2018/09/28/case-breaking-up-facebook-instagram.

[112] Google's, Facebook's, and Amazon's annual conferences "held to announce new tools, features, and acquisitions, always 'send shock waves of fear through entrepreneurs,'" according to one investment firm, and "[v]enture capitalists attend to see which of their companies are going to get killed next." *The Future of Tech Startups: Into the Danger Zone*, ECONOMIST (U.K. edition) (June 2, 2018), at 61, http://weblogibc-co.com/wp-content/uploads/2018/06/The_Economist_UK_Edition_-_June_02_2018.pdf.

[113] *See* notes **Error! Bookmark not defined.-Error! Bookmark not defined.**, *supra*; *see, also, e.g.*, Erin Griffith, *Will Facebook Kill All Future Facebooks?*, WIRED (Oct. 25, 2017), https://www.wired.com/story/facebooks-aggressive-moves-on-startups-threaten-innovation.

[114] *See* Deepa Seetharaman & Betsy Morris, *Facebook's Onavo Gives Social-Media Firm Inside Peek at Rivals' Users*, WALL ST. J. (Aug. 13, 2017), https://www.wsj.com/articles/facebooks-onavo-gives-social-media-firm-inside-peek-at-rivals-users-1502622003l.

iii. The Reward for Innovation

Entrepreneurs may expect a low payoff to developing a free-standing product because of entry barriers and exclusionary conduct by the incumbent platform. In that case, its best hope is to be the preferred innovator of a complement and sell its business to the platform at an early stage. This source of financial reward is often cited as a reason why large platform acquisitions are good for society. Certainly, a reward of this type (a share in the platform's business model and flow of rents) is better than no payoff and will stimulate some level of innovation. However, it is important to see that this incentive is distorted relative to that of the competitive context. Suppose public policy could reduce entry barriers and prevent anticompetitive exclusionary conduct towards entrants. In that case, the entrepreneur would not have to settle for a small fraction of the platform's profits, but could compete for all of them and try to replace the platform. When a young firm has a chance to compete for the entire market on the merits of its innovation because there is no exclusionary conduct holding it back, success could lead to up to 100% of market profits, rather than a smaller acquisition payoff.[115] The availability of this option would allow entrepreneurs to develop improvements, complements, or replacements for a platform according to what has the highest returns. The inability to innovate in pursuit of the whole market leads to lower entry in tech sectors that are already dominated by a single large company.

iv. Current Trends in Innovation

The incipient but growing technical research supports a concern for the impact of big tech on innovation. Much of this research uses startup formation and its fuel, venture capital, as a proxy for innovation. In 2018, Facebook commissioned the consulting firm Oliver Wyman to write a report on this topic.[116] Using Facebook, Google, and Amazon as a proxy for big tech platforms, the authors drew four conclusions: i) Facebook, Google, and Amazon contribute a very small portion of the total venture capital in tech; ii) Facebook, Google, and Amazon M&A activity has no impact on aggregate investment levels; iii) Facebook, Google, and Amazon R&D has had no impact on venture capital investment levels; and iv) the presence of Facebook, Google, and Amazon does not dampen venture capital investment in technology relative to other mature sectors.

The first three conclusions are factual and unsurprising. But the fourth conclusion, that the presence of Facebook, Google, and Amazon does not dampen VC activity related to other

[115] As previously noted, many of these markets will tend toward concentration naturally, so the size of profits is not affected by effective competition enforcement, but the number of years they can be earned will be affected when an incumbent cannot block entrants.

[116] *Assessing the Impact of Big Tech on Venture Investment*, OLIVER WYMAN (July 11, 2018), https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2018/july/assessing-impact.pdf.

sectors, is surprising. Ian Hathaway has summarized a straightforward rebuttal.[117] The Facebook-commissioned report looked at industry-wide effects. However, as Hathaway points out, viewing the industry in the aggregate masks the effects of dominating firms. By looking at the sub-industries associated with each firm—social platforms (Facebook), internet software (Google), and internet retail (Amazon)—a different trend emerges. Since 2009, change in startup investing in these sub-industries has fared poorly compared to the rest of software for Google and Facebook, the rest of retail for Amazon, and the rest of all VC for each of Google, Facebook, and Amazon. This suggests the existence of so-called "kill-zones," that is, areas where venture capitalists are reluctant to enter due to small prospects of future profits.[118]

In a study of the mobile app market, Wen Wen and Feng Zhu come to a similar conclusion: Big tech platforms do dampen innovation at the margin.[119] Their study analyzed how Android app developers adjust their innovation strategies in response to entry (or threat of entry) by Google:

> [A]fter Google's entry threat increases, affected developers reduce innovation and raise the prices for the affected apps. Once Google enters, the developers reduce innovation and increase prices further. However, app developers' incentives to innovate are not completely suppressed; rather, they shift innovation to unaffected and new apps. Given many apps already offering similar features, Google's entry may reduce social inefficiency.[120]

Ultimately, these studies are suggestive but not determinative. Much more research needs to be done to property identify the existence and extent of "kill zones" for market entry and innovation. Nonetheless, the evidence thus far does suggest that current digital platforms face very little threat of entry and are negatively impacting investment in key digital areas. This is reinforced by the fact that the key players in this industry remained the same over the last two technology waves, staying dominant through the shift to mobile and the rise of AI.[121] In the past,

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[117] Ian Hathaway, *Platform Giants and Venture-Backed Startups*, IAN HATHAWAY BLOG (Oct. 12, 2018). http://www.ianhathaway.org/blog/2018/10/12/platform-giants-and-venture-backed-startups.

[118] *Id.*

[119] Wen & Zhu, *supra* note 4.

[120] *Id.*

[121] This dynamic affects where we see innovation, and by whom. While distributed technology seems to be a relatively open playing field with the potential for many entrants, the bulk of innovation in other spaces is dominated by tech giants. This is the case, for example, in the AI and voice-assistant space. In the AI field, innovation is driven by startups leveraging and customizing the existing technology and libraries developed by Microsoft, Amazon, Facebook, and Google. These companies have been quick to acquire promising ventures. Since 2011, Facebook has acquired seven AI startups: Face, Protogeo, Wit.ai, Bloomsbury AI, Dreambit, Grokstyle, and Ozlo. Since 2010, Amazon has also acquired seven startups in the AI space: Yap, ORbeu, GoButler, harvest.ai, Graphiq, Body Labs, and Dispatch. Finally, Google has acquired 20 AI startups since 2011, the most notable being Kraggle and DeepMind. *See List of Mergers and Acquisitions by Facebook*, *supra* note 110; *List of Mergers and Acquisitions by Alphabet*, *supra* note 110. The AI space may not see a successful IPO because of these dynamics. Similarly, innovation in voice-assistant technology has been dominated by tech giants. Microsoft's Cortana, Apple's Siri, Google's Google Voice, and Amazon's Alexa are examples of dominant firms leveraging their previous offerings to retain a first-mover advantage in the market.

dominant business found it difficult to navigate innovation or disruption waves. By contrast, Facebook, Google, Amazon, Apple, and even Microsoft were able to ride these waves without significant impact on market share or profit margins. This indirect evidence corroborates the argument that these companies are facing few competitive threats.

There is an informal sense from practitioners that in mobile, cloud computing, and AI the result is the same: Innovation at the core has slowed and is centered around the tech giants.[122] As a result, new innovation waves have emerged, centering around blockchain, distributed ledgers, and decentralized models (the new Silicon Valley growth paradigm); and with specialized AI, niche retail applications, or, in the enterprise sector, b2b models. It should be noted that, apart from blockchain, whose decentralization eliminates network effects (in theory), the other areas of innovation do not necessarily herald a change in future market structure. Some have also argued that, in markets that are characterized by significant market power, innovation will likely shift from focusing on consumer benefit (to entice a rise in market share), to consumer exploitation.[123]

In summary, unlike last-century's businesses, digital businesses will often lack competition *in* the market. This absence may be redressed by intensive competition *for* the market, as firms compete to be the winner that takes all. However, if dominant firms are able to maintain their dominance, even as the external environment and tastes change over time, consumers may be denied the benefits of competition for the market as well.

f. Old Wine in a New Bottle, or a New Reality?

The market characteristics and problems discussed above in Part I and Part II raise an important question: Is there something new or different about the digital economy, which justifies a revised approach to intervention? Is this simply old wine in a new bottle, the same old problems of network effects and concentration, or do we face a new reality? As we outlined above, we believe the digital platform may be a unique combination of economic forces that requires both new analysis and new public policy.

We expect some to argue that there is no need for action. It is in the interest of the powerful incumbent to deny there is any problem to solve in order to delay while the market remains in its hands. The waiting game allows incumbents to collect profit from the status quo and use those profits to raise doubts or marginalize concerns in order to delay or prevent effective

[122] *See, e.g.*, Griffith, note 113, *supra*; *Tech Monopolies Are Stifling U.S. Innovation. Antitrust Enforcement May Help*, BRINK NEWS (Dec. 11, 2018), http://www.brinknews.com/is-antitrust-enforcement-the-wests-best-weapon-against-chinese-tech; *Andreeson Horowitz Makes Big Bet on Blockchain*, REALDAILY (Feb. 13, 2018), https://realdaily.com/andreessen-horowitz-makes-big-bet-on-blockchain.
[123] *See* Ezrachi & Stucke, *supra* note 14.

intervention.[124] However, the body of research that indicates increasing problems of underenforcement is growing rapidly.[125]

Of course, the rapid developments of our digital world are not yet fully understood and merit ongoing study. However, the material above makes clear that when market power becomes entrenched, it is difficult to return to a competitive market. Inaction could create decades of market power leading to weakened innovation, increased rent extraction, and social domination by gatekeeper tech firms. Making no policy change and standing back to let platforms carry out the strategies of their choice carries unusual risk. The new reality of the digital landscape presents new challenges that will not easily be resolved through organic competition or current US antitrust enforcement norms. The United States now risks missing the moment to confront a serious challenge to competition. That risk spurs our search for possible solutions, which we outline in Part IV.

[124] *See, e.g.*, Brody Mullins & Jack Nicas. *Pay Professors: Inside Google's Academic Influence Campaign*, WALL ST. J. (July 14, 2017). https://www.wsj.com/articles/paying-professors-inside-googles-academic-influence-campaign-1499785286 (relating Google's funding of professors for, among other things, research opposing antitrust intervention in the search engine market).
[125] *See* WCEG literature review (FSM 2019) https://equitablegrowth.org/research-paper/modern-u-s-antitrust-theory-and-evidence-amid-rising-concerns-of-market-power-and-its-effects/

IV. SOLUTIONS

In this part, we outline a range of solutions to address the issues raised above. Needless to say, there is no magic pill. The legislature, judiciary, and regulators will each need to play a role. Each of the proposed solutions brings with it benefits and costs and should be considered as part of a balanced policy. Still, with these limitations in mind, these solutions have the power to address changing market dynamics and enable society to move toward a more efficient, open, and dynamic market environment.

Competition policy is only one facet of society's wider goals. Alongside the promotion of competition policy, policymakers may wish to implement policies to promote privacy, democratic accountability, and fairness. While these goals may be advanced indirectly through the measures proposed below, they can also be addressed more directly through laws and regulations that we do not consider here. Other committees provide valuable insights on possible advancements on that front.

Having established the impact of high entry barriers, we open with a fundamental question about the ability of a market to self-correct.

a. Will Markets Self-Correct When Competition Problems Arise?

The question whether the market will self-correct is central to antitrust policy. It affects the scope of illegality, as well as the zeal with which competition agencies approach intervention. It also affects the gain from implementing both ex ante and ex post solutions to insufficient competition. When there is a reasonable chance that technological progress and innovation will speedily prevent or remove bottlenecks and maintain an active competitive process, intervention should be limited. For example, the stock trading app Robinhood Markets, which slashed per-trade fees to zero, has forced competitors to scramble—even JP Morgan is now offering a free stock trading app for consumers.[126] Likewise, Amazon and Wal-Mart are currently vigorously competing for fast and cheap delivery services, forcing others to follow.[127]

Acolytes of the Chicago School have persuaded many federal officials and judges that markets will generally quickly self-correct, and that antitrust scrutiny should therefore be limited. This

[126] *See* Hugh Son, *JP Morgan to Unveil New Investing App With an Eye-Catching, Disruptive price: Free*, CNBC (Aug. 21, 2018), https://www.cnbc.com/2018/08/21/jp-morgan-to-unveil-new-investing-app-with-an-eye-catching-disruptive-price-free.html.

[127] *See* Suman Bhattacharyya, *To Compete with Amazon, Walmart and eBay are Spending on Logistics*, DIGIDAY (Jan. 15, 2019), https://digiday.com/retail/compete-amazon-walmart-ebay-investing-logistics; Andrea Cheng, *Amazon, Facing Growing Competition, Offers Free Shipping on All Orders for the First Time*, FORBES (Nov. 5, 2018), https://www.forbes.com/sites/andriacheng/2018/11/05/amazon-free-shipping-holiday-minimum-order-walmart-target/#6c459dc555e1; Nick Statt, *Amazon and Walmart's Rivalry is Reshaping How We'll Buy Everything in the Future*, VERGE (Aug. 3, 2018), https://www.theverge.com/2018/8/3/17630604/amazon-walmart-competition-tech-partnerships-grocery-delivery.

conviction has extended into digital markets. Opponents of government intervention point to the dynamic nature of technology, the role of disruptive innovation, and firms' strong investment in research and development. They defend the adequacy of a free-market, noninterventionist approach, and argue that the cost of over-intervention outweighs the benefits of intervention.

While some markets may self-correct, the findings of this report suggest that rapid self-correction in markets dominated by large digital platforms is unlikely, and that harms to economic welfare from the exercise of market power in such markets are substantial. As discussed above, entrants find it difficult to overcome the high barriers to take on digital platform incumbents. Economies of scale, economies of scope, network effects, and negligible marginal cost all work together to make entry difficult in existing markets. Moreover, while monopoly profits are a lure to competitors, incumbents can use those very profits to entrench themselves and protect their position. No matter how dynamic the technology, an entrant will not unseat a monopolist if the monopolist is permitted to buy the dynamic entrant for a share of monopoly profits. Both parties gain from such a transaction—and the public loses.

The result is less entry than a more competitive environment would create. Less entry into digital markets means fewer choices for consumers, stunted development of alternative paths of innovation, higher prices, and lower quality. Self-correction is not a realistic expectation in this environment—indeed, the available evidence suggests it has not happened—and public policy should not rely exclusively on it. Effective antitrust enforcement and regulation must take account of this reality. If there is a force toward self-correction, it may require active promotion to succeed, and in this way public intervention can be complementary rather than antagonistic to market forces. Indeed, the other reports that have addressed this problem around the world have accepted that policy changes are necessary in order to avoid stagnant and harmful digital markets. We now turn to what policy options exist, and which of these the government might adopt.

b. US Antitrust

i. Basic Principles

Antitrust law is intended to prohibit private conduct by firms that reduces economic welfare. Although application of antitrust principles can be complex and the specific doctrinal embodiments of those principles can seem arcane and arbitrary, at its core US antitrust law is simple.[128] It can be summarized in a single sentence: *Private conduct that creates or increases market power, other than by efficiency-based competition on the merits, is illegal.*

There are two fundamental components of any antitrust violation. The first is bad conduct, commonly called "anticompetitive conduct." The second is a resulting harm to economic welfare

[128] *See* A. Douglas Melamed, *Response: Antitrust Law is Not That Complicated*, 130 HARV. L. REV. F. 163 (2019).

from the creation of more market power than would otherwise exist. A firm gains market power when the competitive discipline imposed upon that firm by either actual or potential future rivals is reduced. One way to achieve market power is through price-fixing and other forms of collusion, but we will not address such behaviors here. Rather, this report will focus on antitrust law as it applies to mergers and non-merger exclusionary conduct.

Importantly, a firm does not violate the antitrust laws if it gains market power by competing on the merits rather than as a result of anticompetitive conduct. For example, if a firm enters the market with a fantastic new product that has strong network effects, competes solely on the merits of that product with no anticompetitive conduct, and finds itself with 95% market share, it would not have violated the antitrust laws. Similarly, a firm does not violate the antitrust laws if it engages in anticompetitive conduct but that conduct does not harm the market as a whole and fails to result in additional market power.[129]

Box IV
More About US Antitrust Law

There are four substantive elements to any US antitrust violation: Private, as opposed to government, conduct; anticompetitive conduct; creation or increase in market power; and a causal connection between the conduct and the market power. There are three basic types of conduct that can be anticompetitive. They are (i) mergers that lessen competition, (ii) conduct that excludes or weakens actual or potential rivals, and (iii) conduct that constitutes or facilitates collusion (e.g. cartels) among firms that would otherwise compete more vigorously. Possible antitrust problems involving digital platforms are most likely to arise from the first two types of conduct.

Anticompetitive conduct is conduct that is likely to lead to the creation or maintenance of market power for reasons other than an increase in allocative efficiency (i.e., by increasing output or decreasing price where price is not less than marginal cost) or productive efficiency (i.e., by reducing cost or increasing product quality). The range of potential anticompetitive conduct is nearly boundless and can include burning down a rival's factory, designing products to be incompatible with rivals' products, acquiring smaller rivals to shut them down or deny them to other suitors, exclusive dealing and Most Favored Nation clauses (MFNs) in some circumstances, and some forms of tying or bundling multiple products or services. Digital markets are prone to new and innovative violations of the antitrust laws because marginal costs are often close to zero, the business models themselves are often new and innovative, and firms are able to be creative with new product bundles, contracts, and transactions.

[129] Certain types of conduct, notably agreements among competitors fixing prices or allocating customers or service areas, are regarded as unlawful per se, which means that they are unlawful without proof of harm to competition in the market as a whole. Per se illegality in these circumstances is not a rejection of the principle described in this text. Rather, per se illegality reflects a pragmatic judgment that those types of conduct are so likely to harm competition and so unlikely to provide any welfare benefits that it would be needlessly costly and burdensome to require proof of harm to the market as a whole on a case-by-case basis.

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More About US Antitrust Law (Cont.)

Current popular debate often seems to imply that high market share in and of itself is a violation of the antitrust laws. It is important to understand that a firm can violate the antitrust laws *only if it engages in anticompetitive conduct*, even if its conduct causes the firm to gain monopoly power. Thus, for example, a firm does not violate the antitrust laws by gaining market power solely because it has a better product that consumers choose to buy for that reason or because it develops a better distribution channels that consumers find convenient.

Since at least the middle of the twentieth century, US antitrust law has embraced the view that those who do not engage in anticompetitive conduct are entitled to the fruits of their labor, including any market power or dominance that they might have gained. This view rests on the concern that breaking up or restricting firms that obtain their success by competition on the merits would deter the very kind of aggressive but procompetitive conduct that the antitrust laws are intended to encourage. Such no-fault intervention would deter such conduct, both because firms would fear that too much success would end up hurting them and because they would be uncertain about the antitrust implications of their conduct. While firms that achieve durable market power, especially in industries that are regarded as "natural monopolies," are sometimes subject to sectoral regulation, durable market power is not itself a sufficient basis for antitrust intervention. Society has other legal mechanisms to regulate an industry that is not delivering on social goals.

US antitrust law has also long required that antitrust plaintiffs prove, not just anticompetitive conduct, but also that the conduct harmed competition in the market as a whole.[1] This requirement limits antitrust enforcement to those matters that are important enough to warrant costly and burdensome antitrust proceedings and ensures that antitrust law remains focused on making markets work.

Both the anticompetitive requirement and the market power requirement protect the competitive process, another concern that arises in the popular debate. The conduct requirement does this by focusing antitrust enforcement on conduct that is not efficiency-based and can thus create market power only by distorting competition on the merits. The market power requirement does this by focusing antitrust enforcement on conduct that impairs the competitive discipline of rivals and, in that way, harms the competitive process. Many of the current proposals for more aggressive antitrust enforcement, although couched in antitrust language, would dispense with either the bad conduct requirement or the market power requirement.
Conduct that harms competition without creating any efficiencies can readily be characterized as anticompetitive. Examples of such conduct include mergers among competitors that do not create efficiencies by combining complementary assets, conduct whose only purpose is to harm or exclude competitors, and agreements among competitors about their prices or other terms of trade.

1 *See* Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 488 (1977) ("The antitrust laws . . . were enacted for the protection of competition, not competitors.") (internal citation and quote marks omitted).

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More About US Antitrust Law (Cont.)

When conduct both generates efficiencies and impairs the competitive efficacy of rivals, the question whether it is anticompetitive is less clear and will depend on specific facts. The conduct is more likely to be unlawful if substantially all of the efficiencies could be achieved by an alternative that is less harmful to rivals or if the efficiencies are insubstantial and the harm to rivals is great. Courts rarely deem conduct anticompetitive if it generates substantial efficiencies that cannot be realized by an available alternative, regardless of the impact of that conduct on rivals.

As explained in greater detail below, antitrust enforcement decisions are often made with great uncertainty about the efficiencies and market impact of the conduct at issue. For the past 30 years or so, antitrust law has reflected the view that mistakes in the direction of over-enforcement are more problematic than those in the direction of under-enforcement. One premise of this view is that under-enforcement results in market problems that are likely to be corrected by innovation or other market developments. As noted above, this report assesses the state of the evidence on entry and innovation and concludes that such self-correction is unlikely to be prompt and effective, in part because digital platforms that have achieved market power possess formidable barriers that inhibit entry and innovation. The assumption that over-enforcement is costly is reflected in aspects of antitrust doctrine applicable to exclusionary conduct, vertical contracts, and merger review as well as in courts holding antitrust plaintiffs to demanding standards of proof.

The relative concerns about the risks and cost of over-enforcement and under-enforcement embodied in current antitrust law has been subject to increasing criticism. This report concludes that the tolerance of antitrust law for under-enforcement should be reassessed and recalibrated. Careful recalibration of the benefits and costs of different mistakes is likely essential to the development of more aggressive antitrust law that remains consistent with the principles described above.

While US antitrust law has long been flexible in combatting anti-competitive conduct, there is increasing concern that it has been underenforced in recent years. First, there is increasing evidence that the enforcement agencies and courts have permitted too many mergers between competing firms that have led to post-merger price increases and other indications of increased

market power.[130] Vertical mergers are rarely challenged by the enforcement agencies,[131] and claimed or expected merger-related efficiencies are often not realized. Second, monopsony—market power of buyers or employers—appears to be a growing problem.[132] Recent studies suggest that labor markets are less competitive than previously thought and employers have exercised market power against workers in those markets.[133] Third, there have been few antitrust challenges to exclusionary conduct since the government's 1998 case against Microsoft, and courts have in several instances been hostile to such cases and have imposed daunting proof requirements on plaintiffs. Apparent under-enforcement is in part due to courts' reliance on so-called Chicago School assumptions that do not have a sound theoretical or empirical basis.

Regardless of whether or not antitrust enforcement has failed to keep up with conduct in the economy more generally, the challenge of enforcing in the area of digital platforms presents new issues. The platforms create new competitive environments; they provide opportunities for new types of anticompetitive conduct; and they create new economic and conceptual challenges for antitrust enforcement. This section is focused on analysis and recommendations designed to help such future enforcement, though that enforcement will often be addressed to conduct that occurred in the past.

The challenges facing future antitrust enforcement are more than just analytical and intellectual. Antitrust law and its application by the courts over the past several decades have reflected the

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[130] *See* JOHN KWOKA, MERGERS, MERGER CONTROL, AND REMEDIES: A RETROSPECTIVE ANALYSIS OF U.S. POLICY 156, 159 (2014); Jonathan B. Baker, Presentation, Has the US Economy Become More Concentrated and Less Competitive: A Review of the Data (Sept. 13, 2018), https://www.ftc.gov/system/files/documents/public_events/1398386/georgetown-deck-913.pdf, at 39 (listing six reasons to believe that industry concentration cannot be explained by scale economics, including the fact that various forms of anticompetitive behavior are "insufficiently deterred" and that "market power is durable"); John E. Kwoka, *The Structural Presumption and the Safe Harbor in Merger Review: False Positives or Unwarranted Concerns?*, 81 ANTITRUST L.J. 837 (2017); John Kwoka, *The Changing Nature of Efficiencies in Mergers and in Merger Analysis*, 60(3) ANTITRUST BULL. 231 (2015); Leemore Dafny et al., *Paying a Premium on Your Premium? Consolidation in the US Health Insurance Industry* 102 AMER. ECON. REV. 1161, 1163 (2012) ("[T]he mean increase in local market [firm concentration] between 1998 and 2006 (inclusive) raised premiums by roughly 7 percent from their 1998 baseline"); Orley Ashenfelter & Daniel Hosken, *The Effect of Mergers on Consumer Prices: Evidence from Five Mergers on the Enforcement Margin*, 53 J.L. & ECON. 417 (2010). *But see* Michael Vita & F. David Osinski, *John Kwoka's Mergers, Merger Control, and Remedies: A Critical Review*, 82 ANTITRUST L.J. 361 (2018). *See also* Robert B. Kulick, *Ready-to-Mix: Horizontal Mergers, Prices, and Productivity* (U.S. Census Bureau, Ctr. for Econ. Studies, Working Paper No. 17-38, 2017), https://papers.ssrn.com/abstract=2637961; Bruce A. Blonigen & Justin R. Pierce, *Evidence for the Effects of Mergers on Market Power and Efficiency* (NBER, Working Paper No. 22750, 2016), https://www.nber.org/papers/w22750, at 24.

[131] *See* D. Bruce Hoffman, Acting Director, Bureau of Competition, Fed. Trade Comm'n, Vertical Merger Enforcement at the FTC, Address at the Credit Suisse 2018 Washington Perspectives Conference (Jan. 10, 2018), https://www.ftc.gov/system/files/documents/public_statements/1304213/hoffman_vertical_merger_speech_final.pdf (admitting that "vertical merger enforcement is . . . a small part of [the FTC's] merger workload").

[132] *See, e.g.*, Michael Kades, *In Conversation with Herbert Hovenkamp and Ioana Marinescu*, EQUITABLE GROWTH (Oct. 11, 2018), https://equitablegrowth.org/in-conversation-with-herbert-hovenkamp-and-ioana-marinescu.

[133] Elena Prager & Matt Schmitt, *Employer Consolidation and Wages: Evidence from Hospitals* (Washington Center for Equitable Growth Working Paper, 2019), https://equitablegrowth.org/working-papers/employer-consolidation-and-wages-evidence-from-hospitals.

now outdated learning of an earlier era of economic thought, and they appear in some respects inhospitable to new learning. Antitrust enforcement better suited to the challenges of the Digital Age may therefore require new legislation.

Box V
EU Competition Law

EU competition law, like US antitrust law and the competition laws of most nations, is intended in large part to promote economic welfare by prohibiting private conduct that injures or is likely to injure competition. Not surprisingly in light of this shared objective, US and EU law are very similar.

With respect to market power, similar to US antitrust law, a firm does not violate the EU Competition laws if it gains power by competing on the merits rather than as a result of anticompetitive conduct. EU Competition law only condemns the abuse of a dominant position. An abuse, under EU law, may however include a wider range of prohibited exclusionary and exploitative practices than under US antitrust law. As a result, some practices which may not trigger enforcement action under US antitrust law, may nonetheless be regarded as infringing EU competition law.

In this context, it is also worth noting the (wider) goals of EU competition law. According to the European Commission, competition on the market is protected 'as a means of enhancing consumer welfare and of ensuring an efficient allocation of resources.'[1] This notwithstanding, EU competition law has also consistently been held to protect 'not only the interests of competitors or of consumers, but also the structure of the market and, in so doing, competition as such.'[2] Moreover, a genuinely indigenous objective is worthy of note, namely that of promoting European market integration.[3]

The multitude of competition goals, and their position within the wider normative EU values may sometimes contribute to possible inconsistencies between the EU and US analysis.[4]

EU Competition law is enforced both at public and private levels; public enforcement is carried out by the European Commission and by the Competition Authorities of the member states. Private enforcement takes place in the courts of the member states, where private parties may bring follow-on or stand-alone damage claims.

1 European Commission, 'Guidelines on the Application of Article 81(3) of the Treaty' [2004] OJ C101/97, para.13 (hereinafter 'the General Guidelines').

2 Case C-501/06 P *GlaxoSmithKline Services Unlimited v Commission and Others* [2009] ECR I-9291, para 63. *See* also Case C-8/08 *T-Mobile Netherlands and Others* [2009] ECR I-4529, paras 31, 36, 38-39; Council Regulation (EC) 1/2003 on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 of the Treaty [2003] OJ L1/1, Recital 9; European Commission, 'Green Paper on Vertical Restraints in EC Competition Policy' COM(96) 721 final, para 180.

3 Information Service High Authority of the European Community for Coal and Steel Luxembourg, 'The Brussels Report on the General Common Market' (June 1956) (Spaak Report); David J Gerber, 'The Transformation of European Community Competition Law?' [1994] Harvard Intl LJ 97, 102.

4 Ezrachi, Ariel, EU Competition Law Goals and the Digital Economy (June 6, 2018). Oxford Legal Studies Research Paper No. 17/2018. Available at SSRN: https://ssrn.com/abstract=3191766

c. Special Challenges Presented by Technology Platforms

Technology platforms present particular challenges for antitrust enforcement. Markets tip and resulting market power is durable, so even effective antitrust enforcement is unlikely to generate fragmented markets. Nonetheless, enforcement that protects competition on the merits in the first stage and prevents exclusionary conduct in the second stage will help ensure that market-participants make unfettered choices among competing platforms and that entry and innovation are not inhibited by private rent-seeking. Additionally, these markets move very quickly in areas such as new product introduction, foreclosure, and tipping. Antitrust litigation does not move quickly. Effective antitrust enforcement should move as rapidly as is practicable. However, enforcers will be most effective when they choose enforcement priorities and remedies to generate optimal deterrence of anticompetitive conduct.

As explained above, digital platforms are able to exploit behavioral biases to their advantage. Economists describe these strategies as falling into two conceptually distinct categories of conduct: exclusive (strategies that foreclose competition) and collusive (strategies that cause higher prices).[134] The former occurs when platforms exploit behavioral biases to keep consumers attached to their platforms and make switching to alternatives more difficult. These tactics generally make consumers less receptive to competitive alternatives—they lower contestability—and thus raise entry barriers. Platforms also exploit behavioral biases—such as hyperbolic discounting and limited self-control—to extract surplus from both consumers and content providers. Strategies such as offering addictive content at moments when consumers lack self-control increase time spent on the platform and profitable ad sales even as the platform lowers the quality of content. These tactics increase the welfare costs of market power.

Many technology platforms are distinctive because they provide valued services to consumers without charging a monetary price. Instead, consumers barter their attention and data to the platforms in exchange for these services. The platforms use that attention and data to generate monetary payments from advertisers. While a barter transaction is, in principle, subject to antitrust scrutiny just like any other transaction, antitrust enforcement has had vastly more experience with transactions based on monetary prices, and that experience has prompted the development of sophisticated tools to analyze money prices.[135] Where monetary prices are fixed at zero while quality changes over time—in response to changes to the nature of the services, privacy protections, content offerings and the like—the quality-adjusted prices change. Because economists, antitrust agencies, and courts have less experience with quality, they lack equally

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[134] *See* Steven C. Salop, Practices that (Credibly) Facilitate Oligopoly Co-ordination, in NEW DEVELOPMENTS IN THE ANALYSIS OF MARKET STRUCTURE 265 (Joseph E. Stiglitz & G. Frank Mathewson eds., 1986

[135] For example, the US agencies' traditional definition of an antitrust market is one in which a monopolist could profitably raise price by a non-insignificant amount for a significant period of time. *See* U.S. DEP'T OF JUST. & FED. TRADE COMM'N, 2010 HORIZONTAL MERGER GUIDELINES (2010), https://www.ftc.gov/sites/default/files/attachments/merger-review/100819hmg.pdf, at 9, § 4.1 (defining the hypothetical monopolist test).

sophisticated tools for analyzing changes in quality-based prices. This is partially because quality naturally presents itself in a less quantified form than price, but also because in regular markets price often adjusts to quality, not the other way around, so economists have been able to rely on price as one measure of quality. When enforcers are able to quantitatively link quality to price, they will be better equipped to fit digital cases into older, price-centered jurisprudence.

Technology platforms also pose unusual challenges for antitrust merger enforcement. To the extent that platforms are in winner-take-all or winner-take-most markets, mergers among significant, existing competitors, which are the mergers most subject to antitrust challenge, are likely to be rare. Instead, competition in such markets is largely for the future, often in evolving and very different markets. This competition is sometimes called "competition for the market" or "leapfrog" competition. In this context, acquisition by a dominant platform of a much smaller and possibly nascent firm could be very damaging to competition if, absent the acquisition, the smaller firm would develop into a major competitive threat or would lead to significant change in the nature of the market. In a concentrated market structure, this potential competition from very small entrants may be the most important source of competition faced by the incumbent firm.[136]

The problem is that it is very difficult to know at the time of an acquisition whether the acquired firm is likely to develop into a competitor or whether, to the contrary, acquisition by the platform offers the most promising path to the commercial development and use of the acquired firm's new technology or an essential exit strategy for investors in the acquired firm. Antitrust agencies and antitrust law need to develop a better understanding of the circumstances under which acquisitions of nascent competitors might be anticompetitive.[137] Enforcers may have to learn to think more as venture capitalists do and understand their analytics in order to better identify

[136] The D.C. Circuit in *Microsoft* endorsed this principle. *See* United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001) (en banc) (per curiam) ("[I]t would be inimical to the purpose of the Sherman Act to allow monopolists free reign to squash nascent, albeit unproven, competitors at will.").

[137] In addition, because small acquisitions are not subject to pre-merger review under the Hart-Scott-Rodino Act, agencies are often unaware of the acquisitions until after the are consummated. The threshold for pre-merger notification was raised in December 2000 from $10 million to $50 million. While transactions under the threshold are still subject to Clayton Act enforcement, agencies do not see them in advance, may not find them at all, and can only sue to unwind them after the fact. After the filing threshold increase, there was a sharp uptick of newly non-notified mergers (between $10 and $50 million) between direct competitors—the type of mergers that likely would have been blocked during HSR review, had it occurred. Small technology mergers fall in this category also and are rarely reviewed or challenged. *See* Thomas Wollman, *Stealth Consolidation: Evidence from an Amendment to the Hart-Scott-Rodino Act*, AMER. ECON. REV. INSIGHTS (forthcoming 2019), https://www.aeaweb.org/articles?id=10.1257/aeri.20180137. An example of a problematic merger of this type that was challenged by DOJ after consummation is Bazaarvoice-PowerReviews. United States v. Bazaarvoice, 3:13-cv-00133-WHO, 2014 WL 203966 (N.D. Cal., Jan. 8, 2014). While the government prevailed in that litigation, because the two software firms had gone some way down the integration path, the result was arguably not as favorable for consumers as if the transaction had been notified and blocked ex ante which would have preserved two robust competitors. In general, the evidence demonstrates that firms act quickly to obtain market power in the absence of government enforcement, and that the requirement to notify the government serves as an important deterrent to anticompetitive mergers.

harms. A pattern of repeated purchases of small potential competitors that could have developed into substitutes, or an acquisition price that reflects a sharing of monopoly rents, might be useful indicators of possible competitive risks.

Antitrust law might also have difficulty policing conduct by established technology firms that tends to exclude or marginalize smaller rivals. Recall that at launch a platform invites and encourages complementors to provide content and functionality on its platform. It does this when it is competing for consumers' attention against other platforms because it wants its platform to be attractive. A successful platform creates an ecosystem that is valuable to consumers. However, one or both of the following issues may arise. In the first, a complement to the platform seeks to become its horizontal competitor. In the second, the platform seeks to become a horizontal competitor of one of its complements. Let us take these one at a time.

First, a complement can develop the ability to form a relationship with the end user that is sufficiently free-standing and valuable to take the user off the platform and into a separate relationship with the complement. The platform has an incentive to foreclose the complement to prevent this loss of market power and profit. Because the complement is transitioning into direct horizontal rivalry with the platform, US law does not have any trouble recognizing antitrust violations of this form. For example, content providers like Yelp are Google's complements—people want to be able to find Yelp reviews via Google—but Yelp is also a search engine that could grow to rival Google search. Google has entered the restaurant review market with its map product, and Yelp now alleges that Google is engaging in foreclosure.[138]

Second, if the platform observes that a complement (say, complement *Z*) is earning strong profits, the platform may seek to enter that complementary market. Because the platform and rival complement *Z* providers are now horizontal competitors, the platform has the incentive—and, often, the ability—to foreclose those competitors. This could take the form of banning rival complements from the platform, reducing their ability to interoperate, raising their costs, steering customers elsewhere, and so forth. If the platform's new product *Z* is a wonderful innovation, there will be an efficiency (in the form of higher quality) to weigh against any harms from less competition.[139] At root, there is a fundamental question about whether all the rents of the platform are part of the competitive return to the creator of the platform, particularly if the complementors' added-value can be driven to zero once the network effects are operational. In a setting with single-homing users, those complements may have no bargaining power ex post and the platform may have the incentive and ability to give them a share of zero. This is a

[138] *See* Duhigg, *supra* note 23.
[139] Lina Khan, *Amazon's Antitrust Paradox*, 126 Yale L.J. 710, 780-83 (2017). *See also* Feng Zhu & Qihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRAT. MGMT. J. 2618, 2618 (2018) (finding that "[w]hile Amazon's entry discourages affected third-party sellers from subsequently pursuing growth on the platform, it increases product demand and reduces shipping costs for consumers").

particularly interesting problem when those complementors added value to the platform at a critical competitive moment before network effects and entry barriers protected it.

Addressing this issue, the U.K. Furman Report and the EC Vestager Report both devote significant discussion to platforms being "fair" to complementors. First, a sectoral regulator is likely to be better than the antitrust laws at enforcing fairness norms. Antitrust law is focused, not on fairness itself, but on anticompetitive conduct that creates market power and might therefore permit various types of conduct that some might regard as "unfair" because, for example, a platform extracts the rents of partners that offer a good product but have no bargaining power. Because the complementor is not threatening to replace the platform, the simple exclusion theory of harm explained above does not apply directly. The situation is informally akin to the familiar "open early, closed late" strategy.[140] In the "open early, closed late," strategy a firm at first encourages others to become dependent on connecting to it and relying on it, and later uses their dependence to shut out competitors or extract monopoly rents.[141] This type of behavior might be regarded as exploitation or excessive pricing and thus deemed to be an unlawful abuse of dominance under EU law. It would violate US law only if, among other things, it enabled the platform to gain or preserve market power it otherwise would not have in either the platform market or the market in which the excluded firm did business. In the latter case under US antitrust law, this conduct might be captured under the "duty to deal" framework.

Because large technology platforms have huge scale and benefit from network effects, they are often able to engage in aggressive conduct targeted at rivals without violating existing antitrust standards. The platforms might be able to copy rivals' innovations or otherwise increase the value of their services to consumers without pricing below cost, and they might be able to insist that rivals using their platforms enter into agreements, such as agreements regarding access to consumer data, that enhance the platform's ability to compete. A platform might be able to require exclusive contracts or loyalty-based contracts that cause single-homing by one side (e.g. drivers or consumers). Such single-homing might cause the market to tip in the platform's favor and exclude a competitor. This kind of conduct often has efficiency benefits that make it difficult to challenge the conduct under the antitrust laws. Certain aspects of antitrust law might be adjusted, for example antitrust rules intended to prohibit dominant firms from engaging in conduct that would exclude an equally efficient competitor could be revised to better protect

[140] *See* Scott A. Sher & Bradley T. Tennis, *Exploiting Others' Investments in Open Standards*, COMPETITION POL. INT. (Sept. 15, 2016), https://www.competitionpolicyinternational.com/exploiting-others-investments-in-open-standards/; Carl Shapiro, Exclusionary Conduct: Testimony Before the Antitrust Modernization Commission (Sept. 29, 2005), http://faculty.haas.berkeley.edu/Shapiro/amcexclusion.pdf, at 15 ("[I]n a network industry, a firm might obtain a dominant position based in part on certain 'open' policies that induce reliance by complementary firms, and then later exploit that position by offering less favorable interconnection terms or by refusing to interconnect with them altogether.").

[141] For an example, see the discussion of Cisco-Arista at note 16, *supra*, and accompanying text.

smaller competitors. Nonetheless, it is unlikely that such adjustments would entirely eliminate the competitive advantages inherent in large firms with substantial scale and scope economies.

Pinpointing the locus of competition and therefore the relevant market in which technology platforms compete can also be challenging because the markets are multisided and are often ones with which economists and lawyers have little experience. This complexity can make market definition another hurdle to effective enforcement. For example, two platforms might compete in general search, while also each offering social media and mapping functionalities, among other services. Advertisers that buy ads on searches may be a common set of customers. While courts and agencies have substantial experience analyzing advertising markets, for example, they are less knowledgeable about markets for attention or barter transactions involving data made available to providers as an unintended byproduct of using a digital platform. The problems are compounded by the facts that technologies surrounding the products' functions in digital markets are continually changing and changes in quality-adjusted prices are difficult to observe.

Only one litigated US case has explicitly addressed these issues. That case culminated in a 2018 decision by the US Supreme Court.[142] Although the decision has been praised by some conservative commentators,[143] it has been widely criticized by others.[144] The case itself involved the credit card business and what the Court called a "transaction platform," in which the platform (American Express) facilitated simultaneous transactions between consumers and merchants.[145] It should not, therefore, be legal precedent applicable to other kinds of platforms like Google and Facebook. But the case does suggest that the five-Justice majority on the Court is hostile to antitrust enforcement (at least in vertical and exclusion cases), does not understand multi-sided markets very well, and might be more influenced by ideological preconceptions than by evidence in the case or fact-finding by district court judges.[146]

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[142] Ohio v. American Express Co., 138 S. Ct. 2274 (2018).
[143] *See, e.g.*, FED. TRADE COMM'N, *Transcript: FTC Hearing #3: Competition and Consumer Protection in the 21st Century* (Session 4) (Oct. 15, 2018), https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf, at 228-235 (Vinson & Elkins partner Darren Tucker praising the *American Express* decision).
[144] *See, e.g.*, Dennis W. Carlton, *The Anticompetitive Effects of Vertical Most-Favored-Nation Restraints and the Error of* Amex, COLUM. BUS. L. REV. (forthcoming 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3328628; Herbert Hovenkamp, *Platforms and the Rule of Reason: The* American Express *Case*, COLUM. BUS. L. REV. (forthcoming 2019), https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=3060&context=faculty_scholarship; A. Douglas Melamed & Nicolas Petit, *The Misguided Assault on the Consumer Welfare Standard in the Age of Platform Markets*, 54 REV. INDUSTRIAL ORG. 1 (2019); Michael Katz & Jonathan Sallet, *Multisided Platforms and Antitrust Enforcement*, 127 YALE L.J. 1724 (2018). *See also* FED. TRADE COMM'N, *supra* note 143, at 226 (Goldstein & Russell partner Eric Citron describing the *American Express* decision as "economically illiterate").
[145] *American Express*, 138 S. Ct. at 2277.
[146] Anthony Kennedy, one of the members of the five-justice majority in American Express, has since retired, but his replacement, Brett Kavanaugh, is likely even more ideological on antitrust matters. *See* Stephen Calkins, *How Might a Justice Kavanaugh Impact Antitrust Jurisprudence?*, PROMARKET BLOG (July 20, 2018), https://promarket.org/might-justice-kavanaugh-impact-antitrust-jurisprudence.

The harm from lack of competition in digital markets will manifest itself in quality and innovation, as well as from higher prices to advertisers. As detailed by Giulio Federico and colleagues, the impact on consumer welfare of a decline in innovation due to lack of competition is likely to be large, especially in the case of fast-moving technologies that affect many consumers and related businesses.[147] Very often the uncertainty involved in evaluating harms to innovation will be high, especially in contrast to the analysis of price forecasts. It is possible to measure pipeline projects and current R&D to obtain a sense of competitive overlap or trajectory, but the tools do not yet exist to accurately forecast the speed and direction of innovation in the longer run. Likewise, obtaining quantitative evidence about the innovations or products that *would* have been offered to consumers in the absence of the conduct is often not possible.

Perhaps in part as a result of these challenges, US antitrust has not been active in policing allegedly anticompetitive conduct by technology platforms. The government's last monopolization case involving issues raised by platforms was the Microsoft case in 1998. Today, the European Commission and the European National Competition Authorities effectively act as the global enforcers for allegedly exclusionary conduct that operates at a global level in industries such as software, chips, and digital platforms.[148]

d. Could a Reformed Antitrust Law be Effective in Dealing with Digital Platforms?

There are many ways that US antitrust law could be revised to make it more aggressive in addressing competition problems while maintaining the objective of prohibiting private conduct that reduces economic welfare. Such changes could improve competition enforcement in digital markets as well as others.

i. Reform by What Means?

With few exceptions, antitrust law has in the past evolved in a common-law-like process by which it has reflected new learning and judicial and market experience. This process is continuing, at least to some extent, as antitrust law and enforcement have recognized, for example, previously unnoticed competition problems in labor markets and doctrine has evolved to incorporate new learning about competitive problems that can be created by most favored

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[147] Giulio Federico, Fiona Scott Morton, & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption* (NBER Innovation Policy and the Economy, Working Paper, 2019) (on file with authors).
[148] *See, e.g.*, Press Release, Euro. Comm'n, Antitrust: Commission Fines Google €4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine (July 18, 2018), http://europa.eu/rapid/press-release_IP-18-4581_en.htm; Press Release, Euro. Comm'n, Antitrust: Commission Closes Formal Proceedings Against Qualcomm (Nov. 24, 2009), http://europa.eu/rapid/press-release_MEMO-09-516_en.htm; *Report on the Monitoring Exercise Carried Out in the Online Hotel Booking Sector by EU Competition Authorities in 2016*, EURO. COMM'N (2017), http://ec.europa.eu/competition/ecn/hotel_monitoring_report_en.pdf.

nation (MFN) and other vertical agreements. The challenges posed by the big technology platforms and the current populist political climate have, however, put the issue of antitrust reform before Congress in various legislative proposals. There are advantages and disadvantages to both common law evolution and new legislation.

Evolution by a common law-like process takes time. It took the Chicago School roughly 20 years to refocus antitrust law, from the early expressions of its perspective in 1950s and 1960s[149] until the Supreme Court's seminal decision in *GTE Sylvania* in 1977[150]—and the obstacles are probably greater now. While there had been ebbs and flows in antitrust enforcement in the mid-twentieth century, there was not a well-formed conceptual framework calling for aggressive enforcement that the Chicago School proponents had to overcome. The structure-conduct-performance paradigm was widely accepted as an economic proposition, but it was not embedded in a rigorous normative and conceptual antitrust framework. By contrast, oversimplified Chicago School thinking has provided a widely accepted framework for antitrust analysis for more than thirty years. Perhaps more importantly, many federal judges, appointed by an increasingly ideological vetting process, are trained in and adherents of that framework. Many seem unaware of new economic research that calls into question many of the tenets of that framework and continue to cite outdated Chicago School publications of the 1970s and 1980s. And, while there has been a great deal of economic research and literature on which a new antitrust paradigm could be constructed, there is not a widely accepted, alternative paradigm that is comprehensible to and administrable by lawyers and judges. Even if such a paradigm were written tomorrow and rapidly became widely accepted, it would likely take years for that paradigm to be manifest in doctrinal changes and market outcomes.

New legislation could in principle be adopted and take effect much more rapidly. New legislation would not need to depart from the dual requirements of bad conduct and harm to competition in the market as a whole. Such legislation might, instead, implement a recalibration of the relative tolerance of antitrust law for the risk of over-enforcement and under-enforcement by prescribing rebuttable presumptions that would ease the high proof requirements currently imposed on antitrust plaintiffs and place on defendants a more rigorous burden of proving efficiencies. Some possible new presumptions and similar reforms are outlined below.

The risk, of course, is that new legislation will not be enacted by experts committed to sound, economically-focused antitrust. It will be designed by Congress in a politically charged environment subject to pressure from the very companies who stand to lose their market power if subject to increased antitrust oversight, or who benefit if their trading partners are subjected to excessive oversight.

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[149] *See, e.g.*, Ward S. Bowman Jr., *Tying Arrangements and the Leverage Problem*, 67 YALE L.J. (1957); Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7 (1966); Robert H. Bork & Ward S. Bowman, Jr., *The Crisis in Antitrust*, FORTUNE, Dec. 1963, at 138, *reprinted in* 65 COLUM. L. REV. 363 (1965).
[150] Continental T.V., Inc. v. GTE Sylvania Inc., 433 U.S. 36 (1977).

There is more at stake than the risk of flawed legislation. Antitrust law has maintained legitimacy and widespread support for nearly 130 years in part because it applies to all forms of commercial activity and is not perceived as special interest legislation. In our view it is very important that antitrust law not have different rules aimed at different sectors—such as technology[151] or agriculture[152]—that would differentiate industries and undermine political support for antitrust law in general. For this reason, the report outlines a number of useful digital platform interventions that can be undertaken by a sectoral regulator rather than falling to the task of antitrust enforcement.

Equally important, antitrust law has benefited immensely from the brevity and vagueness of the key statutory provisions because they have enabled antitrust law to evolve in response to new learning. The challenge with new legislation is to embrace enduring normative principles without codifying current economic learning in a way that will prevent the law from evolving to take account of newer economic findings.

ii. Reform of Antitrust Law Through a General Tightening

As noted, most antitrust cases require uncertain decisions about unknowable future events like innovation or entry or about unobservable economic elements like demand curves, marginal cost, and product quality. Much US antitrust law reflects judgments about how to deal with such uncertainty. Those judgments are embodied in rules regarding burdens of proof, evidentiary presumptions, and decision-theoretic approaches to fact finding. They are also embodied in substantive legal doctrine, such as rules regarding predatory pricing and unilateral refusals to deal that are intended to reduce the likelihood of false positives (erroneously finding a business has violated the law) even at the risk of false negatives (erroneously deciding that a business has not violated the law). Digital markets typically have high levels of uncertainty and move quickly.

Given uncertainty, courts must determine how much weight to put on the risk of enforcement mistakes: both the likelihood of a mistake and its cost. Much US antitrust law is driven by a judgment, embraced by the Chicago School, that avoiding false positives (good conduct judged to be bad) is more beneficial to society than avoiding false negatives (anticompetitive conduct judged to be good).[153] This judgment rests on the beliefs that false positives are difficult to correct but that false negatives will be quickly corrected by market forces. These beliefs seemed

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[151] As suggested, by, e.g., Elizabeth Warren, *Here's How We Can Break Up Big Tech*, MEDIUM (Mar. 8, 2019), https://medium.com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c.

[152] As suggested by, e.g., Elizabeth Warren, *Leveling the Playing Field for America's Family Farers*, MEDIUM (Mar. 27, 2019), https://medium.com/@teamwarren/leveling-the-playing-field-for-americas-family-farmers-823d1994f067.

[153] For a classic statement of this proposition, see Frank H. Easterbrook, *Vertical Arrangements and the Rule of Reason*, 53 ANTITRUST L.J. 134, 135-36 (1984) ("There are limits on the ability of courts to sort the beneficial from the deleterious manifestations of [restrictive dealing] practices, and most of the time it is better not to try than to try and fail."). For a criticism of this view, see Jonathan B. Baker, *Taking the Error Out of 'Error Cost' Analysis: What's Wrong with Antitrust's Right*, 80 ANTITRUST L.J. 1 (2015).

plausible in 1975 in a Chicago School framework, but they have never been empirically demonstrated and have fallen into disrepute. Moreover, their logic is incomplete because the cost to society of a false negative, for example, depends not only on its likelihood, but also on both the magnitude and the duration of the resulting harm.

It is time for antitrust law to recalibrate the balance it strikes between the risks of false positives and false negatives. Underenforcement is likely to be costlier than previously thought because, among other things, market power of large technology platforms is more enduring. False negatives are almost certainly more common than previously thought because certain types of conduct that were previously thought to be benign are now understood to be anticompetitive. Especially in technology markets, the most important competitive threats to incumbent firms are likely to come from new entrants that might be vulnerable to exclusionary conduct or anticompetitive acquisitions when their competitive prospects are uncertain. In addition, false positives might be less common than previously thought because of the development in the past few decades of more sophisticated and reliable econometric and simulation tools for assessing conduct and market power effects. New work by economists studying multi-sided markets, network effects, the economics of nominally "free" goods and services, and restrictive vertical agreements suggests that antitrust agencies and courts should be able to continue to improve in their ability to make sound enforcement decisions. And false positives might be less costly than previously thought because firms are finding new and different ways to realize efficiencies.

A recalibration of this type should influence antitrust law in two basic ways. First, it should provide a basis for revising certain aspects of antitrust doctrine that were adopted explicitly in order to minimize the risk of over-enforcement. Second, it could more broadly provide a basis for courts to impose less demanding proof requirements on antitrust plaintiffs, especially where facts are difficult to observe or prove directly and indirect or circumstantial proof is available. Again, we pursue our theme of harm to entry through the next section. Exclusion of existing or potential entrants is well established in both the economics literature and the antitrust jurisprudence as a harm to competition, but the law is not well calibrated to recognize this familiar tactic in its new setting.

Some of the specific ways in which the law might be revised are set forth below. They could be achieved by common law-like evolution of antitrust law or by new legislation.

iii. Specific Areas of Possible Antitrust Reform [designed for the specialist reader]

To address the issues raised by technology platforms, antitrust enforcement agencies and courts will need to understand the unusual factual context that those platforms often present and be receptive to recent and future economic learning about the implications of that context and how to apply antitrust principles to it. Economists and other experts will need to develop new

understanding and new tools to aid agencies and courts in addressing these matters, among others:

- How to assess the quality-adjusted price paid for a good or service sold in a barter transaction with zero or close to zero monetary price, and how to define and analyze markets in which a substantial portion of the sale take the form of barter transactions.
- How learning from behavioral economics and related disciplines about addictive or exploitative content should be considered in addressing issues regarding economic welfare.
- How technology platforms are able to take advantage of consumer biases (such as salience, status quo bias, or impatience) to bind consumers to their platforms and make switching to alternatives more difficult than imagined by lay intuition ("competition is one click away").[154]
- How market circumstances affect the likelihood and nature of innovation and how to evaluate innovation, whether using qualitative or quantitative tools, in both its magnitude and direction.
- How to assess potential competition from new or small firms or not-yet-identified future innovators and entrants. This is especially important in markets that depend on technological change and in which competition in the market is less important than leap-frog competition for the market.
- How to assess consumer welfare in a two-sided market. Learnings from platform economics suggests that users on different sides of a platform generally have divergent interests and thus that defining a single two-sided market—rather than two, closely interrelated ones—obscures the analysis. Platform economics also demonstrates that neither the change in the two sided price nor the change in the transaction volume is a sufficient statistic for a how a firm's conduct affects consumer welfare.[155]

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[154] David Wismer, *Google's Larry Page: 'Competition is One Click Away,' (and Other Quotes of the Week)*, FORBES (Oct. 14, 2012), https://www.forbes.com/sites/davidwismer/2012/10/14/googles-larry-page-competition-is-one-click-away-and-other-quotes-of-the-week.

[155] One of the features of such platforms is that, because of the feedback effects between the two sides of a platform and the importance of the relative prices charged on the two sides, increased output by the platform does not necessarily imply increased economic welfare. Whether increased output by the platform will increase economic welfare depends on how the benefits and costs of that output are allocated across the two sides. *See* Michael L. Katz, *Platform Economics and Antitrust Enforcement: A Little Knowledge is a Dangerous Thing*, 28 J. ECON. & MGMT. STRAT. 138 (2019); Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 1 J. EURO. ECON. ASSOC. 990 (2003). There is another sense in which increased output of digital platforms does not necessarily increase economic welfare. Because of some of the unique attributes of digital platforms discussed above, consumer demand for digital services does not necessarily reflect consumer welfare from those services. *See* Section II.I.

Other antitrust reforms, including those below, would require changes to doctrine:

- Antitrust law prohibits unilateral refusals to deal only under very unusual circumstances. Current law reflects, among other things, concerns about the difficulty of determining the required terms of trade and incentive effects of required dealing on both the dominant firm and its rivals.[156] The law thus gives platforms substantial freedom both to refuse to deal with actual or potential rivals, including complements, and to deal with them only on onerous terms. Those terms might include access to customer data, interoperability, and other terms that raise the costs of rivals and enable the platforms to reinforce their dominant positions. This doctrine should be reconsidered in light of the substantial importance of large technology platforms and, in particular, their central role as distribution channels, both of which suggest that the benefits of antitrust intervention might be greater than previously appreciated.

- Predatory pricing law has been shaped in large part to avoid over-enforcement and with explicit acknowledgement that the law permits some forms of anticompetitive pricing conduct.[157] Courts have adopted a narrow and rigid notion of recoupment[158] and have made it almost impossible to prove that prices are below cost, even where it seems likely.[159] Digital goods often have a marginal cost close to zero, which makes tests that require prices to be below incremental or variable cost almost impossible for a plaintiff to meet. The law has also been construed to protect only rivals that are equally efficient at the time of the conduct at issue and thus to disadvantage smaller rivals that have not yet reached efficient scale. Predatory pricing law should be modified so that it will be better able to combat anticompetitive pricing by digital platforms and other firms.

- The paradigm of predatory pricing law has also been relied upon to assess more complex pricing strategies, such as loyalty discounts. Loyalty discounts and similar contracts can be used to drive one side of a platform to single-home, which can cause a market to tip and enhance market power. The efficiency benefits of loyalty discounts are very different from those of low prices in general; for example, unlike low prices themselves, even above-cost loyalty discounts do not necessarily increase static welfare. Antitrust law

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supra. This latter concern applies to other products as well, such as mortgages and prescription drugs; and it is very relevant to possible regulation of digital platforms, as discussed below. By contrast, while antitrust enforcers and courts need to understand those attributes of digital platforms in order to understand how the relevant markets work, antitrust law is for several reasons based on the assumption that consumer preferences reflect consumer welfare.

[156] *See, e.g.*, Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, 540 U.S. 398 (2004); *see also* A. Douglas Melamed, *Exclusionary Conduct Under the Antitrust Laws: Balancing, Sacrifice and Refusals to Deal*, 20 BERKELEY TECH. J. 1247 (2006).

[157] *See* Barry Wright Corp. v. ITT Grinnell Corp., 724 F.2d 227, 231, 234 (1st Cir. 1983) (Breyer, J.).

[158] *See* C. Scott Hemphill & Philip J. Weiser, *Beyond* Brooke Group*: Bringing Reality to the Law of Predatory Pricing*, 127 YALE L.J. 2048 (2018).

[159] *See, e.g.*, United States v. AMR Corp., 335 F.3d 1109 (10th Cir. 2003).

should not rely exclusively upon predatory pricing standards to assess loyalty discounts.[160]

- The Supreme Court held in *American Express* that a plaintiff in a case involving a vertical restraint must define and prove a relevant market and may not rely on direct proof of harm to competition.[161] This holding was based on the notion that vertical restraints almost always enhance efficiency and almost never harm competition. Scholars over the past 30 years have demonstrated that that notion is false and therefore, that vertical restraints must be evaluated individually on the specific facts.[162] Where there is direct evidence of harm to competition, antitrust law should not require circumstantial evidence via a defined relevant market.

- Courts are generally very reluctant to second guess a defendant's product design decisions, even where the design harms competitors.[163] Yet product design decisions involving, among other things, app stores, mobile device screen layouts, data storage and analysis, and interface design are often key elements in digital market competition. Antitrust courts should be more willing to assess product design decisions where appropriate.

- There should be no safe harbor based on the short-term of exclusive dealing agreements and other restrictive vertical agreements when they are used by dominant platforms or firms. Such firms can use their market power to induce desired behavior in trading partners without relying on long-term contracts.[164]

Perhaps most importantly, antitrust law might be revised to relax the proof requirements imposed upon antitrust plaintiffs in appropriate cases or to reverse burdens of proof. Burdens of proof might be switched by adopting rules that will presume anticompetitive harm on the basis of preliminary showings by antitrust plaintiffs and shift a burden of exculpation to the defendant or by ensuring that plaintiffs are not required to prove matters to which the defendants have greater knowledge and better access to relevant information. These proof requirements include the following, which are likely to be important in the application of antitrust standards to technology platforms:

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[160] *See* Hemphill & Weiser, *supra* note 158.
[161] Ohio v. American Express Co., 138 S. Ct. 2274 (2018).
[162] *See* Steven C. Salop, Revising the Vertical Merger Guidelines: Presentation at the FTC Hearings on Competition and Consumer Protection in the 21st Century (Nov. 1, 2018), https://www.ftc.gov/system/files/documents/public_events/1415284/ftc_hearings_5_georgetown_slides.pdf; Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1742 (2018).
[163] *See* United States v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001) (per curiam).
[164] *Compare* United States v. Dentsply Int'l, Inc., 399 F.3d 181 (3d Cir. 2005), *with* Omega Envtl., Inc. v. Gilbarco, Inc., 127 F.3d 1157 (9th Cir. 1997).

- Mergers between dominant firms and substantial competitors or uniquely likely future competitors should be presumed to be unlawful, subject to rebuttal by defendants. This presumption would be valuable, not because it would identify anticompetitive mergers with precision, but because it would shift the burden to the party with the best access to relevant information on issues of competitive effects and efficiencies from the merger.

- Courts should not presume efficiencies from vertical transactions. Crediting of efficiencies should require strong supporting evidence showing merger-specificity and verifiability.[165]

- Courts should be more willing to permit plaintiffs to prove harm to competition by circumstantial evidence, especially where the propositions in question are not observable and there thus cannot be direct evidence.[166]

iv. A Competition Court

Revisions to the law may have little effect to the extent that judges see antitrust cases only rarely and have difficulty understanding the economic underpinning of antitrust law. One way to ameliorate this problem would be to establish a specialized antitrust court on which a certain number of Article III judges would sit for a specified term of several years. These judges could be expected to hear multiple antitrust cases and to develop substantial antitrust expertise. And, because they would be chosen from the general federal bench, they would bring the broader perspective of generalist judges. This model could be used at the trial court level, the appellate level, or both. If judges are selected from the larger pool of Article III judges and rotated on and off the specialized court, judges on the specialized court will be less likely to develop an overly narrow intellectual interpretation of antitrust law.

v. A Regulatory Partner Could Enhance Effective Antitrust Enforcement

Digital markets move quickly. Using the internet as a distribution channel to reach an installed base of billions around the globe means that new products can be rolled out quickly—as can anticompetitive conduct. The pace of antitrust enforcement is far slower—judging by the evidence, too slow—to protect small entrants except by creating deterrence. A sectoral regulator, by contrast, could be endowed with the authority to move quickly. By taking steps to preserve competition before markets have tipped or entrants have been purchased, a regulator could prove a valuable complement to antitrust enforcement.

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[165] For an example of the Court presuming efficiencies from vertical transactions with minimal evidence, see *American Express*, 138 S. Ct. at 2289.

[166] *See, e.g., id.* (injury to competition in a two-sided market); United States v. AMR Corp., 335 F.3d 1109 (10th Cir. 2003) (predatory pricing).

Antitrust enforcement proceeds on a case-by-case basis, and, apart from merger enforcement, it is largely backward looking—it looks at conduct already undertaken that is alleged to harm competition. A regulator, by contrast, can look forward and establish rules to constrain future conduct before there has been harm to competition, or before investments by the defendant and third parties have been shaped by the conduct. This is particularly useful in cases where ex post conduct remedies would be costly or ineffective.

Effective antitrust enforcement requires effective remedies. Treble damages and financial penalties can compensate for past harms and deter future bad conduct, but they do not restore competition to markets in which competition has been harmed. Even an injunction to forbear from the same or similar anticompetitive conduct going forward will not restore the lost competition if entry barriers are high. For example, if the market has tipped and network externalities are very strong, the firm that became a monopolist through violations of the antitrust laws could stop the conduct at issue and yet retain its monopoly position and the associated stream of profits. An antitrust authority that wants to restore lost competition must induce entry and/or impose structural remedies. Such remedies are likely to require detailed and often technical monitoring and years of effort. Antitrust enforcers are not suited to that type of oversight whereas a sectoral regulator is. One possible solution is to permit antitrust authorities and courts to design antitrust remedies and rely on an expert sectoral regulator to oversee their implementation. A similar approach was approved by the Supreme Court in the *Otter Tail* case.[167]

e. Regulation

For the reasons above, we believe the establishment of a sectoral regulator should be seriously considered. Given the tasks detailed by the other committees in this project as well as this one, there would be much for a regulator to do that would improve the impact of digital platforms on society. A digital regulator, should Congress choose to create one, could consider regulations and actions along the following lines. We call this potential regulator the Digital Authority (DA).

The general harm identified above is insufficient entry, and therefore insufficient competition, in digital platforms. Many of the regulations below are designed to lower barriers to entry directly. Others are responsive to the difficulty of effectively prosecuting antitrust cases today in digital markets. Regulations that mimic the antitrust laws but lower the burden of proof for the regulator and allow it to move faster are a way to gain effective enforcement in this sector, if not others.

Regulation offers a valuable addition to antitrust enforcement. It can help design the digital landscape and align the interests and incentives of platforms and key providers with those of consumers and society. When carefully designed, a regulatory regime can limit or even preempt the harmful effects detailed above, while minimizing its impact on the dynamic nature of digital

[167] Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

markets. It can offer clarity and legal certainty as to the boundaries of acceptable competition. Moreover, some of the problems discussed above may have only one structural solution: breakup of the platform. An enforcer might not want to choose that option because it is very disruptive. But less disruptive ex post remedies require ongoing monitoring, which antitrust enforcers are not well-positioned to do. Handing that job off to a regulator might better serve consumers.

Therefore, the committee suggests considering regulatory steps in conjunction with improved antitrust enforcement. It is important that regulation support, and indeed enhance, competition. The report focuses here on regulations targeted at improving competition, not other policy challenges related to digital platforms. And it is critical that any new regulatory framework avoid the well-documented pitfalls that regulation often invites (e.g., agency capture, revolving door syndrome, or incumbent protection). By having a pro-competition mandate, our hope is that the DA will be able to use the tools at its disposal in ways that resist the natural impediments to entry identified in Part I, rather than entrench powerful incumbents.

This combination of enforcement tools applied to one industry is nothing new in the US economy. Virtually every sector of our economy has required both antitrust and specific regulatory oversight, from banking to agriculture to communications, in order to promote competition and other public interest goals. The regulations we propose below are focused on, and limited to, those that will enhance competition.

The communications sector may offer the best guidance for how to approach public accountability for digital platforms. Telephone, cable, and wireless communications networks have many of the same attributes as digital platforms. Large capital expenditures to build networks, declining costs as consumers use the networks and buy more services on the networks, and the difficulties for new players to enter these markets and compete have led to a world of one or few players in each market. And just like social networking, online search, and web-delivered content, communications networks have been the lifeblood of how we communicate and practice our democracy by delivering TV, radio, text, and conversation, making competitive outcomes in the sector critical. The FCC has served as the sector-specific regulator for telecommunications. In complex industries, a sector-specific regulator can have a wider remit than an antitrust authority as is detailed in the box below.

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Box VI
The FCC Model

In the Telecommunications Act of 1996, Congress sought to affirmatively promote, not just protect, competition.[1] Congress' vision included service availability that was universal and affordable to all and a commitment to local and diverse ownership of news sources to support a robust marketplace of ideas.[2] It wanted to prevent undue discrimination, limit ownership to prevent excess market power (both horizontally and vertically in some instances), and police against abusive contract provisions that distort fair market practices.[3] Some of these goals were achieved with more success than others. And in general, the regulatory process inherently restricts behavior and therefore efficiencies. The net benefits of regulation should factor in these lost efficiencies.

The phone number portability rule was a clearly pro-competitive regulation. The FCC published the Wireless Local Number Portability rule in 2003.[4] The rule allows cell phone users to keep their phone number when they switch between wireless carriers. Prior to the rule, a consumer who wanted to take advantage of a low price or better quality with a competing provider would have had to change her phone number. This significant switching cost dampened competition between carriers. The number portability rule made switching easier and thereby strengthened competition between carriers.[5] Similarly, when portability of 1-800 numbers (e.g., 1-800-flowers) was introduced, prices of those services fell.[6]

After Congress found the cable companies to be local monopolies in 1992, Congress identified a dearth in cable competition partially caused by vertically-integrated cable operators' refusal to sell their programming to potential competitors. It therefore temporarily prohibited exclusive programming contracts, banned a variety of abusive contracting practices, and required that vertically-integrated firms sell their content to competitors under reasonable prices, terms, and conditions.[7]

1 H.R. Rep. No. 104-458 (1996) (Conf. Rep.). Even before the 1996 Act, the FCC had already begun the work of promoting competition through the broad authority it had been granted in earlier statutes.

2 47 U.S.C. § 151 (2018).

3 *Id.*; 47 U.S.C. § 160 (2018).

4 *See generally Wireless Local Number Portability (WLNP)*, FED. TRADE COMM'N, https://www.fcc.gov/general/wireless-local-number-portability-wlnp.

5 Press Release, Federal Communications Commission, FCC Observes First Anniversary of Wireless Local Number Portability (Nov. 24, 2004), https://www.fcc.gov/document/fcc-observes-first-anniversary-wireless-local-number-portability ("Wireless local number portability (LNP) eliminated a barrier to full competition in mobile telephone services and between landline and wireless services").

6 V. Brian Viard, *Do Switching Costs Make Markets More or Less Competitive? The Case of 800-Number Portability* (Cheung Kong Graduate School of Business Research Paper No. 1773R2, 2004), https://ssrn.com/abstract=371921.

7 47 U.S.C. § 251 (2018).

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The FCC Model (Cont.)

The resulting increased competition in the cable industry enabled the Direct Broadcasting Satellite industry to grow,[1] opened the door for telephone companies and smaller cable providers to compete in the provision of distribution,[2] and ultimately drove the digital video market to develop today's cable-modem-powered broadband internet services.

The 1996 Telecommunications Act included interconnection requirements between competing carriers to expand competition. The Act outlined a regulatory regime of duties to connect, of parity in quality between connections offered to the incumbent's own affiliates and competitors, and of rates and contract terms that were just, reasonable, and nondiscriminatory.[3] The regulation was designed to protect all of the businesses that needed to connect to the long-distance wire for their business but competed with a vertically-integrated local wire. Not only was raising rivals' costs prohibited, but complete foreclosure was also prohibited. This duty to deal in a non-discriminatory way is an example of a policy that arguably promoted entry of cable, local telephone, and long-distance competitors.

Similarly, the FCC developed Customer Proprietary Network Information (CPNI) rules, designed to protect sensitive business data transmitted through public telecommunications networks. The FCC recognized that a dominant platform, such as the telephone company, on which businesses rely in order to reach their customers, could easily gather and take advantage of sensitive business user data to promote the phone company's business and harm competition.[4] Phone service competitors, as well as data-driven businesses (such as home-security monitoring firms, hotels, and airlines), rely upon these rules to grow their businesses without interference from telecom network owners. The rule was so effective at promoting competition that Congress codified it in the 1996 Telecommunications Act. The harvesting of data flowing through a platform—generated by and belonging to others—is a standard business practice among today's digital platforms.

Of course, these past regulatory efforts have also helped us learn what not to do. Regulations could be and have been used to entrench incumbent firms' market power, erecting regulatory barriers to entry for new or innovative competitors.

1 47 U.S.C. § 548(a) (2018).

2 47 U.S.C. § 521(6) (2018); 47 U.S.C. § 548 (2018).

3 47 U.S.C. § 251 (2018).

4 47 U.S.C. § 222 (2018).

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The FCC Model (Cont.)

Regulatory capture is a common problem.[1] For example, AT&T has historically had a symbiotic relationship with the US government.[2] Perhaps the height of this relationship was the explicit Kingsbury Commitment in 1913, which allowed AT&T, rather than the government, to set the "solution" for managing competition.[3] The current Chairman of the FCC, Ajit Pai, has called this "a cautionary tale about the dangers of regulatory capture."[4] It was likely this close relationship that allowed the AT&T monopoly to persist for so long, eventually requiring an antitrust case to address the problem.

1 *See* George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. REG. 3 (1971) (arguing that, "as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit."); *see also* Sheldon Whitehouse, *Legal Responses to Regulatory Capture*, ACS BLOG (Nov. 9, 2018), https://www.acslaw.org/acsblog/blog-post-for-the-american-constitution-society-legal-responses-to-regulatory-capture ("We unfortunately live in a time of widespread regulatory capture. We should not pretend otherwise."); Elizabeth Warren, *Corporate Capture of the Rulemaking Process*, REG. REV. (June 14, 2016), https://www.theregreview.org/2016/06/14/warren-corporate-capture-of-the-rulemaking-process ("Under the law, it is easy for business groups to challenge a rule for being too strong or too restrictive. But it is much harder for public interest groups or ordinary citizens to challenge a rule for being too weak or riddled with loopholes."); Daniel Carpenter, *Challenges in Measuring Regulatory Capture*, REG. REV. (June 22, 2016), https://www.theregreview.org/2016/06/22/carpenter-challenges-measuring-regulatory-capture ("[T]here are limitations when it comes to preventing capture. Perhaps the most important is that capture is difficult to measure").

2 Chris Matthews, *AT&T and the Government Have Been 'Friends' for a Really Long Time*, FORTUNE (Aug. 18, 2015), http://fortune.com/2015/08/18/att-nsa.

3 Ajit Pai, Chairman, Fed. Commc'n Comm'n, Remarks on the 100th Anniversary of the Kingsburgy Commitment (Dec. 19, 2013), https://www.fcc.gov/document/pai-remarks-100th-anniversary-kingsbury-commitment.

4 *Id.*

i. The Digital Authority

To be effective, a proposed regulatory regime requires an enforcement body capable of carefully designing and enforcing the relevant regulations. We start therefore with a proposal for Congress to pass legislation creating a Digital Authority with the mandate to develop targeted regulation to achieve the goals described above and subsequently engage in monitoring and enforcement.

We anticipate that this regulator will also be tasked with non-competition digital goals, such as those in the areas of privacy, media, data-use restrictions, and consumer protection. While the antitrust agencies will employ structural interventions to protect competitive markets wherever possible, the focus of this regulator will be on both carrying out remedies for the antitrust authority that require ongoing oversight, and on developing regulations going forward that are a combination of structural safeguards, such as unbundling or separation, with limited behavioral interventions in areas where traditional antitrust tools are insufficient. Other jurisdictions that are

assessing competition in digital platforms all propose some form of regulation.[168] Having forward-looking regulations in place will increase business certainty about what conduct is permitted and how enforcement actions are likely to proceed. Ideally, this predictability and clarity will encourage companies to comply with the law, thus requiring fewer government resources for enforcement.

The DA legislation will require Congress to define the scope of regulatory power. The definition must include digital businesses that facilitate transactions of any kind (including the sale of advertising). It should have clear and broad authority over digital business models in order to prevent firms subject to regulation from evading its oversight.

We offer a menu of potential regulation, starting with the least intrusive form and building to the more severe interventions. Each type of regulation comes with costs and benefits which we briefly detail. The size of the costs and benefits will be different across settings, meaning that the choice of the best tool for any particular case may vary. The committee also suggests separating out some types of regulation that will apply to virtually all market participants while others are only appropriate tools to apply to companies with bottleneck power.

1) Bottleneck power

"Bottleneck power" describes a situation where consumers primarily single-home and rely upon a single service provider (a "bottleneck"), which makes obtaining access to those consumers for the relevant activity by other service providers prohibitively costly. As the U.K. Furman Report put it,

> [O]ne, or in some cases two firms in certain digital markets have a high degree of control and influence over the relationship between buyers and sellers, or over access by advertisers to potential buyers. As these markets are frequently important routes to market, or gateways for other firms, such bottlenecks are then able to act as a gatekeeper between businesses and their prospective customers.[169]

The finding of bottleneck power will employ consideration of the forces that, as discussed above in this Report, tend to impede entry and lead to foreclosure. The Furman Report similarly explains that this single-homing foreclosure tends to happen when users experience high switching costs, such as loss of valued personal data or reputational indicators at the point of switching; contract terms that deter switching; technical barriers to switching, such as complex switching processes or a lack of interoperability between the old service and the new or second service; tying services, which can be by contract or technical; and the inertia of defaults.[170]

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[168] *See, e.g.*, AUSTRALIAN COMPETITION REPORT, *supra* note 1, at 13-14; EC COMPETITION REPORT, *supra* note 1, at 8-10; U.K. COMPETITION REPORT, *supra* note 1, at 60-61.
[169] U.K. COMPETITION REPORT, *supra* note 1, at 41.
[170] *Id.* at 36.

Digital businesses that have this incentive and ability to develop and preserve a single-homing environment should be considered entities with bottleneck power. The DA, pursuant to congressional guidance, should have the sole authority to define bottleneck power and should update the definition either regularly or on an "as needed" basis. This is not a determination that should be left for definition by generalist judges. If Congress establishes a specialized panel of judges who review antitrust matters (as described above), it would be wise to grant the same panel sole judicial review authority over DA regulatory actions.

2) Data

Should Congress pass any laws concerning consumer data, the authority could set forth pro-competitive rules concerning the consequences of consumers' control over their data and about user choice in the sharing of data. Where users are simply and clearly informed and given the opportunity to make viable choices about which companies get their data, this valuable competitive information can be shared as the consumer prefers. The DA could design data sharing rules with the general goal of reducing single-homing and promoting entry.

3) Partnership with the Antitrust Agencies

Antitrust enforcement agencies or courts could designate the DA as the administrator and/or architect of remedies in antitrust cases. In cases where structural remedies are not appropriate to restore the lost competition, the DA could be directed to either carry out a remedy designed by the competition authority, or provide an effective behavioral monitoring remedy consistent with the DA's mandate. Since the difficulty of designing an appropriate and administrable antitrust remedy that can be enforced by a court often limits antitrust enforcement, having the option of an expert regulator to craft the remedy, or to simply be responsible for ongoing monitoring or other execution of the remedy, could better ensure cost-effective enforcement of pro-competition policies.

The DA can partner with the antitrust agency when it observes anticompetitive conduct. Due to their frequent interaction with firms in the industry and their real-time data feed, regulators may observe exclusionary conduct before the antitrust authority, and be able to give it relevant information and data.

ii. Menu of Regulations

We lay out below a menu of regulations that could be used to solve the problems identified above from least interventionist to most interventionist. For each, we describe the likely benefits and the costs.

1) Broadly Applicable Regulations

Some of these regulatory tools should be applied broadly to all firms in the industry, not only to bottleneck firms. It would be appropriate, however, to include a small business exception and perhaps even a new business exception, to allow very small entrants, who may benefit competition, time to ramp up against larger established companies.

a. Data collection

The Digital Authority could regularly collect data on market transactions, with an emphasis on data from businesses with bottleneck power. The information would allow policy makers and researchers to assess the performance of the sector and improve rule enforcement. For example, the data may include, inter alia, a sample of searches at a set of websites, a sample of queries followed by purchases at other sites, a sample of downloads of applications at an app store, or a sample of activity and ads shown on a social media site. The DA may further regularly collect information, including what types of data the business collects, how it uses that data, and who else is bartered or sold access to which elements of the data. It may include experiments to evaluate the true portability of data, the ads generated by certain user information, and other information relevant to assessing how and if competition is taking hold in the market. This program will require ongoing costs to run, but these should be reasonable compared to the benefits.

Box VII

Real Time Regulation in Financial Services

Technological innovation and the data revolution are also disrupting the financial services market, spurring regulators into action. Banks and other companies are undergoing an innovation and digitization spree, partially in response to competition by non-financial institutions and startups. This rapid change increases the challenges for regulators to follow and analyze what regulated companies are doing.

The response by some financial regulators has been to embrace new technologies focused on machine readable regulation (with the help of machine learning and AI) and digital reporting (with the help of data sharing frameworks, APIs, cloud computing, and advanced analytics). This is leading to an important shift from manual and template driven compliance and regulatory reporting to a near real time or real time regulatory reporting and supervision. Examples of authorities adopting this system range from the European Central Bank, various national central banks in continental Europe, the Monetary Authority of Singapore, or more notably, the Bank of England and the Financial Conduct Authority (FCA) in the UK.

Real Time Regulation in Financial Services (Cont.)

The Bank of England and the FCA are arguably the most advanced when it comes to digital regulatory reporting. Both were the first financial regulators to set up innovation labs and programs to interact with startups and new technologies. Their aim is to assess which regulation is suitable for machine reading, what data could be included in a standardized fashion within a digital regulatory reporting framework and how these changes will impact data models currently used for regulatory stress testing, leading to upgrades. This standardization then allows for near real time data sharing, lowering compliance costs to small and big firms alike.

Closer to home, in the United States, the SEC is implementing rules requiring trading firms to report intra-day trading data in real time. The SEC, the CFTC and the FDIC have also each set up fintech/regtech innovation labs to assess fintech solutions in general and regulatory tech solutions in particular. A Digital Authority could learn from, and expand on, these experiences of near real time regulation when overseeing an industry that has data at its core.

These data may be requested by an antitrust agency to aid in an investigation or prosecution. This ability to transfer existing data will speed up the enforcement of antitrust laws. After an investigation is opened, rather than subpoenaing the relevant data from the targeted firms and spending months arguing over definitions and formats, the antitrust authority could immediately begin analysis with the DA dataset.

In addition, the DA should make as much of these data public as possible, subject to keeping personally identifiable information and business secrets confidential. This will allow academics and nonprofits to study particular markets and consumer behavior as they do in industries such as airlines (where "Data Bank 1A" is publicly available)[171] to great public benefit. Leveraging the nonprofit and educational sector to help the DA and elected officials understand these markets is likely to be helpful and cost-effective.

b. Restrictions on Practices That Enhance Behavioral "Mistakes"

As described above, it is well known that behavioral "nudges" can lead consumers to make better choices. Better choices promote competition because they generate increased market share for firms that make better offers to consumers. The DA should have a mandate to create such "light touch" rules when they will make markets more competitive. For example, automatic renewals can discourage consumers from comparison shopping when a contract ends. A restriction on automatic renewals in that setting could lower prices market-wide. Regulations that require firms to make salient the most important terms of an offer can improve competition (e.g., a credit card offer must show the APR in large font). The U.K. likely has the most advanced regulatory

[171] *See* Bureau Transportation Stat., *Sources of Aviation Data*, U.S. DEP'T TRANSPORTATION (2017), https://www.bts.gov/explore-topics-and-geography/topics/sources-aviation-data.

regime in this regard, and the DA may be able to learn from it and other jurisdictions that have already taken these steps.[172]

c. Data Portability and Mobility

Congress may, at some point, pass a data law of some type that gives consumers control of their data. For this control to translate into more competitive markets, it must be used to lower switching costs and facilitate entry. The DA has a role to ensure that users can easily transfer their data from one service to another in industries where there is a common business model (e.g., social media, banking, or online grocery shopping). The DA will identify industries where porting is likely to aid the competitive process. Being able to port one's data directly lowers the cost of moving from one service to another, which in turn causes businesses to compete harder to keep those customers.[173] Consumers who control their data and have the right to receive it in a standardized format from the business will be able to take advantage of a new entrant by porting themselves to it, along with their own data. With information about a user's past purchases, likes, friends, and so forth, the entrant can provide a higher-quality service and grow more quickly.

The DA could propose a standard for exchanging the data, but remain open to options that industry favors, provided the format is not itself an entry barrier. The data porting standard should be updated frequently to accommodate new innovations in the industry. New innovators can think broadly about what services users might like that rely on this data, or are compensated through access to the data.[174] The Vestager Report divides data into personal and not personal; and content into volunteered, observed, and inferred.[175] The DA could determine which of these types of data must be included in the portability standard.

While a porting regulation lowers consumer switching costs greatly, they may still be high enough that demand is not sufficiently contestable to induce entry.[176] The DA could also set up a process by which a customer can choose to send her data to an entrant by authorizing it to be transferred directly from her former service provider. The DA would need to authorize the entrant to offer this facility to its consumers and establish regulations to require the incumbent to transfer the consumer's data upon the authorized request from the entrant. This may be particularly useful as the Internet of Things becomes more important; a consumer may wish to

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[172] *See* Fletcher, *supra* note 48.

[173] This is why incumbents may create or maintain systems that make data portability difficult. *See* Section I.I.B.1, *supra*.

[174] *See, e.g.*, the RadicalxChange group. *Mission and Values*, RADICALXCHANGE (2019), https://radicalxchange.org/about/. The group's chair, Glen Weyl, has argued in a paper written with colleagues that it's a mistake to view internet services priced at $0 as simply free; instead, data can be viewed as a form of labor or barter. *See* Imanol Arrieta-Ibarra et al., *Should We Treat Data as Labor? Moving Beyond "Free"*, 108 AMER. ECON. ASSOC. PAPERS & PROCEEDINGS 38 (2018), https://pubs.aeaweb.org/doi/pdfplus/10.1257/pandp.20181003 (exploring "whether and how treating the market for data like a labor market could serve as a radical market that is practical in the near term").

[175] *See* EC COMPETITION REPORT, *supra* note 1, at 8; *id.* at 24.

[176] *See* U.K. COMPETITION REPORT, *supra* note 1, at 129, § 5.11.

port the food supply service that was bundled with her new refrigerator from Amazon to an entrant. Being able to authorize the entrant to obtain all her data from Amazon will lower the cost of switching. Conceptually, automatic porting is no different from manual porting, but it is mechanized in a way that is likely to raise contestability and therefore can make entry more profitable. The Vestager Report notes that the GDPR Article 20 provides these data portability rights to Europeans. If consumers have the right to quickly and easily patronize an entrant without data lock-in, there will be more incentive to enter into these markets. However, other entry barriers remain, which we discuss below.

d. Open Standards to Promote Competition

The DA should move preemptively to prevent the consolidation of control over users' identities, as this would create a large new source of market power. The DA could create an open standard so that new entrants can easily offer their own digital identity product that allows users to access goods and services online. One example of this type of product is Solid, by Tim Berners-Lee, often named as the creator of the World Wide Web. Solid offers users a "POD" that safeguards their digital identity that they can use to connect with different services.[177] Several government-backed efforts at identity portability are underway across the world. These include Estonia's e-Estonia initiative to give citizens a unique digital identifier; India's Aadhaar, a verifiable 12-digit identity number issued for each citizen which serves as an identifier and authenticator for a variety of offline and online services; Sweden's and Norway's BankId, which allows companies, banks, and governmental agencies to identify and conclude agreements with individuals over the internet; and even self-sovereign identity solutions studied by start-ups that would use blockchain to allow individuals to own their identity credentials and control who can access their data in online services. If an individual could then port their identity to the platforms and providers they wish to use, this would again promote entry of new services and erode the switching costs of established platforms.

The DA could consider creating an open standard that would facilitate micro-payments among consumers and digital entities. The coordination needed among stakeholders to create a successful micro-payment system is substantial, and it likely will require assistance and oversight from a regulator.

e. Merger Review

The behavior that may be of greatest concern to the many policymakers studying powerful digital businesses is their acquisition of potential competitors. These acquisitions often fall below the value threshold under which the buyer would need to notify competition authorities in advance of the deal. As a consequence, authorities have limited or no ability to assess whether a

[177] *See How It Works*, SOLID (2019), https://solid.inrupt.com/how-it-works.

given deal is procompetitive or harmful to competition before it closes.[178] Markets move quickly and a competitor's window of opportunity to gain traction against the incumbent is short. For these reasons, Congress could give the DA merger review authority. Similar to the FCC's merger review role, this would be conducted concurrently with the antitrust review done by the FTC or DOJ, but with different standards and tools. It would not be prudent to alter the nation's antitrust laws to accommodate one difficult and fast-moving sector where false negatives are particularly costly. Therefore, giving additional power over merger review to the sectoral regulator is a good solution.

These specific merger regulations should require merging firms to demonstrate that the combination will affirmatively promote competition. This shifting of the burden of proof from the government (to prove harm) to the parties (to prove benefit) will assist the DA by placing the job of demonstrating efficiencies on the parties, who have a greater ability to know what they are. In some cases, the DA's review may be the only merger review conducted, as it should not be subject to the minimum size limitations on HSR filings. In particular, notification and pre-clearance could be required for any acquisition by a business designated as having bottleneck power.[179]

In its merger review process, the DA could be explicitly tasked with evaluating a given merger's likely harm to existing as well as potential competition. Another example discussed above is the case of content or complements that could expand from that position to compete with the digital bottleneck business itself. As already noted, entry from elsewhere in the vertical (or conglomerate) chain may be the most effective and promising entry point to challenge an established bottleneck business. Mergers with either of these types of entrants have the effect of neutralizing companies that might one day have posed a competitive challenge to the bottleneck business. This view of potential competition should drive DA merger review.

The decision in *Credit Suisse* and the dicta, or language, in *Trinko* greatly expanded the industries and conduct that have become, for practical purposes, exempt from antitrust scrutiny.[180] The agencies have understandably been skittish to expend limited resources bringing cases that risk being thrown out on *Trinko* grounds.[181] It is important that *Trinko* not be used to

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[178] *See* Section III.2.B, *supra*, for a further discussion of these difficulties.

[179] When network effects are strong, a digital business with bottleneck power will likely only have very small competitors. Therefore, even small transactions can neutralize an important potential competitor that is poised to grow. *See* Section III.3.B, *supra*.

[180] *See* Credit Suisse Securities (USA) LLC v. Billing, 551 U.S. 264 (2007); Verizon Communications v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398 (2004).

[181] Howard Shelanski, at the time the FTC's top antitrust economist, testified in Congress on behalf of the Commission a few years after the *Credit Suisse* decision. He argued that a narrow interpretation of *Trinko* was possible. *See Is There Life After* Trinko *and* Credit Suisse*? The Role of Antitrust in Regulated Industries: Hearing Before the Subcomm. on Courts and Competition Policy of the H. Comm. of the Judiciary*, 111th Cong. (2010) (statement of Howard Shelanski, Deputy Director for Antitrust in the Bureau of Economics at the FTC), https://www.ftc.gov/sites/default/files/documents/public_statements/prepared-statement-federal-trade-commission-courts-and-competition-policy-committee-judiciary-united/100615antitrusttestimony.pdf [hereinafter Shelanksi

create a no-man's land where neither regulation nor antitrust are applied to harmful behavior. A traditional antitrust savings clause can no longer be relied upon, as the clause in the 1996 Telecom Act was found insufficient to protect antitrust enforcement in *Trinko*. Legislation creating regulation and antitrust enforcement for digital businesses should address this concern head on. The statute must be extremely specific, explaining for each tool and goal whether it is intended to supersede antitrust or not. Antitrust enforcers and other agencies can share dual authority with different review standards and goals. They can account for each other's determinations in a manner that will minimize inconsistencies without having one always take priority over the other. Antitrust must remain in full force except where Congress explicitly says otherwise.

The merger review process must move rapidly. The agency will need a simple and efficient merger review process so that businesses can move forward without undue delay, and the agency does not expend more resources than necessary. These concerns indicate that the burden of proof must primarily be placed on the merging parties who have the incentive, data, and resources to quickly deliver the right information to the authority. Decisions should be subject to judicial review, like a rulemaking process under the Administrative Procedure Act, with reliance on the specialist Competition Court discussed above. However, in light of the difficulty of winning antitrust cases in current US courts, judicial review will be effective at supporting the mission of the DA when combined with a more explicit and tougher enforcement statute or a Competition Court, or both.

In order for the agency to be most efficient, it should use a combination of adjudication and rulemaking for these merger transaction reviews. Rules help businesses know what behavior is proscribed, and help the agency clarify its intentions without having to wait for a good test case—or multiple test cases—to fully explain the issue. Clear rules will help companies avoid proposing anticompetitive transactions to begin with.

The cost of such regulation is duplicative merger reviews. However, given the importance of markets that tip and the uncertainty about whether an acquisition is a substitute or complement, having two reviews is perhaps helpful in getting to the right answer. If the regulator can block an incumbent platform's acquisition of potential competitors, and those competitors have the ability to quickly get their customers' data, entrants will plan to enter and compete with the platform, rather than enter and be bought. If the competitive environment is improved by data portability

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Testimony]. The key facts in *Trinko* were that the legislation at issue, the 1996 Telecom Act, went farther than antitrust law; an agency, the FCC, had issued rules directly regulating the conduct at issue; and the FCC actively administered those rules. *See Trinko*, 540 U.S. 398. Shelanski argued that "[w]here a competent agency actively administers a rule whose standard for the competitive conduct at issue in litigation is more demanding on the defendant than antitrust law, the Court was right to find it relevant whether the marginal gains outweigh the potential costs of antitrust enforcement against the same conduct." Shelanski Testimony at 9. Yet he expressed concern that courts may use much broader interpretations of the line of cases. The Court in *Trinko* expressed concern about misuse of antitrust law by impudent plaintiffs, so some preemption could be limited to private plaintiffs, with expert agencies being given greater leeway.

and the elimination of exclusionary conduct, the chance of success will rise and consumers will benefit from increased competition.

f. Interoperability

There may be settings where the DA is charged by Congress to prevent the creation of market power in the first place due to the importance of the market and the potential harms from the market power. Such a market would be a candidate for open interoperability standards that could be used by all competitors and would promote entry. The DA could oversee the creation of an open standard and its adoption in the market of interest. For example, devices in the home might be required to adhere to an open standard so that any platform could connect with any device. Without such a standard, an Apple thermostat would not function in conjunction with a Google home assistant. Under an open standard, if a consumer had purchased a number of Amazon appliances and then switched her home assistant from Amazon to Apple, she would not need to purchase a new refrigerator, thermostat, and security system because all of those devices could connect to the new platform and stay functional. It is possible that such open standards can slow down innovation that depends on the interface, but open standards will drastically reduce lock-in and market power, leading to greater incentive to innovate on the service itself.

2) Regulations that apply to firms with bottleneck power

Some regulations should apply only to firms that meet the DA's definition for bottleneck power. In these cases, the bottleneck firm has the incentive and ability to harm competition and is an important source of consumer welfare. These firms require extra monitoring to be sure they are not violating antitrust, or other laws, because of the uncertainties in technology and demand, the speed at which platforms tip, the irreversibility of tipping, and the need for expert evaluation of the design of algorithms. For all of these reasons, the cost of false negatives is high and therefore, under conditions of uncertainty, the public interest requires the DA to take a more interventionist approach.[182]

a. Mergers

The DA could be given merger review authority over all transactions involving digital businesses with bottleneck power because new competition against these entities is the most valuable for consumers. Businesses with bottleneck power would notify the DA and obtain pre-clearance for an acquisition of any size. While this would potentially result in many reviews for the DA, their number will be limited by the number of platforms with bottleneck power.

The DA may want to use its merger review authority over bottleneck firms to assess consummated mergers, just as the antitrust authority can under section 7 of the Clayton Act. Past

[182] If these regulations fail to create or maintain competitive digital markets, the DA should alert Congress that neither antitrust nor existing regulatory tools are effective so that Congress may consider stronger steps.

mergers of potential competitors that created monopoly positions could be assessed in this way. Similarly, past vertical mergers (e.g. a business that develops tools for brands to place ads and a business that runs mechanisms to set ad prices) may be found to cause higher prices or otherwise lessen competition. Any such anticompetitive mergers could be unwound by the DA.

b. Non-discrimination and foreclosure

Discrimination against current or future rivals is an important tool in a foreclosure strategy by a digital business with bottleneck market power.[183] As explained above, there are broadly two types of foreclosure of a complement: one that operates against a complement that is a potential competitor of the platform itself, and one that operates only on the platform between rival providers of content. Because large digital platforms today are conglomerates with large eco-systems of complements, this is an important area in which to enforce competition. Non-discrimination can be a helpful tool in creating a competitive environment in which entrants are protected and can thrive, while allowing a platform to vertically integrate to some degree. Non-discrimination requirements should be used only after careful study because they can also prevent efficient forms of service that enhance competition.

Anticompetitive foreclosure of a firm that is a current or potential competitor can be addressed by the antitrust authority if the antitrust law is strong enough. If not, there will be a role for the DA to develop a stronger rule in order to successfully enforce against such foreclosure by firms with bottleneck power. Furthermore, the DA could use similar rules in a forward-looking regulatory context. Effective non-discrimination rules can foster entry and diversity, create potential sources of disruptive innovation and protect start-ups and other entrants. The goal of the forward-looking regulation is to prevent a digital business with bottleneck power from exercising it in order to protect *entrants on* the platform so that they have the chance to become *competitors of* the platform.

Platform strategies to prevent multi-homing are an important category for the DA to include in its analysis of foreclosure. A platform contract to induce single-homing on one side of a multi-sided market can be used to reduce competition (e.g., a loyalty payment to drivers of a ride-sharing service). Likewise, a platform can make it costlier for users to multi-home among applications on the platform by, for example, limiting data sharing. Such strategies can foreclose entrants and harm competition; appropriate regulation could limit their use by firms with bottleneck power.

The second reason for forward-looking regulation is to prevent digital businesses with bottleneck power from inefficiently expropriating rents created by complements on their platform. As described above, this harm is less well-protected by antitrust laws so the need for enhanced

[183] For a deeper discussion of the power of discrimination in preventing entry by disintermediation, see Section II.2.B.3. *supra*.

regulation will be greater when considering foreclosure *on* the platform. The DA may be able to build on the concept of "business to platform" regulation that is developing in Europe to create effective non-discrimination rules.[184] The motivation of this EC regulatory effort is to create a "fair, predictable, sustainable, and trusted legal environment" in which complementors and content providers can invest safely and contribute to social welfare.[185] The Vestager Report states that platforms "[i]f dominant . . . have a responsibility to ensure that they regulate in a pro-competitive way. Dominant platforms should be subject to a duty to ensure interoperability with suppliers of complementary services."[186] Likewise, the Furman Report recommends developing a platform code of conduct to ensure fairness.[187]

The DA could promulgate regulations prohibiting the foreclosure of a competing content provider on a platform that is vertically integrated. The authority would need to develop rules to identify foreclosure that might depend on finding certain anticompetitive conduct, market share, or market power to make such determinations. The DA must also account for potential pro-competitive innovations that a company with bottleneck power seeks to provide. The data collected by the DA will allow it to examine such outcomes and weigh all factors to make pro-competitive determinations. This balancing will be costly and, despite its best efforts, the regulator may err. However, as the report emphasizes, non-intervention is also costly. Non-discrimination rules in the past suffered from slow and expensive adjudication, which limited their usefulness.[188] Strategies for speedy adjudication are addressed in detail below.

c. Bundling

A digital platform with bottleneck power may have a contract with complementors (e.g., retailers on an ecommerce platform) that bundles together access to their transaction data along with logistics services. This could have harmful anticompetitive effects.[189] As described above, the business may also compete against those retailers on its ecommerce site. The business could use

[184] For regulatory developments, see *Fairness in Platform-to-Business Relations*, EURO. COMM'N, https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5222469_en.
[185] *Proposal for a Regulation of the European Parliament and of the Council on Promoting Fairness and Transparency for Business Users of Online Intermediation Services*, at 3, COM (2018) 238 final (Apr. 26, 2018), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0238 ("The present proposal aims at ensuring a fair, predictable, sustainable and trusted legal environment for business users, corporate website users, providers of online intermediation services and online search engines alike, which will limit the occurrence and the impact of harmful platform-to-business trading practices occurring in certain online activities, thereby safeguarding trust in the online platform economy and preventing further legal fragmentation of the Digital Single Market.").
[186] EC COMPETITION REPORT, *supra* note 1, at 71.
[187] *See* U.K. COMPETITION REPORT, *supra* note 1, at 5.
[188] *See Leased Commercial Access Modernization of Media Regulation Initiative*, Further Notice of Proposed Rulemaking, 33 FCC Rcd 5901 (2018), https://docs.fcc.gov/public/attachments/FCC-18-80A1.pdf, at 1, n.2 and accompanying text (noting that "the [Federal Communication] Commission's 2008 Leased Access Order . . . has [been] stayed for a decade in conjunction with several judicial appeals").
[189] Retailers may accept what otherwise seems like a bad bargain due to the importance of being available to customers through the bottleneck. *See* Section II.2.B.4., *supra* for a discussion of bottleneck firms' ability to dictate business terms.

the retailers' data to learn which products are selling well and expropriate the ideas and strategies of the retailer. That data advantage over rivals can enable a company to achieve and/or maintain critical economies of scale, better predict consumer behavior, and form a powerful barrier to entry for potential competitors.[190] Bundling may also discourage multi-homing.

Another example of possibly harmful bundling could occur when a platform owner requires installation of a bundle of applications. Those apps might be chosen to block the growth of rival apps that were extracting rents from the platform or threatening to be a future competitor of the platform. The Internet of Things will create more settings in which bundling policy will be critical. Will a consumer's new fridge arrive with a supply contract from Amazon's WholeFoods? Will the consumer be able to change that contract in some period of time, or is the consumer permitted to purchase the fridge without any contract?

An antitrust case in these settings may be ineffective in protecting entrants and competition in digital bottleneck businesses due to the complexity of the problem and the slow pace of litigation. However, the DA could establish regulations that prohibit anticompetitive bundling by firms with bottleneck power. Such a firm would be required to demonstrate that its bundle was on balance procompetitive if foreclosure was alleged. The DA could require unbundling and an offer to business customers of a choice of contracts in the case of anticompetitive bundling. The DA would need to enforce such contracts.

iii. DA-Enforced Remedies for Antitrust Violations

When a company has been found liable for violating the antitrust laws, the antitrust authority is tasked with devising a remedy to restore the lost competition. A fine does not restore lost competition. No longer engaging in the illegal conduct may help the next entrant or complement that wishes to interoperate, but it will typically not restore the competition that has already been lost, particularly in the face of durable barriers to entry that protect incumbent digital platforms.

Antitrust authorities are good at enforcing structural remedies that require no ongoing monitoring, such as requiring a divestiture between a platform and its content, or the sharing of a dataset or intellectual property with the entrant, royalty-free. However, reducing entry barriers often requires a remedy that involves ongoing monitoring, as do behavioral remedies, such as firewalls between platforms and content. As mentioned above, the DA could also enforce remedies for antitrust violations identified and addressed by existing antitrust agencies.[191] Below are some types of remedies for which the DA would be a more appropriate body to enforce.[192]

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[190] *See* Section I.1.B.1. and Section I.2.A.3, *supra*.
[191] *See* Section III.3.A., *supra*.
[192] For example, ongoing monitoring. *See* Section III.3.A, *supra*.

1) Data Sharing

Anticompetitive conduct may result in a market that has tipped in favor of a single provider which then benefits from unparalleled access to data. In those cases, a new entrant may find it impossible to service users with new products as it lacks the scale needed for effective operation. Data sharing could restore the lost competition. The relevant data to share may not be just historical data, but present and future data also. Because data are non-rivalrous, an incumbent can both share its data with a competitor and also keep it. Thus, access to data forms a very important remedy in the toolkit of both the antitrust authority and the DA. The Furman Report recommends that agencies mandate "data openness" (which leads to data sharing) to enhance competition.[193] The Vestager Report likewise recognized that data sharing can help level the playing field.[194]

2) Full Protocol Interoperability

Another useful tool that could restore lost competition is an open protocol and interoperability standard that would be available for entrants to use on a continuing basis and allow them to overcome network effects. A bottleneck business whose anticompetitive conduct created a monopoly position could be required to interoperate with its competitors. Entrants, previously rendered uncompetitive by network effects, could use the APIs to bring information from the incumbent bottleneck firm to its own users. In a social media context this would allow the users of the new service to see not only all the content on their own service, but also content from friends on an incumbent site that was subject to an interoperability requirement. The network barrier to entry would no longer protect the incumbent firm, which would then encourage entry into the industry. Interoperability would facilitate ongoing competition on the merits of the user experience, rather than on the size of the installed base, and potentially stimulate robust competition.

Interoperability managed by the DA would be necessary due to the ongoing monitoring needed, the likelihood of technical change, and the incentive for non-cooperation by the incumbent firm. The DA could mandate the standard protocols or APIs to be applied and tightly control the process to avoid having competition undermined by actions of the dominant firm. The DA would need a process to update protocols at the time of the launch of new functionality or innovation. It would need rules to protect the privacy and choice of users on one service as some form of access to them is granted to users of another service. With easy interoperability, users will be free to make a real choice about which service they prefer. This will encourage new market entry and vigorous competition between providers.

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[193] *See* U.K. COMPETITION REPORT, *supra* note 1, at 10, 74, § 2.79.
[194] *See* EC COMPETITION REPORT, *supra* note 1, at 98-107.

3) Non-discrimination

The clear and simple remedy for a case when a bottleneck digital business favors its own content or complement is divestiture of one of the businesses, either the bottleneck business or the content/applications. This removes both the incentive and the ability for the conduct. However, this structural remedy could be costly to consumers in various ways, leading to the conclusion that a behavioral non-discrimination remedy might be more appropriate. Requiring a dominant bottleneck to abide by a non-discrimination rule could induce competitive entry by allowing complementary businesses to thrive and eventually become horizontal competitors to the bottleneck.[195] The ongoing monitoring necessary to enforce this type of remedy in a specific antitrust case is not an ideal role for an antitrust agency. However, if the antitrust agency determines that such a remedy run by the DA would restore and protect competition, the law would allow it the option of requesting the DA to carry out the remedy. A speedy mechanism to adjudicate complaints would be of key.

4) Un-Bundling

As described above, the requirement to unbundle contracts could be an antitrust remedy that is less onerous than divestiture. Such a remedy would require ongoing monitoring that would best be performed by the DA.

iv. Aligning other policies with competition

In addition to the structural competition tools, the authority should be empowered to align privacy protection, as well as AI and algorithmic oversight, with competition goals. Privacy protections that shield consumers from misuse or over-collection of their data can be set up in a way that raises or lowers entry barriers. This point is often forgotten inside a specialist agency and therefore we strongly suggest that the DA's mandate include evaluating and then directing regulatory solutions in a pro-competitive direction.[196] Mandating that the DA have vigorous competition as one of its goals will help to make sure that potentially complex analysis takes place and that the needs of entrants are taken seriously when making policy decisions. The authority may also need to examine the development and use of algorithms to capture consumer attention, maximize advertising revenue, and drive consumer purchases or information selection, and examine how structural or other tools can promote competition in that space as well.

v. Adjudication Process

Adjudication of disputes by this new authority must be quick. Due to the fast pace of change in these industries, the short amount of time it takes to destabilize or eliminate an entrant, the

[195] *See* Section III.2.B.3.E.
[196] It is worth considering whether the competition function and staff of the DA will be more effective when incorporated into other agency tasks or separated into a distinct division.

substantial discrepancy in bargaining power between digital bottlenecks and their business customers, and the necessity to use government resources efficiently, a speedy process is crucial. This could be achieved through mandatory deadlines for dispute resolution or other procedural rules requiring the authority to produce a decision in a fixed number of days, as well as by crafting clear standards that are simple to enforce where possible.

The regulatory framework outlined above would coexist with and complement antitrust enforcement, only blocking transactions and preventing behavior that harm the public interest in ways clearly defined by Congress and that strengthen the reach of antitrust. The authority could help elucidate the common line-drawing problem of what behaviors are in or out of the reach of antitrust through communication with the antitrust enforcement agencies and with the public. An effective regulator will devise rules that promote competition and new avenues for innovation.

V. Conclusion

This report has discussed the unique combination of attributes of large digital platforms and their tendency toward entrenched market power. The entry barriers that result are in part due to certain characteristics of digital technology, but in part also due to behaviors of market participants. Consumers create entry barriers with their behavioral biases, and incumbents create entry barriers through strategic use of contracts and technologies, as well as by engaging in various other activities. The resulting monopoly or concentrated market structures do not serve consumers as well as would a market in which entry is a credible, or actual, reality.

Public policy has been slow to respond to economic harms resulting from these conditions. Such harms include advertising prices that are higher than would be expected in a more competitive environment. The markups distort decision-making and are subsequently passed through to consumers in the goods and services they buy. There are also quality harms. Platforms have incentives to provide low quality in order to keep users "engaged" and sell more ads. More generally, a lack of competition lessens the pressure on any platform to deliver high quality to its customers for fear that they will move to a rival platform. Perhaps most importantly, insufficient competition among and for digital platform position distorts and reduces innovation in a sector that has been—and, under the right conditions, will continue to be—the source of huge benefits for consumers and society.

It is unlikely that these problems will self-correct, meaning new and revised rules and incentives will be needed to prevent market power from entrenching a few dominant tech firms as economic and social gatekeepers. The United States is very far behind the frontier in antitrust enforcement, both because courts have taken a conservative view of what constitutes anticompetitive conduct and because agencies have not yet developed expertise in digital competition cases. Considerable work can be done by academics to help provide new relevant knowledge and tools to both agencies and courts. It also may be necessary for Congress to pass new legislation that revises the antitrust laws, establishes a specialist Competition Court, or

both. The committee believes that vigorously enforcing the antitrust laws under these conditions would be likely to increase entry in digital platform industries, competition, and consumer welfare. Moreover, such enforcement would result in remedies to restore competition that has already been lost as well as serve as a deterrent to future anticompetitive conduct. Finally, because the problems we identify may require action beyond antitrust, we also propose the establishment of a new digital regulatory agency, or Digital Authority.

Such an agency could increase social welfare by establishing baseline market rules and conditions that both promote competition and limit the dimensions of competition to those that benefit consumers, rather than exploit them. In addition, the agency could assist in carrying out modern competition enforcement, using burdens of proof that reflect new understandings of market behaviors.

Whether the platforms that are dominant today have achieved that position entirely on the merits bears further examination. If illegalities are determined, appropriate remedies will be needed to restore the lost competition. However strong antitrust remedies likely will require coupling with market-opening regulations to overcome market power that prevented competitive market entry. Going forward, two important goals for public policy are ensuring entry and competition *for* platforms, as well as creating competition *on* platforms. Forward-looking laws and regulations should be geared to lowering entry barriers as much as possible and vigorously guarding against exclusion, lock-in, and foreclosure in the platform context. Without a swift policy pivot to apply these combined tools, digital markets may tip toward levels of entrenched power that undermine the benefits of innovative digital businesses for American consumers.

Mr. CICILLINE. Thank you, Dr. Scott Morton.

And now the chair recognizes Ms. Mitchell for 5 minutes.

TESTIMONY OF STACY MITCHELL

Ms. MITCHELL. Thank you, Chairman Cicilline and members of the committee. I really appreciate this opportunity to participate in this hearing and this historically important investigation.

America's independent businesses are in trouble. They are declining rapidly across many sectors of the economy and it's not because they can't compete. On the contrary, research shows that in many sectors they actually out perform their larger rivals on many measures, including price.

Rather, the evidence suggests that the problem can be traced to changes in policy and particularly our antitrust enforcement that have allowed a few dominant corporations to consolidate markets and given them free reign to hobble their smaller competitors.

Today, this threat is really magnified in our digital markets. A handful of dominant players now act as gatekeepers. Amazon, in particular, last year, Amazon captured about $1 of every $2 that Americans spend online. But the more consequential measure of its market power is that half of all online shopping searches now start on Amazon's platform.

What this means is if you are—is that for every—virtually every company in the economy that either makes or retails anything increasingly to reach the online market you have little choice but to sell through a platform that's run by your most aggressive competitor.

This is a bitter pill. Becoming a seller on Amazon's platform means forfeiting to Amazon your product knowledge, a trove of data about your transactions. It means giving Amazon a sizable cut of your revenue, and it means entering into a relationship that is often predatory.

Studies show that Amazon learns from the retailers on its platform and starts selling their most popular items itself. It has capsized businesses overnight by changing its terms, gating products so they can't sell them suddenly, or simply canceling their accounts without explanation.

In the absence of competing platforms, there's no downward pressure on the fees that Amazon can charge sellers, and indeed these fees now constitute a sizable tax on its competitors' trade.

And although Amazon didn't address this directly today, it is true that, in order to rank high and have a better chance of winning a buy box, you need to use its fulfillment services, and those fees have increased by double digits for the last few years.

Amazon is many things. It's a platform. It's a retailer. It's a manufacturer. It's a digital ad giant and so much more. And, really, I think key to understanding its market power is that it's able to leverage the interplay between these different business lines to extort value from its competitors.

An executive at a large, well-known performance footwear brand that sells to Amazon told, me that as long as his company sold to Amazon on their terms, they would help him police the counterfeiters and the other nefarious sellers on the platform.

But the moment that they pushed back, that they didn't agree to that next big discount or the change in terms, Amazon's site became a Wild West of sellers misrepresenting his brand, many overseas and unreachable. He said, quote, they use this as a punitive measure. They can sink companies without anyone to answer to.

Increasingly our commerce is occurring not in a market but in a private arena governed by Amazon, where it has the power to regulate, tax, and punish America's entrepreneurs. And the consequences of this are being felt around the country. There are few metros that are doing well, but most places are not. Local businesses are disappearing and, with them, a pathway to the middle class. Producers are struggling to invest in new products and grow their companies. New business formation is down to historic lows.

And for many Americans, including those who walked out of an Amazon warehouse this week, work has become increasingly exploitative because there are so few companies competing for their labor.

Amazon would like us to believe that to challenge its dominance is to somehow challenge the digital revolution itself. But the issue here is not technology; it's power, and it's the policies that enable that concentration of power.

In fact, the urgent risk we face if we do not act is that entrepreneurialism and invention will become increasingly stifled. I hope the committee will consider several policy tools as part of this investigation. In particular, we very much endorse the approach that Congress took with regard to the railroads, that if you operate essential infrastructure, you can't also compete with the businesses that rely on that infrastructure.

But we also need nondiscrimination rules for platforms, stronger enforcement against anticompetitive conduct, and changes to merger policy particularly in light of the pivotal acquisitions that Amazon and other tech giants have made that have flown under the enforcement agency's radar.

Thank you very much.

[The statement of Ms. Mitchell follows:]

ILSR INSTITUTE FOR Local Self-Reliance

Testimony of
Stacy F. Mitchell[1]
Co-Director
Institute for Local Self-Reliance

Before the United States House of Representatives
Committee on the Judiciary

Subcommittee on Antitrust, Commercial, and Administrative Law

Hearing on:
Online Platforms and Market Power
Part 2: Innovation and Entrepreneurship

Washington, D.C.
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[1] With thanks to Zachary Freed, Research Associate, for his support in preparing this statement.

Good afternoon Chairman Cicilline, Ranking Member Sensenbrenner, and Members of the Subcommittee. Thank you for the opportunity to participate in this important hearing and the historic investigation that you are undertaking. My name is Stacy Mitchell. I am the co-director of the Institute for Local Self-Reliance (ILSR), a public interest research and advocacy organization. Since 1974, we've worked to advance policies that disperse economic power and strengthen local communities.

My statement begins with a brief overview of how changes in policy, particularly competition policy, have led to a sharp decline in independent businesses across many economic sectors, fueled growing concentration, and opened the way for a handful of technology giants to assume control over the basic infrastructure of commerce. It then turns to the rise of Amazon and details how its dominance is harming competition, entrepreneurship, innovation, and local economies. For several years, ILSR has been conducting in-depth research on Amazon, drawing on a variety of sources, including interviews with dozens of manufacturers, retailers, and other firms. Some of these executives and business owners are quoted here, a few by name, but most insisted on anonymity because they are fearful of the power that Amazon holds over their companies. Finally, I outline several policy approaches for restoring competition in digital commerce.

Introduction: The State of Independent Business

Across many sectors of the economy – from manufacturing, to retail, to banking, to services – independent businesses have been declining sharply in both numbers and market share.[1] Meanwhile, starting a new business appears to have become harder than ever. The number of new firms launched each year has fallen by nearly two-thirds since 1980.[2] This loss of independent business and entrepreneurship has far-reaching implications. Research shows that it impacts innovation, mobility into the middle class, the well-being of communities, and even democracy.[3]

It's not that independent businesses can't compete. On the contrary, our research has found that independent businesses are nimble competitors. In many sectors, they outperform their larger rivals by key measures, and they deliver distinct consumer and market benefits that large corporations cannot match.[4] Independent pharmacies, for example, offer lower prices and better healthcare than the chains.[5] Small local banks have lower account fees and do more lending to new and growing businesses than big banks do.[6] Independent office supply dealers have lower prices than the big

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[1] "Antitrust and the Decline of America's Independent Businesses," Stacy Mitchell, *The Antitrust Bulletin*, June 2017.
[2] "Dynamism in Retreat: Consequences for Regions, Markets, and Workers," *Economic Innovation Group*, Feb. 2017.
[3] "Antitrust: A Missing Key to Prosperity, Opportunity, and Democracy," Barry C. Lynn, *Demos*, Oct. 2013; "Market Power and Inequality: The Antitrust Counterrevolution and its Discontents," Lina Khan and Sandeep Vaheesan, *Harvard Law and Policy Review*, Apr. 24, 2016; "The Social Costs of Mergers: Restoring Local Control as a Factor in Merger Policy," *North Carolina Law Review*, Richard M. Brunell, Dec. 1, 2006.
[4] "Antitrust and the Decline of America's Independent Businesses," Stacy Mitchell, *The Antitrust Bulletin*, June 2017.
[5] "Shop Around for Lower Drug Prices," Lisa L. Gill, *Consumer Reports*, Apr. 5, 2018; "Consumers Still Prefer Independent Pharmacies, CR's Ratings Show," Lisa L. Gill, *Consumer Reports*, Dec. 7, 2018.
[6] "Antitrust and the Decline of America's Independent Businesses," Stacy Mitchell, *The Antitrust Bulletin*, June 2017.

chains and Amazon, and they pioneered next-day delivery 40 years ago.[7] And, yet, across all of these sectors and others, independents are a rapidly shrinking part of the market.

The evidence suggests that the main driver of this troubling trend can be traced to changes in public policy that began in the 1970s and 1980s. In particular, our federal antitrust agencies radically changed how they interpret and enforce our antitrust laws. As a result of these changes, dominant corporations have been allowed to amass an unprecedented degree of market power, and have been given far more leeway to use that power to undermine, exclude, and crush their smaller rivals.[8] Over time, the ideological shift that drove these changes in antitrust enforcement also infused other areas of public policy with a bias in favor of big business, creating an environment less and less hospitable to independent businesses.

The emergence of dominant digital platforms has added new and alarming dimensions to the problem of concentrated economic power. A growing share of our commerce now flows through a handful of digital platforms. These powerful gatekeepers not only control market access, but also directly compete with the businesses that depend on them. Until policymakers address this fundamental conflict-of-interest, the United States will almost certainly continue to become less dynamic and entrepreneurial, less equal in its distribution of wealth and opportunity, and less a place of freedom and democratic self-determination.

1. Amazon's platform has become essential infrastructure for producers and retailers of consumer goods.

Last year we reported on the story of Gazelle Sports,[9] which is typical of the predicament that many companies producing or retailing consumer goods now find themselves in. Founded in 1985, Gazelle Sports is a popular independent retailer of running shoes and sporting apparel with four locations in Michigan. For many years, Gazelle Sports grew steadily, swelling to a bout 170 employees. As its customers moved online, so too did the company. Gazelle Sports built a robust e-commerce site. With scores of enthusiastic reviews on Google and Yelp, the site came right up in online searches, yielding a brisk stream of customers and sales.

But, in 2014, sales began to decline. The problem was that many people in Michigan and across the country were no longer starting their online shopping on a search engine, where they might find Gazelle Sports. Instead, they were going straight to Amazon. By 2016, the share of online shoppers

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[7] "Amazon Business Pricing Comparison," OPSoftware, LLC, Jul. 10, 2018; "Amazon's Next Frontier: Your City's Purchasing," Stacy Mitchell and Olivia LaVecchia, *Institute for Local Self-Reliance*, Jul. 10, 2018.

[8] "Monopoly Power and the Decline of Small Business: The Case for Restoring America's Once-Robust Antitrust Policies," Stacy Mitchell, *Institute for Local Self-Reliance*, Aug. 2016; "How the Federal Government Rigs the Game Against Small Businesses," Stacy Mitchell, *Washington Monthly*, Feb. 26, 2019; "Walmart's Monopolization of Local Grocery Markets," Stacy Mitchell, *Institute for Local Self-Reliance*, June 2019.

[9] "Amazon Doesn't Just Want to Dominate the Market–It Wants to Become the Market," Stacy Mitchell, *The Nation*, Feb. 15, 2018.

bypassing search engines and beginning their product search on Amazon had grown to 55 percent.[10] With sales flagging and staff reductions underway, the owner of Gazelle Sports, Chris Lampen-Crowell, made what seemed like a necessary decision: Gazelle Sports would join Amazon Marketplace, becoming a third-party seller on the digital giant's platform. "If the customer is on Amazon, as a small business you have to say, 'That is where I have to go,'" he explained. "Otherwise, we are going to close our doors."

Virtually every manufacturer and retailer of consumer goods in America faces this same predicament. In order to reach more than half of the online market, they have to sell through a platform operated by one of their most aggressive and formidable competitors. This is a bitter pill. It means handing over to Amazon their customer relationships, their product expertise, and a sizeable cut of their revenue.

In 2018, online retail spending in the U.S. surpassed $510 billion.[11] Amazon's platform captured more than half of this spending.[12] While online shopping has been growing rapidly, Amazon's share of this market has been growing even faster. In 2014, online shopping was a $300 billion market and Amazon accounted for about one-third of this spending.[13] In specific product categories – including books, toys, apparel, and electronics – Amazon has a commanding market share of all sales, online and offline.[14]

Arguably the more consequential measure of Amazon's platform power, however, is its share of online shopping search. More than half of all online shopping searches in the U.S. start on Amazon.[15] One of the main drivers of this dominance is Amazon Prime, the company's membership program, which provides two-day shipping and other perks for $119 per year. Already, 100 million Americans, accounting for more than half of the country's households, are Prime members.[16] There's evidence that being a Prime member alters consumer behavior. When people pay for Prime, they naturally want to maximize the value in free shipping they derive from it by doing more of their shopping on Amazon. Studies show that Prime members are significantly less likely to comparison-shop, and they spend nearly three times as much on Amazon, compared to non-Prime customers.[17]

As a result of these dynamics, companies that once drew sufficient consumer traffic from search engines to their own sites are now compelled to become vendors or sellers on Amazon's platform – or

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[10] "55 percent of online shoppers start their product searches on Amazon," Jason Del Rey, *Recode*, Sep. 27, 2016.
[11] "Quarterly Retail E-Commerce Sales, 4th Quarter 2018," *U.S. Census Bureau News, U.S. Department of Commerce*, Mar. 13, 2019.
[12] "Amazon Suppliers Panic Amid Purge Aimed at Boosting Profits," Spencer Soper, *Bloomberg*, Mar. 7, 2019.
[13] "Amazon's Stranglehold: How the Company's Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities," Olivia LaVecchia and Stacy Mitchell, *Institute for Local Self-Reliance*, Nov. 2016.
[14] "Amazon Has Basically No Competition Among Online Booksellers," Polly Mosendz, *The Wire*, May 30, 2014; "Deutsche Bank: Amazon set to eclipse Best Buy as top consumer electronics retailer," Daphne Howland, *Retail Dive*, June 22, 2016; "The Western Toy Market," Lutz Muller, *Toy Directory Online*, Feb. 1, 2015;" "Cowen: It Looks Even More Like Amazon Will Become America's Top Clothing Retailer in 2017," Julie Verhage, *Bloomberg*, May 11, 2016.
[15] "More Than 50% of Shoppers Turn First to Amazon in Product Search," Spencer Soper, *Bloomberg*, Sep. 27, 2016.
[16] "Amazon reveals it has more than 100 million Prime members," Heather Kelly, *CNN Money*, Apr. 19, 2018.
[17] "These new stats about Amazon should make Google very nervous," Jillian D'Onfrio, *Business Insider*, Apr. 20, 2015; "Amazon Prime customers spend way more on Amazon than other customers -- and the difference is growing," Dennis Green, *Business Insider*, Oct. 21, 2018.

forego access to a majority of online shopping traffic. In our recent surveys of independent businesses, we've heard this over and over again. "As a small business that was once (fiercely) independent, I am now – as most of my industry is – dependent upon Amazon to supply access to the retail market base," the owner of 33-year-old business in Minneapolis told us. "If we had the choice, we would rather not be selling on the Marketplace," said another retailer located in a small Midwestern town. "The sad part of our business is we have no choice but to sell there," a business owner in rural Georgia told us.

In other words, Amazon doesn't just dominate the online market; it controls access to it. Amazon has become essential infrastructure for the buying and selling of goods. This position gives it an unprecedented degree of structural power in the economy.

Moreover, Amazon's online shopping platform is only one piece of its digital infrastructure. It also controls other platforms that function as key intermediaries for competing companies. Amazon Web Services (AWS) has more than one-third of the world's cloud computing market share, bigger than the next three providers, Microsoft, Google, and Alibaba, combined.[18] AWS provides the web and data infrastructure for a vast number of companies, including Netflix, Comcast, and Condé Nast. AWS also controls market access for a new and growing sector of developers building cloud-based applications and services for companies.[19] In addition, Amazon operates a vast shipping and logistics infrastructure, scaled to handle both its own packages and those of other firms.[20] Its voice assistant, Alexa, dominates the voice market, powering 68 percent of smart home speakers and providing the interface for more than 100 million Alexa-enabled devices and appliances that have been sold.[21] With Alexa as the platform for the burgeoning world of internet-connected devices, in both consumer and industrial settings, Amazon has yet again positioned itself as a powerful intermediary for other companies and developers. Meanwhile, Amazon is making investments in healthcare, finance, and more.

2. Amazon exploits its platform dominance to undermine competition and extort value from rival businesses.

Amazon's power as a gatekeeper for the online market allows it to:

- privilege its own products on the platform, or privilege outcomes that maximize its own interests, at the expense of competition, rival sellers, and consumers;
- maintain a God-like view of the transactions of rival businesses and customers, and use this data to move into new markets with a built-in advantage;

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[18] "Canalys: Cloud spend to surpass US$143 billion in 2020, driven by IT channel," *Canalys Newsroom*, Apr. 2, 2019.
[19] "Open Source Battle Over AWS Intensifies," Kevin McLaughlin, *The Information*, Jul. 3, 2019.
[20] In March and April of this year, Amazon carried 45 percent of its own packages. "Amazon in-sourcing nearly half of its parcel transportation needs," *Freight Waves*, June 2019; "Amazon to Launch Delivery Service That Would Vie With FedEx, UPS," Laura Stevens, *Wall Street Journal*, Feb. 9, 2018;"Amazon Shipping Now Delivering Nationally from NYC, LA, and Chicago," Justin Smith, *TJI Research*, Apr. 2, 2019.
[21] "Amazon Says 100 Million Alexa Devices Have Been Sold – What's Next?," Dieter Bohn, *The Verge*, Jan. 4, 2019; "Letter to Shareholders," 2018 Annual Report, Jeff Bezos, *Amazon*, 2018.

- dictate (and arbitrarily change) the rules by which its competitors have access to this essential infrastructure, including suspending their accounts without cause or process;
- levy a sizable tax on its competitors' trade through the fees it charges them; and
- leverage the interplay between its different business lines to amplify its power to extort value from competing retailers and suppliers.

Exploiting Competitors' Data

When businesses join Amazon's Marketplace, they hand over to Amazon their customer relationships, their product expertise, and a trove of data about how shoppers interact with their product offerings.[22] Market studies, media reporting, and our own interviews with business owners and executives have documented how Amazon exploits its platform power and view into the activities of rival firms to either advantage its own direct retail sales and products, or to fortify its market dominance in other ways.

Studies have found that when third-party sellers post new products, Amazon starts selling many of their most popular items itself. The market research firm Upstream Commerce tracked 857 apparel items first offered for sale by Marketplace sellers and found that, within 12 weeks, Amazon began directly selling 25 percent of their top-selling items itself.[23] "The likelihood of Amazon's entry is positively correlated with the popularity and customer ratings of third-party sellers' products," according to another study, by researchers at Harvard Business School.[24] The researchers, who describe their findings as a "gloomy picture" for sellers, found: "Results also show that third-party sellers affected by Amazon's entry appear to be discouraged from growing their businesses."

We've heard this echoed in numerous interviews we've conducted with retailers. "Everything that I sold well [on Marketplace], Amazon would start to sell directly," the owner of baby and children's products store in Wisconsin told us.

Amazon has also leveraged the insights it gains from rival firms to expand into new markets with a built-in advantage. Data derived from competing brands and retailers on its platform, for example, has enabled Amazon to produce and sell a growing number of its own private-label products. In recent years, Amazon has launched more than 100 of its own private-label brands, spanning many product categories, including electronics, apparel, groceries, and toys. Research has found that Amazon gives its own clothing items better access to promotional placement (in the carousels at the bottom of product pages) than those produced by rivals – restricting access and suppressing sales of competing brands at no cost.[25] Reporting has also shown that Amazon often features its own products in the

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[22] "Amazon's Antitrust Paradox," Lina Khan, *Yale Law Journal*, Jan. 3, 2017.
[23] "Upstream Commerce Retail Intelligence Research Finds Amazon Muscles In On Its Own Vendors' Best Sellers," *Upstream Commerce*, Oct. 28, 2014.
[24] "Competing with Complementors: An Empirical Look at Amazon.com," Feng Zhu and Qihong Liu, *Harvard Business School*, Apr. 28, 2015.
[25] "Amazon: Prioritizing its Own Fashion Label Brands in Product Placement on its Increasingly Dominant Platform," *The Capitol Forum*, Dec. 13, 2016.

sponsored product ads that now account for a sizable part of the available real estate in product search results.[26] At times, Amazon has even manufactured close knock-offs of products that are bestsellers on its site and then given its own versions top-billing in its search results.[27]

These issues are not limited to Amazon's retail platform. Similar dynamics appear to be playing out on Amazon's cloud and Alexa platforms. Some have alleged that Amazon has copied cloud software developed by small companies that depend on AWS to reach their clients.[28] There's evidence too that Amazon has appropriated the ideas of startups financed by its Alexa Fund to produce smart devices that copy their innovations and compete directly with them. "Some venture capitalists said they would advise companies to be wary of accepting Amazon's investment, because of the risk of Amazon copying ideas," reported the Wall Street Journal.[29] Firms that develop "skills" or functionality for Alexa risk Amazon creating its own native versions and sidelining their applications.[30] In February, Bloomberg reported that Amazon is demanding a "continuous stream of customer information" from makers of smart appliances, which rely on Alexa as their interface.[31] This data – about when someone turns on a lamp or runs the rinse cycle on a dishwasher – gives Amazon a powerful advantage as it designs its own smart devices and looks to fortify its position as the dominant voice platform.

Taxing Competitors' Sales

While Amazon may steer shoppers to its own private-label products in some cases, these house brands serve an additional, and likely more lucrative, purpose: they enhance Amazon's margins on other products sold on its platform. This is because being able to offer shoppers its own version of a particular product gives Amazon more leverage to extract deeper discounts from vendors, who risk losing sales to Amazon's brand, or to compel third-party sellers offering similar products to alter their pricing in ways that benefit Amazon, or both. Indeed, even as Amazon has introduced more private-label product lines, its revenue from third-party sellers has soared.[32]

Between 2015 and 2018, Amazon's revenue from third-party seller fees grew from $16 billion to $43 billion.[33] Revenue from seller fees outpaced the overall growth of Amazon's retail sales, and it outpaced the growth of sales made by third-party sellers on the site.[34]

Companies that sell on Amazon's platform must give Amazon a cut of every sale they make. For most products, the cut is 15 percent. This fee comes off the top and it represents a sizeable expense for

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[26] "Amazon, With Little Fanfare, Emerges as an Advertising Giant," Lara O'Reilly & Laura Stevens, *Wall Street Journal*, Nov. 27, 2018.
[27] "Got a Hot Seller on Amazon? Prepare for E-Tailer to Make One Too," Spencer Soper, *Bloomberg*, Apr. 20, 2016.
[28] "Open Source Battle Over AWS Intensifies," Kevin McLaughlin, *The Information*, Jul. 3, 2019.
[29] "Startups Weigh Pros, Cons of Alexa Fund," Patience Haggin, *Wall Street Journal*, Aug. 28, 2017.
[30] " Voicelabs ditches analytics service to launch Alpine.ai for ecommerce voice apps," *VenureBeat*, Jan. 29, 2018.
[31] "Your Smart Light Can Tell Amazon and Google When You Go to Bed," Matt Day, *Bloomberg*, Feb. 12, 2019.
[32] "Letter to Shareholders," 2018 Annual Report, Jeff Bezos, *Amazon*, 2018; 2018 Annual Report, *Amazon*.
[33] 2016 Annual Report, *Amazon*; 2018 Annual Report, *Amazon*.
[34] According to Amazon's 10-K filings, sales by third-party sellers grew by 113 percent over this period, while the fees they paid to Amazon grew by 166 percent.

retailers. In the absence of viable competing platforms, there's no market pressure on Amazon to lower these fees.

On top of this fee, Amazon also charges fees for using its warehousing and shipping services, known as "Fulfillment By Amazon," or "FBA." Amazon strongly incentivizes third-party sellers to buy these services by giving FBA sellers a much better shot than non-FBA sellers of being chosen by Amazon's algorithms as the default seller on a product page ("winning the buy box"), which greatly increases their chances of making a sale.[35] Amazon has repeatedly raised the cost of FBA. In 2018, these fees rose by as much as 14 percent for standard-sized items (and more for oversized goods), on top of similar increases in 2017.[36] (Measured on a per-cubic-foot basis, these increases were even larger.)

Given Amazon's power as a gatekeeper for online commerce, these fees could be characterized as a form of rent-seeking, or a kind of toll or tax, which companies, large and small, have little choice but to pay in order to reach the online market.

Setting the Terms by Which Competitors Can Access the Market

Amazon often abruptly changes terms for sellers, disrupting their businesses overnight. Its dominance means that sellers have little recourse or alternative. Earlier this year, for example, Amazon reportedly engaged in a "purge" of selected vendors, inducing these firms to suddenly have to shift from supplying Amazon as wholesalers to operating as third-party sellers on its platform.[37] A few months before it had pushed some third-party sellers in the opposite direction, telling them that they could no longer sell on the platform; instead, they would need to become vendors to Amazon's own retail division.[38] In both cases, Amazon abruptly and radically altered the terms by which businesses could access its platform, and in ways that presumably benefitted its own bottom line or market position.

Another recent example is Amazon's deal with Apple, which restricted third-party re-sellers of Apple products to a few large companies. This deal effectively removed all small Apple re-sellers from selling on Amazon, upending hundreds of small businesses.[39] Or consider another policy change last year, when Amazon introduced a policy called "Pay by Invoice," which effectively lengthened the payment cycles of third-party sellers, putting many in a precarious position.[40]

"If they don't want an item on there, they can decide that. If they only want one seller to sell something, they can set that rule. They control everything," explained a baby products retailer, who tried to sell on Amazon's platform after customer traffic to his company's store and web site began to decline in 2013.

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[35] "Amazon Says It Puts Customers First. But Its Pricing Algorithm Doesn't," Julia Angwin & Surya Mattu, *ProPublica*, Sept. 20, 2016 .
[36] "Amazon Fees are Increasing A LOT in 2018 -How Will it Impact You?" Dave Bryant, *EcomCrew*, Dec. 24, 2016; "Amazon FBA's Largest Ever Fee Increase Coming in 2018 - How Will it Affect You?" Dave Bryant, *EcomCrew*, Dec. 19, 2018.
[37] "Amazon Is Poised to Unleash a Long-Feared Purge of Small Suppliers," Spencer Soper, *Bloomberg*, May 28, 2019.
[38] "An Amazon revolt could be brewing as the tech giant exerts more control over brands," Jason Del Ray, *Recode* Nov. 18. 2018.
[39] "Apple and Amazon Cut A Deal That Upended The Mac Resale Market," Nick Statt, *The Verge*, May 21, 2019.
[40] "Some Amazon sellers are outraged over a new payment policy designed to attract more corporate buyers," Eugene Kim, *CNBC*, Aug. 21, 2018.

But he found that Amazon's shifting policies and terms, often opaque and arbitrarily imposed, made it impossible to succeed. The company folded in 2015. "I hear Amazon talk about it as an open marketplace, but it's not."

Among the most egregious examples of Amazon's arbitrary treatment of sellers are its abrupt suspensions of their accounts, frequently made without explanation.[41] Third-party seller discussion boards on Reddit and Facebook are filled with frantic business owners trying to figure out how to get their accounts reinstated as they struggle to navigate Amazon's often confusing and email-only system of communicating with merchants.[42]

"After we'd been on Amazon for about four years, Amazon closed our Marketplace account. Out of the blue, no warning. We just woke up to an email that said our account had been closed for 'violations.' There was no one at Amazon who would answer emails, pleas, questions, phone calls, or requests for more info. At the time Amazon closed our account, we had… over 98 percent positive feedback from our customers," a retailer in central Pennsylvania told us. "We never made up for that sudden loss. Nearly seven years later, for no real reason, Amazon announced that we could return as Marketplace sellers."

In effect, Amazon is supplanting an open public market, in which commerce is governed by democratic rules aimed a facilitating competition, with a privately controlled "marketplace," in which buyers and sellers have to abide by Amazon's rules and pay tribute to it.[43] It would be as if Walmart owned our malls and Main Streets, decided which firms could operate in these spaces and on what terms, and surveilled every move they made.

Amazon's Multifaceted Market Power

Amazon is many things at once: it's a dominant e-commerce platform, major retailer, producer of consumer goods, digital advertising giant, leading shipper, and more. It derives much of its market muscle from the integration of these various business lines. By leveraging the interplay between its different roles, Amazon can amplify its power over suppliers and third-party sellers, extorting more value from their businesses while entrenching its own monopoly position.

One illustration of this can be found in the ways Amazon has exploited its position as a platform operator to enhance its retail division's power over direct suppliers.

"As long as you sell to Amazon on its terms, they work with you to go after that," an executive at one of the world's largest makers of performance footwear told me, referring to third-party sellers who peddle counterfeits or otherwise misrepresent a brand's products. But, he said, the moment a vendor

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[41] "Amazon Angers Mom-and-Pop Sellers With 'Arbitrary' Suspensions," *Bloomberg*, Aug. 26, 2016.
[42] "Prime and Punishment: Dirty Dealing in the $175 Billion Amazon Marketplace," Josh Dzieza, *The Verge*, Dec. 19, 2018.
[43] "Amazon's Antitrust Paradox," Lina Khan, *Yale Law Journal*, Jan. 3, 2017.

declines any of Amazon's escalating demands for additional discounts or more favorable terms, "they stop cooperating."

Amazon's Marketplace has become a "wild west" of counterfeit goods and unauthorized, fly-by-night sellers.[44] According to several manufacturers we've spoken with, Amazon uses its ability to selectively police counterfeiters and other nefarious sellers as leverage to extract concessions from suppliers.

"They use this as a punitive measure," the executive explained. In his company's case, the punishment came when it balked at Amazon's demands for more fees and other terms that shifted costs onto the brand. "Either you play ball or you are forced by Amazon into spending your resources and time trying to manage the activity on their platform."

In 2016, an executive with the shoemaker Birkenstock complained about this publicly. Amazon refused to go after sellers of counterfeit Birkenstocks on its site unless the shoe company agreed to sell its full line to Amazon.[45] Like many brands, Birkenstock reserves part of its line, typically new and niche designs, to reward brick-and-mortar stores that provide additional support for Birkenstock's customers, such as fittings and returns. In effect, Amazon sought to use its power as a platform operator to force concessions from a supplier and neutralize a natural competitive advantage of rival brick-and-mortar shoe stores (their ability to provide in-person service). News accounts suggest that Nike, faced with a similar ultimatum, gave in to Amazon's demands.[46]

More recently Amazon has been leveraging its platform power to rapidly scale its digital advertising division by promoting sponsored ads to sellers already anxiously jockeying to win favorable search placement from Amazon.[47]

Still another example can be found in the way that producing its own product lines enables Amazon to extract more from vendors and third-party sellers. This is because, as I noted above, being able to offer shoppers its own version of a particular product gives Amazon more leverage to extract deeper discounts from vendors, and to compel third-party sellers offering similar products to alter their pricing in ways that benefit Amazon. In other words, Amazon's goal with its private-label lines is not to make everything itself, but rather to amplify its leverage and thus have the power to appropriate a bigger piece of the pie, at the expense of competing brands and retailers.[48]

One striking aspect of Amazon's tactics is that vendors and sellers quickly learn that the best way to solve their problems on the platform typically entails further enhancing Amazon's dominance over

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[44] "Prime and Punishment: Dirty Dealing in the $175 Billion Amazon Marketplace," Josh Dzieza, *The Verge*, Dec. 19, 2018; "What Happens After Amazon's Domination Is Complete? Its Bookstore Offers Clues," David Streitfeld, *New York Times*, Jun. 23, 2019.
[45] "Birkenstock quits Amazon in US after counterfeit surge," Ari Levy, *CNBC*, Jul. 20 2016
[46] "Nike Thought It Didn't Need Amazon, Then the Ground Shifted," Laura Stevens & Sarah Germano, *Wall Street Journal*, Jun. 28, 2017.
[47] "Report: Amazon takes more digital advertising market share from Google-Facebbok duopoly," Taylor Soper, *GeekWire*, Feb. 20, 2019.
[48] Even as Amazon has introduced more private-label product lines, Marketplace sales have grown as a share of its retail sales. "Letter to Shareholders," 2018 Annual Report, Jeff Bezos, *Amazon*, 2018.

them. As one journalist put it, "The solution is often to more fully meld with Amazon – to enroll in its fulfillment program, to purchase Amazon's labels to make sure product isn't being diverted, or even make their brand exclusive to Amazon, which brings special protections."[49]

3. Amazon's platform dominance is harming entrepreneurship and innovation, and threatening our economic liberty.

In 1971, David Guernsey started an office products company in Fairfax County, Virginia. Today Guernsey Inc. has 247 employees and about $97 million in annual revenue.[50] When people think of office supplies, they might think of a big-box chain. Out of sight of many consumers, though, are hundreds of independent office products dealers like Guernsey. They're primarily business-to-business operations. Instead of storefronts, they have sales representatives, e-commerce sites, and delivery trucks. These independent dealers are an important economic force, both within their communities and nationally. They account for about 20 to 25 percent of the market for office supplies, according to the National Office Products Alliance.

Studies show these dealers are highly competitive, with prices that beat those of both the big chains and Amazon Business (the company's platform for corporate and government buyers).[51] Guernsey is a good example of how well these dealers serve the market. Along with competitive prices, Guernsey has offered online ordering for nearly 20 years and free next-day delivery for more than 40 years. There are other service perks, too: When Guernsey delivers an order of printer paper and toner cartridges, it drops off the supplies in every copy room on every floor.

But like hundreds of other independent office supply dealers, Guernsey's ability to compete is increasingly threatened by Amazon's dominance. As more corporate and government buyers default to using Amazon's platform, dealers like Guernsey face losing market access. Some of his customers have suggested that he join Amazon's platform as a third-party seller. But doing so, David Guernsey says, would be a "death knell."

"If you are fortunate enough to get some orders, as soon as Amazon gets information on the order flow and where the value is, they will do it themselves," he says. Amazon's fees also make success impossible, he adds. On government and corporate contracts, Guernsey's margins are very slim. If the company had to add 15 percent to pay Amazon's fee, it would no longer be price competitive. "You can't pay that to Amazon and be profitable," Guernsey says.

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[49] "Prime and Punishment: Dirty Dealing in the $175 Billion Amazon Marketplace," Josh Dzieza, *The Verge*, Dec. 19, 2018

[50] For more on the office supply sector generally and Guernsey in particular, see "Amazon's Next Frontier: Your City's Purchasing," Stacy Mitchell and Olivia LaVecchia, *Institute for Local Self-Reliance*, Jul. 10, 2018.

[51] "Amazon Business Pricing Comparison," OPSoftware, LLC, Jul. 10, 2018; "Amazon's Next Frontier: Your City's Purchasing," Stacy Mitchell and Olivia LaVecchia, *Institute for Local Self-Reliance*, Jul. 10, 2018.

Today, David Guernsey is shifting gears into retirement, but he continues to worry about what Amazon's dominance will mean – both for the future of the company he built and the families that depend on it, and for the future of free enterprise itself. "I'm profoundly grateful for the opportunity to start a business and work to grow it. It was hard work, but so rewarding," he says. "It's frightening to think of that opportunity not being there. I think it profoundly impacts American society. I look at the younger people in this industry and I fear for them."

In May, we surveyed more than 550 independent retailers, ranging in size from small stores to firms employing hundreds of people. By a wide margin, they ranked Amazon as the top threat to their businesses, more worrisome than rising health care costs, access to financing, and government red tape.[52] Among those selling on Amazon's platform, only 7 percent reported that it's having a positive impact on their bottom line.

Nationally, the number of independent retailers has fallen by about 85,000 over the last decade, according to Census data. As we document in detail in our 2016 report, Amazon's Stranglehold (attached),[53] the decline of independent retailers is harming innovation, because "these businesses play an outsized role in enabling new products to find an audience."

Producers, creators, and manufacturers are alarmed at the prospect of a future in which this diversity of retail outlets gives way to a single online platform. Already, as more browsing and shopping migrates to Amazon, the tech giant is gaining unprecedented power to direct consumers attention and decide which products they encounter, and to pick which companies, brands, and creators will be winners, and which will be losers. Increasingly it's not the market that is determining the fate of a company or a product; it's Amazon. As the executive at the performance footwear brand explained: "They can sink companies without anyone to answer to."

At the same time, as Amazon leverages its position to extract larger discounts and fees from producers, these companies are left with less revenue to invest in research and development. "If you can't make any money, it takes away invention and innovation," an executive at a sporting goods company told us. The trouble is, as much as this loss impacts consumer choices, stunts innovation, and harms the economy, it's virtually impossible to measure. "As a consumer, how would you even know that something was missing?" a manager at a game and puzzle company pointed out.

4. Amazon's dominance is eroding the economic capacity of many communities and regions, and further concentrating wealth.

Until the 1970s, a core tenet of competition policy was to disperse economic power widely, ensuring a measure of opportunity and local self-determination in every region of the country.

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[52] "2019 Independent Business Survey," *Institute for Local Self-Reliance*, forthcoming.
[53] "Amazon's Stranglehold: How the Company's Tightening Grip Is Stifling Competition, Eroding Jobs, and Threatening Communities," Olivia LaVecchia and Stacy Mitchell, *Institute for Local Self-Reliance*, Nov. 2016.

Today, growing economic concentration, and Amazon's dominance especially, is leading to a starkly unequal geographic distribution of opportunity and income. Only a handful of metro areas are gaining significant numbers of high-paying jobs from Amazon and other tech giants.[54] Indeed, the top 25 metro areas now account for 52 percent of the entire U.S. GDP.[55] Meanwhile, across the rest of the country, local and regional businesses are shuttering. Consumer products companies are being squeezed, affecting their ability to invest and create jobs. New business creation – which historically has been an engine not only of new jobs, but of entirely new occupations – has fallen precipitously.[56]

All of these trends are making it harder for Americans to earn a decent living. Starting a business, a long-standing pathway to a middle-class life, has become less viable. Recent scholarship has found that growing concentration is exerting downward pressure on wages in many industries. Harvard University sociologist Nathan Wilmers, for example, has found evidence that, when companies that produce consumer goods are more dependent on a small number of very large corporate buyers (like Amazon or Walmart), they pay lower wages.[57]

Amazon has little or no physical presence in most communities. Its growing dominance operates much like an invisible undertow in these places, as they lose local businesses, retail jobs, and tax base. Meanwhile, where Amazon does create employment, many of these jobs are precarious temporary or high-turnover positions.[58] People who work inside the company's warehouses describe the pace as grueling, with 'unit-per-hour' rates set so high that failure and exhaustion are routine. Robots dominate these facilities, while their human workers are monitored, supervised, and, in some cases, fired by an automated system.[59] Amazon's ability to drive a hard-bargain with warehouse workers is, at least in part, an outgrowth of its market dominance. In the absence of better opportunities, working people, much like independent retailers and suppliers, have little choice but to accept Amazon's terms.

5. Policy Solutions

As we begin to imagine what a different, more competitive, future for e-commerce might look like, it can be easy to assume that Amazon's vision is the only way things could turn out. After all, it's been at the center of the online economy from the start. And Amazon would very much like us to believe that to challenge its dominance is to challenge the digital revolution itself.

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[54] "The Best $100,000+ Tech Jobs Are Increasingly Concentrated in Just 8 Cities," Josh Zumbrun, *Wall Street Journal*, Jul. 26, 2017; "In Superstar Cities, the Rich Get Richer, and They Get Amazon," Emily Badger, *New York Times*, Nov. 7, 2018.
[55] "The age of winner-take-all cities," Kim Hart, *Axios*, Jul. 10, 2019.
[56] "Dynamism in Retreat: Consequences for Regions, Markets, and Workers," *Economic Innovation Group*, Feb. 2017.
[57] "Wage Stagnation and Buyer Power: How Buyer-Supplier Relations Affect U.S. Workers' Wages, 1978 to 2014," Nathan Wilmers, *American Sociological Review*, Mar. 27, 2018.
[58] "What Amazon Does to Poor Cities," Alana Semuels, *The Atlantic*, Feb. 1, 2018; "Amazon is replacing some fulfillment center jobs with robots that pack orders," Jeffrey Dastin, *Reuters*, May 13, 2019.
[59] "How Amazon automatically tracks and fires warehouse workers for 'productivity'," Colin Lecher, *The Verge*, Apr. 25, 2019.

But if you look beyond Amazon's modern veneer, the company looks remarkably like the Robber Barons of another age, who also took advantage of that period's new technologies and weak antitrust polices to assert control and impede competition. That era had an air of inevitability too, but Americans rose up to defend their liberty and passed a series of laws that instituted fair and open markets.

As we consider policy solutions, it's critical that we recognize that nature of Amazon's power. Amazon doesn't just dominate markets. Through its control of essential infrastructure, it has assumed governing authority over a growing share of our commerce. As I've documented here, Amazon has the power to regulate, tax, and punish Americans engaged in trade. Thus the threat that it poses to our liberty and democracy is fundamental.

At the Institute for Local Self-Reliance, we believe that, to restore competition and safeguard our liberty, we need to both restructure and regulate Amazon. We believe the following policy approaches are essential:

Structural separation – Structural separation was once "a standard regulatory tool and key antitrust remedy in network industries," applied in sectors including railroads, bank holding companies, television networks, and telecommunication carriers.[60] Today, the inherently anti-competitive dynamics of dominant digital platforms, including their ability to appropriate data and manipulate platform outcomes to entrench their market power and advantage their other lines of business, call for picking up this tool once again. An entity like Amazon that controls an e-commerce platform should not be allowed to also operate as a retailer, and thus a competitor, on that platform.

Non-discrimination – Dominant e-commerce platforms should be subject to standards of neutrality, non-discrimination, and fair and open access, similar to regulations governing common carriers. (It's our view that, in the case of Amazon, such standards will not be sufficiently effective unless paired with structural remedies.)

Stronger merger policy – Amazon has made a number of acquisitions that have helped to fortify its market power.[61] These mergers, including its 2017 acquisition of Whole Foods, all won quick approval from federal antitrust enforcers and offer striking examples of how the enforcement agencies have failed to recognize the distinct nature and consequences of platform business models. Furthermore, many of Amazon's recent acquisitions fall below the threshold for notification and review. Yet these deals have allowed Amazon to buy key innovations – including the core functionality behind Alexa[62] and chip technology that has fueled the growth of AWS[63] – bolstering its position and taking competing technologies off the market. This calls into question whether dominant tech companies

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[60] "The Separation of Platforms and Commerce," Lina M. Khan, *Columbia Law Review*, Vol. 119, No. 4.
[61] For a complete list of Amazon's acquisitions see, *List of mergers and acquisitions by Amazon*, *Wikipedia*, https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Amazon
[62] "Amazon Has Acquired or Invested in More Companies Than You Think--at Least 128 of Them," Zoë Henry, *Inc.*, May 2017.
[63] "How An Acquisition Made By Amazon In 2016 Became Company's Secret Sauce," *Forbes*, Mar 10, 2019.

should be allowed to acquire even small firms without notice and review, and perhaps whether they should be barred from mergers of any kind.

Stronger enforcement against anticompetitive conduct – Amazon has a long and well-documented history of engaging in below-cost selling in order to take market share from competitors that lack the financial resources to sustain losses at the scale Amazon can afford. Recent legal scholarship has shown how such a predatory pricing strategy could be rational and profitable, and harm competition, and yet still not draw antitrust scrutiny under the current enforcement approach.[64] This suggests one area where current enforcement theories have been out-of-step with market realties, failing to protect competition.

6. Conclusion

I'd like to once again commend the Committee for undertaking this critically important investigation. The comprehensive factual record you are building is essential to documenting, understanding, and devising solutions to the unprecedented power that digital platforms now wield in our country. We believe this is an urgent mission and central to the future of American democracy and liberty. So too do many of the business owners and executives we've spoken with. I'd like to close with the words of an executive at a mid-sized consumer products company: "Who can challenge Amazon in the courts? It's going to take someone at the federal level to say that this isn't working. A lower price is one thing, but devouring entire industries whole is not healthy and it's not something you can do in the United States."

[64] "Amazon's Antitrust Paradox," Lina M. Khan, *Yale Law Review*, Jan. 2017; "Prime Predator: Amazon and the Rationale of Below Average Variable Cost Pricing Strategies Among Negative-Cash Flow Firms," Shaoul Sussman, *Journal of Antitrust Enforcement*, Feb. 15, 2019.

Mr. CICILLINE. Thank you, Ms. Mitchell.

The chair now recognizes Ms. Ohlhausen for 5 minutes.

TESTIMONY OF MAUREEN OHLHAUSEN

Ms. OHLHAUSEN. My thanks to Chairman Cicilline and members of the committee for inviting me to testify. I'm Maureen Ohlhausen, and as a former Acting Chairman and Commissioner of the Federal Trade Commission and a long-time antitrust practitioner, I hope to offer some perspectives to assist the committee with its important inquiry.

In reaction to today's technology-driven economy, there's a perception in some quarters that antitrust needs to change from principally protecting consumers to pursuing other goals. Given the clear consumer benefits of technology-driven innovation, however, I'm concerned about reducing the focus on consumer welfare.

But believing that consumer welfare is the appropriate goal does not mean being passive or embracing the view that antitrust cannot improve its tools to detect anticompetitive behavior. If those tools suggest that competition will be harmed and consumers made worse off from the behavior of any firm, antitrust enforcers should act.

And my experience suggests that a successful case rests on three pillars: a secure foundation in the law, a solid factual basis, and strong economic evidence of an anticompetitive outcome. And I also recommend that any assessment examined, first, antitrust laws as interpreted by the courts; second, the application of that law to particular types of anticompetitive behavior in defined markets; and, third, the boundaries between antitrust law and regulation. And I will briefly address each of these factors.

A defining quality of an antitrust violation is the elimination or weakening of a market constraint on a firm's power to set the terms of its interactions. In other words, we examine the impact on the competitive process through which a firm makes its decisions on price, quality, and the need to innovate.

Thus, antitrust enforcers should intervene only when firms are likely to corrupt the competitive process and gain or maintain market power through means other than competition on the merits, such as by colluding with rivals, merging with competitors to reduce competition, or, for a firm with market, power engaging in exclusionary conduct that does not benefit competition on balance.

Thus, under current antitrust law, a dominant provider must maintain its position through legitimate competition on the merits rather than through conduct that has little or no purpose beyond disadvantaging rivals. Now, this doesn't mean that antitrust can't reach many of the competitive concerns discussed today as long as there is factual and economic evidence of cognizable competitive harm, and I'd like to offer some recent examples.

During my time as the Acting Chairman when the FTC had only two members, one Republican and one Democrat, we successfully handled a total of 32 proposed mergers with significant competition concerns and brought forward nine different conduct cases. And our challenge to the merger between CDK and Auto/Mate involved a large established firm with a substantial market share buying a

relatively small upstart that appeared poised to challenge the market leaders more aggressively.

Now, some have questioned whether the existing antitrust paradigm can ever reach this kind of behavior where a big player squashes or absorbs a promising upstart before it can grow into a more substantial competitor. And the CDK-Auto/Mate action shows that antitrust law can address this competitive issue if the facts and economic evidence support it.

I'd also like to say a few words about vertical mergers, the majority of which are pro-competitive. Vertical mergers can, however, raise antitrust concerns when the parties gain an ability and incentive to foreclose their rivals from a significant portion of the market.

Thus, as with horizontal mergers, vertical deals should be evaluated on a case-by-case basis based on all the evidence available and not prejudged based on the size of the parties or concerns outside of preserving market competition.

Now, the agencies can review consummated mergers and order divestitures when justified by the facts in the law. But trying to unscramble the eggs through a divestiture long after a merger or using a breakup as a remedy in a conduct matter is a drastic step that carries serious risk of doing more harm than good for competition and consumers.

And aside from practical concerns, courts would require a particularly significant causal connection between the challenge conduct and creation or maintenance of the market power.

Now, for those that seek to supplant antitrust with the regulatory approach, given the troubled history of extensive market regulation by government, we should carefully examine the assumption that regulators can divine the best course for technology-driven markets.

Further, the U.S. has consistently been a strong voice globally in advocating for competition law to focus on consumer welfare goals and not to include other policy goals. And I fear that abandoning this clear position will encourage regimes around the world to pursue industrial policy goals, such as favoring domestic industry, to the detriment of U.S. consumers and business interests.

Thank you.

[The statement of Ms. Ohlhausen follows:]

Written Statement of Proposed Testimony

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Hearing on "Online Platforms and Market Power Part 2: Innovation and Entrepreneurship"

U.S. House of Representatives, Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law

July 16, 2019

Introduction

I would like to thank Chairman Nadler, ranking member Collins, Subcommittee Chairman Cicilline, Ranking Member Sensenbrenner, and the members of Subcommittee on Antitrust, Commercial, and Administrative for inviting me to testify at this hearing on online platforms and market power. I commend you for examining these issues that affect American consumers and the interests of U.S. businesses, both here and abroad. It is my hope that I can offer some helpful perspective, as former Acting Chairman and Commissioner of the Federal Trade Commission and a longtime antitrust practitioner, that will assist the Committee with this important effort.

In reaction to today's increasingly connected and technology-driven economy, there is a perception in some quarters that antitrust needs to change. Some have asserted that increasing business concentration has reduced competition across the economy;[1] that antitrust officials lack the tools to address competitive issues involving technology-enabled business models; and that antitrust should address the size and conduct of large firms, especially successful online platforms, regardless of whether it affects the competitive process. [2] In their view, current events have overtaken the hard-won political consensus that antitrust should principally focus on protecting consumers, and they urge changing the rules of antitrust to intervene more aggressively in markets to pursue a wide variety of goals other than consumer welfare.

Given the clear consumer benefits of technology-driven innovation, I am concerned about adopting an approach that will diminish the focus on consumer interests in the pursuit of other, perhaps even conflicting, goals. But believing that consumer welfare is the appropriate goal of antitrust does not mean being passive or embracing the view that antitrust in the pursuit of consumer welfare cannot be improved. Antitrust law has evolved as our understanding of market dynamics has gotten more sophisticated, and it should continue to adapt as we refine our predictive tools. If those tools suggest that competition will be harmed and consumers made worse off from the behavior of any firm, antitrust enforcers should act.

I have devoted much of my professional career to efforts to safeguard and foster competition, and I believe in its key role in fostering economic growth and innovation. [3] As the Supreme

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[1] Starting in 2016, some journalists and others observed industry census data; noted that concentration across certain broad industry classifications like retail, transportation, finance, and utilities had risen; and saw that firms' returns on invested capital had increased. From this information, they inferred that monopoly power was rising and called for stricter antitrust enforcement. However, industry classifications identified by the Census Bureau are not antitrust markets and shifting trends in concentration do not necessarily reflect lost competition. Some markets have diminishing long-run average-cost curves, while others produce dominant firms or oligopolies due to superior efficiency or innovation. The arguments about increased concentration overlooked those critical nuances, as well as other key factors. See Maureen K. Ohlhausen, Does the U.S. Economy Lack Competition?, 1 Criterion J. on Innovation 47 (2016). Other scholars also observed these shortcomings. See Carl Shapiro, Antitrust in a Time of Populism, 61 Int'l J. Indus. Org. 714-48 (2018); Gregory Werden & Luke Froeb, Don't Panic: A Guide to Claims of Increasing Concentration (Apr. 5, 2018), available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3156912## .

[2] Recent calls to use antitrust to deconcentrate U.S. industry are not unprecedented. For an insightful, historical account, see William Kovacic, Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration, 74 IOWA L. REV. 1105 (1989).

[3] If we wish to increase the amount of competition in U.S. markets, we should also not overlook the need to prune government regulations that inhibit entry, stifle business in red tape, and distort economic activity without offsetting gains. See Maureen K. Ohlhausen and Greg Luib, Brother, May I?: The Challenge of Competitor Control Over

Court recently observed, "Federal antitrust law is a central safeguard for the Nation's free market structures."[4] And, in our system of limited government, it is appropriate that antitrust agencies look to the law as interpreted by the courts for guidance in pursuing their enforcement work. In fact, my experience as an antitrust enforcer suggests that a successful antitrust case rests on three pillars: a secure foundation in the law, a solid factual basis, and strong economic evidence of an anticompetitive outcome.

Thus, I firmly support regular evaluation of antitrust enforcement with the aim of improving its ability to predict, prevent, and address anticompetitive mergers and conduct in all sectors of the economy. Any assessment of the state of antitrust enforcement should necessarily entail an understanding of 1) antitrust law as interpreted by the courts, 2) the application of that law to particular types of anticompetitive behavior in defined markets, and 3) the boundaries between antitrust law and regulation.

I. What is an antitrust violation?

Turning to the legal standard, I will address the foundational issue of what is an antitrust violation. A defining quality of an antitrust violation is the elimination or weakening of a market constraint on a firm's power to set the terms of its market interactions. This can be achieved through a collusive agreement among competitors, a merger between current or likely future competitors, or by the exclusionary conduct of a company with market power. We sometimes think of an antitrust offense in terms of anticompetitive effects, but, properly understood, it is how the scrutinized conduct affects the universe of market constraints facing the relevant firm. In other words, we examine the impact on the "competitive process" through which a firm makes its decisions on price, quality, and the need to innovate, among other terms. A good formulation of this concept as applied to a particular type of antitrust violation appears in the FTC & DOJ Horizontal Merger Guidelines.[5]

I do not mean to say, of course, that negative market outcomes are irrelevant in antitrust law. To the contrary, antitrust enforcers should direct their limited resources to areas where consumers are suffering from or are likely to experience harms such as higher prices, reduced quality, or fewer innovative offerings. In commentators' zeal to scrutinize business conduct and protect consumers, however, sometimes simply the size or conduct of large players become synonymous with a problem that antitrust enforcement can solve.

Having identified a "problem" in the economy, some want to correct it by condemning certain observed behavior by large online platforms, even if that behavior did not lift a competitive constraint on the firm's market power. But simply condemning a particular structure or term of dealing in markets with large online platforms divorced from its impact on consumers is not the

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Market Entry, Oxford Journal of Antitrust Enforcement (2015). Available at SSRN: https://ssrn.com/abstract=2670697 .

[4] N. Carolina State Bd. of Dental Examiners v. Fed. Trade Comm'n, 135 S. Ct. 1101, 1109 (2015).

[5] "Horizontal Merger Guidelines" (2010) at 2 ("A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives"), available at https://www.ftc.gov/system/files/documents/public_statements/804291/100819hmg.pdf .

purpose of antitrust.[6] It is a regulatory action meant to reengineer market outcomes to reflect values other than market competition, such as fairness, consumer privacy,[7] or the protection of small business. By contrast, antitrust violations involve a restraint, practice, or acquisition that removes a market constraint on a firm's behavior.[8]

This definition of antitrust hews to the core premise of the Sherman Act, which is our belief that a market economy, free of private restraints and unnecessarily burdensome regulations, produces superior outcomes over time.[9] This is a time-honored idea; for example, in its 1978 opinion, National Society of Professional Engineers, the Supreme Court embraced the "assumption that competition is the best method of allocating resources in a free market[.]"[10]

The Supreme Court also clearly expressed this position in its Trinko opinion, which dealt with a lawsuit that accused Verizon of monopolizing a telecommunications market by not sufficiently interconnecting with competitive local exchange carriers.[11] Reversing the Second Circuit, the Supreme Court dismissed the antitrust claim, even though the compulsory-access requirements of the 1996 Telecommunications Act may have produced lower prices, greater output, and more varied choice for consumers. But liability did not turn on whether exclusion caused higher prices. Something more fundamental was at stake.

In the Court's view, markets encourage competition only if prevailing firms can reap what they sow. Taking away that prize would undermine the competitive process, replacing market forces with a more "competitive" market structure featuring low prices, but lacking incentives that drive investment in infrastructure, technology, and advancement.[12] Hence, the Court's famous

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[6] See, e.g., Carl Shapiro, Antitrust in a Time of Populism, 61 Int'l J. Indus. Org. 714 (2018) ("We learned long ago that proper antitrust enforcement is about protecting consumers, and protecting the competitive process, not about protecting competitors. We must not forget that guiding principle. Indeed, that principle is especially important in markets subject to large economies of scale, whether those scale economies are based on traditional production economies or based on network effects, which are often important in the tech sector.")

[7] See Maureen K. Ohlhausen & Alexander P. Okuliar, Competition, Consumer Protection, and the Right [Approach] to Privacy, 80 Antitrust L.J. 121,152-53 (2015) ([T]he application of competition law is appropriate only where the potential harm is grounded in the actual or potential diminution of economic efficiency. If there is likely no efficiency loss because of the conduct or transaction, another legal avenue for enforcement is more appropriate and efficient. Second, the scope of the potential harm also should aid in the choice of law. Antitrust laws are focused on broader, macroeconomic harms, mainly the maintenance of efficient price discovery in the markets, whereas the consumer protection laws are preoccupied with ensuring the integrity of each specific contractual bargain. These are complementary, but discrete, enforcement goals. Third, and finally, the available remedies must be able to address effectively the potential harm. Enjoining a merger may do little to prevent a privacy violation if the parties can simply share the same consumer information under a contractual arrangement.")

[8] That is not to say that non-pecuniary values are irrelevant to antitrust; antitrust protects the market process by which consumers express their preferences. See Maureen K. Ohlhausen, Antitrust Over New Neutrality: Why We Should Take Competition in Broadband Seriously, 15 Colo. L.J. 119, 133 2017) ("Market forces and antitrust policy can . . . safeguard nonmonetary goals like free speech and openness, at least to the extent that consumers share those values.")

[9] See, e.g., Verizon Comm'cns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407-08 (2004); Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 694-95 (1978); Rambus Inc. v. Fed. Trade Comm'n, 522 F.3d 456, 464 (D.C. Cir. 2008).

[10] Nat'l Soc'y of Prof'l Eng'rs, 435 U.S. at 695.

[11] Trinko, 540 U.S. at 403-05.

[12] Id. at 407-08.

observation that "charging . . . monopoly prices . . . is an important element of the free-market system."[13]

In sum, antitrust enforcers should intervene only when firms are or are likely to corrupt the competitive process and gain or maintain market power through means other than competition on the merits, such as by colluding with rivals, merging with competitors to reduce competition, or, for a firm with market power, engaging in exclusionary conduct that does not benefit competition on balance. This allows antirust to foster the incentives in our free market system that reward the players that best meet consumer demands, which over time leads to greater innovation in the economy.

II. How have enforcers applied antitrust law to particular anticompetitive behavior in defined markets?

Antitrust law's focus on protecting the competitive process does not mean that it cannot reach many of the competitive concerns raised by today's commentators, as long as there is sufficient factual and economic evidence of cognizable competitive harm under the antitrust laws. These concerns may include price effects, reductions in quality,[14] and impacts on innovation, as well as the ability of a dominant player to acquire and neutralize a nascent competitor. I'd like to offer some facts and examples to show what U.S. enforcers have been able to accomplish in recent years.

Antitrust enforcers generally agree that mergers creating durable market power do not serve consumers well. Thus, the pace of merger enforcement at the antitrust agencies in recent decades has generally varied on the basis of overall economic activity rather than on the political affiliation of the administration. For example, during my time as the Acting Chairman, when the FTC had only one Republican member and one Democratic member, the FTC identified a total of 32 proposed mergers with significant competition concerns. Of these, the agency accepted a consent agreement to protect consumers in 19 cases, with the balance of these deals either abandoned in the face of our challenge or contested in litigation.[15] At one point, the FTC had ten competition matters in active litigation at the same time, with three more on appeal, which approached historic levels of activity. And the action didn't stop at merger review; the FTC also brought forward nine different conduct cases, including several challenging anticompetitive behavior by drug manufacturers.

I would like to highlight our challenge to the merger between CDK and Auto/Mate.[16] The fact pattern was essentially a large, established firm with a substantial share of the market buying a

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[13] Id. at 407.

[14] In the tech sector, reductions in quality could, in some circumstances, include factors such as reduced features, restricted consumer choice, or lessened control over privacy. See, e.g., Ohlhausen & Okuliar, 80 Antitrust L.J. at 133-34 (noting competition among online platforms and technology companies on their privacy protections).

[15] See Federal Trade Commission & U.S. Department of Justice, Hart-Scott-Rodino Annual Report, Fiscal Year 2017 at 15-22, available at https://www.ftc.gov/system/files/documents/reports/federal-trade-commission-bureau-competition-department-justice-antitrust-division-hart-scott-rodino/p110014_fy_2017_hsr_report_c.pdf; FTC Annual Highlights 2018, available at https://www.ftc.gov/reports/annual-highlights-2018.

[16] In the Matter of CDK Global, Inc., a corporation; CDK Global, LLP, a limited liability company; Auto/Mate, Inc., a corporation; Robert Eustace, an individual; Elsa Eustace, an individual; G. Larry Colson, Jr., an individual; Michael Esposito, an individual; and Glen Eustace, a representative, Docket No. 9382, Public Administrative Complaint (Mar. 20, 2018), available at

relatively small upstart that had enjoyed some recent success and appeared poised to challenge the market leaders more aggressively. The market was concentrated and barriers to meaningful entry were substantial. To be sure, there was some current competition between the firms, but the greatest concern we identified during the investigation was the likely future competition that would be lost, should Auto/Mate be absorbed by CDK.

Some have questioned whether the existing antitrust paradigm can ever reach this kind of behavior, where a big player squashes or absorbs a promising upstart before it can ultimately grow into a more substantial competitor. The CDK-Auto/Mate action shows that the antitrust law can address this competitive issue if the facts and economic evidence support it. As a counterexample, the FTC was unsuccessful in challenging the Steris merger based on a loss of potential competition, which the court ultimately failed to sustain on factual grounds.[17] Again, the three pillars are essential to successful enforcement, as they should be.

I'd like to say a few words about so-called "vertical mergers," which have been a hot topic in the antitrust world of late. A "vertical" merger is one in which the parties do not directly compete, instead operating on different levels of the supply chain. A classic example would be a manufacturer merging with its distributor or retailers selling its products, and there are many recent examples in the tech sector as well, including Apple's purchase of music-recognition app Shazam, and Google's acquisition of ITA Software and its flight-search engine.

The vast majority of vertical arrangements are pro-competitive.[18] FTC Commissioner Christine Wilson, has convincingly laid out the reasons why: vertical deals eliminate no head-to-head competition in any market, create cost-saving benefits such as the elimination of double-marginalization, incentivize investment by aligning upstream and downstream incentives, and are confirmed to be typically procompetitive by retrospective analyses, such as those collected by the Global Antitrust Institute.[19] Vertical mergers can, however, raise antitrust concerns when the parties gain an ability and incentive to foreclose their rivals from a significant portion of the market. Thus, as with horizontal mergers, vertical deals should be evaluated case-by-case based

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https://www.ftc.gov/system/files/documents/cases/docket_no_9382_cdk_automate_part_3_complaint_redacted_public_version_0.pdf.

[17] FTC v. Steris Corp., 133 F. Supp. 3d 962 (N.D. Ohio 2015).

[18] See, e.g., Francine Lafontaine & Margaret Slade, Exclusive Contracts and Vertical Restraints: Empirical Evidence and Public Policy, Handbook of Antitrust Econ. 391–414, 409 (Paolo Buccirossi ed., 2008) (concluding from an empirical analysis that, "when manufacturers choose to impose [vertical] restraints, not only do they make themselves better off, but they also typically allow consumers to benefit from higher quality products and better service provision. . . . The evidence thus supports the conclusion that in these markets, manufacturer and consumer interests are apt to be aligned, while [government] interference in the market is accomplished at the expense of consumers (and of course manufacturers)") (alteration in original); James C. Cooper et al., Vertical Antitrust Policy as a Problem of Inference, 23 Int'l J. Indus. Org. 639, 662 (2005) ("Our review of the empirical evidence—which informs our priors—suggests that vertical restraints are likely to be benign or welfare enhancing."). The Supreme Court has adopted the prevailing economic learning. Leegin Creative Leather Prods. v. PSKS, Inc., 551 U.S. 877, 889–92 (2007) (discussing and embracing key insights from the economic literature).

[19] Statement of FTC Commissioner Christine Wilson, Vertical Merger Policy: What Do We Know and Where Do We Go?, at 3-5 (Feb. 1, 2019), available at https://www.ftc.gov/system/files/documents/public_statements/1455670/wilson_-_vertical_merger_speech_at_gcr_2-1-19.pdf; see also Statement of D. Bruce Hoffman, Vertical Merger Enforcement at the FTC, at 2-3 (Jan. 10, 2018), available at https://www.ftc.gov/system/files/documents/public_statements/1304213/hoffman_vertical_merger_speech_final.pdf

on all the available evidence and not pre-judged based on the size of the parties or concerns outside of preserving market competition.

It is true that some technology-fueled markets, including but not limited to markets with online platforms, may present interesting analytical challenges to antitrust enforcers if they have significant network effects, high switching costs, and resulting barriers to entry. But these issues are not unique to these markets, and their implications have been well studied by economists and antitrust lawyers alike. They have also made their way into the body of antitrust case law over the past few decades, providing legal roadmaps for future enforcement cases. The necessary tools exist today to account for these market characteristics. However, reverting to my three pillars for successful enforcement, the mere presence of network effects does not necessarily support a conclusion of an anticompetitive market outcome.[20]

Even with the best analytical tools and intentions, though, no enforcer can get it right 100% of the time, which is why I agree that occasional retrospective reviews of mergers and enforcement remedies are very important. And the agencies regularly undertake such reviews, probing the effectiveness of their past decisions and using that information to inform future enforcement. For example, in 2017 the FTC updated its divestiture study to examine seven years' worth of remedies, taking a hard look at whether each remedy succeeded in preserving competition.[21] While the overall prognosis was positive, the results showed that FTC-approved divestitures of limited asset packages had a higher failure rate than divestitures of whole business lines. The FTC staff took that information to heart and used it immediately to apply more scrutiny to proposed asset packages in deals under review. A limited number of retrospectives of prior deals, using the best available economic analysis, could provide similarly helpful insights, though I would caution against doing this routinely as it would divert resources away from the important job of enforcement.

I should also note that the agencies can and do review already-consummated mergers and order divestitures when justified by the facts and law. This occurs most commonly in mergers that fall below the Hart-Scott-Rodino Act reporting thresholds, such as the 2008 Polypore-Microporous[22] acquisition that was finally unwound in 2013 following a challenge by the FTC, and the Commission's current challenge to the Otto Bock/Freedom Innovations merger.[23]

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[20] See, e.g., Catherine Tucker, Network Effects and Market Power: What Have We Learned in the Last Decade?, Antitrust Magazine, Spring 2018, at 73 ("First, network effects do not imply entrenchment and can actually lead to quicker destabilization of a market leader position. Second, network effects tend to be quite localized, meaning that they tend to be less a function of an entire user base than a function of the scope of a user's interactions in a digital ecosystem. Third, in some instances the addition of certain users to an ecosystem can have negative effects for the relative attractiveness of that platform. These shifts mean that it can no longer be assumed that the mere existence of network effects will lead to entrenchment.") available at http://sites.bu.edu/tpri/files/2018/07/tucker-network-effects-antitrust2018.pdf .

[21] Federal Trade Commission, The FTC's Merger Remedies 2006-2012 (Jan. 2017), available at https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf.

[22] In the Matter of Polypore Int'l, Inc., FTC No. 081 0131, available at https://www.ftc.gov/enforcement/cases-proceedings/081-0131/polypore-international-inc-matter.

[23] In the Matter of Otto Bock HealthCare N. Am., Inc., FTC No. 171 0231, available at https://www.ftc.gov/enforcement/cases-proceedings/171-0231/otto-bock-healthcarefreedom-innovations.

But trying to "unscramble the eggs" through a divestiture remedy long after a merger has been consummated, or using a breakup as a remedy in a conduct matter, is a drastic step that carries serious risk of doing more harm than good for competition and consumers. As pointed out by the D.C. Circuit in the Microsoft case, the dissolution of an already-unified company is rife with "logistical difficulty," and should be "imposed only with great caution, in part because its long-term efficacy is rarely certain."[24] Such a remedy could actually reduce consumer welfare if the breakup leaves the company unable to innovate or with higher costs. As Frank Easterbrook noted many years ago, breaking up particularly innovative firms risks chilling innovation, because as "innovations and other forms of information become a larger and larger fraction of the cost of production, breaking up firms with substantial market positions imposes greater and greater costs" as the reward for all their R&D is dispersed.[25] Aside from practical concerns, divestitures in monopoly cases require a particularly "significant causal connection between the [challenged] conduct and creation or maintenance of the market power."[26] I agree with my former FTC colleague, Commissioner Noah Phillips, that breaking up established companies, even those credibly accused of monopolistic conduct, is a "treatment [that] may be worse than the disease," and should be a last resort for the most inveterate antitrust offenders.[27]

The current state of antitrust law may in very limited circumstances allow for divestiture when a prior merger is demonstrably anticompetitive, but prophylactic enforcement is a much-preferred solution wherever possible. Whatever enforcement direction the agencies take, they should be careful not to create a kind of "antitrust double jeopardy" where previously cleared deals are subject to a "do-over" investigation solely due to a change in political winds. The primary focus should be on getting it right the first time, based on provable facts and sound economics, which will respect procedural fairness and better preserve benefits for consumers.

Mergers are not the only area of competitive concern and other recent enforcement efforts targeted firms using a dominant position to exclude competition, such as FTC's action against McWane for exclusionary conduct against rival manufacturers,[28] as well as the DOJ's continual efforts in the criminal sphere to uproot and squelch price-fixing and other antitrust conspiracies that deprive consumers of the benefit of competition.[29] In the latter category, the FTC and DOJ's joint efforts to crack down on no-poach agreements that stifle wages and other employee benefits, including a new criminal enforcement policy, have built on the DOJ's enforcement actions against numerous tech companies with anticompetitive "no cold call" agreements.

I believe antitrust can and should address such anticompetitive behavior by any company, including innovative technology companies, as set forth in the thoughtful D.C. Circuit opinion in the Microsoft matter.[30] Among other things, that case teaches that under current antitrust law a

[24] United States v. Microsoft Corp., 253 F.3d 34, 80, 106 (D.C. Cir. 2001).
[25] Frank Easterbrook, Breaking Up Is Hard To Do, The American (Dec. 7, 1981), available at https://www.aei.org/publication/breaking-up-is-hard-to-do/.
[26] *Microsoft*, 253 F.3d at 106.
[27] Noah Phillips, We Need to Talk: Toward a Serous Conversation About Breakups (Apr. 30, 2019) at 14, available at https://www.ftc.gov/system/files/documents/public_statements/1517972/phillis_-_we_need_to_talk_0519.pdf.
[28] In the Matter of McWane, Inc., and Star Pipe Products, Ltd., FTC No. 101 0080b, available at https://www.ftc.gov/enforcement/cases-proceedings/101-0080b/mcwane-inc-star-pipe-products-ltd-matter.
[29] See Department of Justice Antitrust Division, Criminal Enforcement Trends Charts Through Fiscal Year 2018, available at https://www.justice.gov/atr/criminal-enforcement-fine-and-jail-charts.
[30] See U.S. v. Microsoft Corp., 253 F.3d 34 (D.C. Cir. 2001).

dominant provider must maintain its position through legitimate competition on the merits, rather than through exclusionary conduct that has little or no purpose beyond disadvantaging rivals.[31]

The Microsoft decision stands for the proposition that monopolists can improve their products to better serve their customers just like any other market participant. But enforcers will not tolerate the use of market position to short-circuit competition on the merits. In essence, monopolists need to fend off their rivals the same way other firms do, by doing things better than the next guy. This standard leaves enforcers plenty of room to attack the kind of exclusionary conduct the antitrust laws are meant to address.

In sum, I believe that today's antitrust paradigm can confront meaningful competitive harm in the modern, digitally mediated economy but that antitrust enforcement should always turn on the specific facts of each individual case and the likelihood of actual consumer harm. Enforcers can and should bring cases in these areas when the interests of consumers are threatened and should continue to refine their tools to better identify when such consumer harm is likely to occur. Through this approach, enforcement can pursue the goal of antitrust as articulated by the Supreme Court, which is to protect free and open markets for the benefit of consumers.

III. What are the boundaries between antitrust and regulation?

Conversely, competition enforcers should not intervene simply because they dislike certain market outcomes. Antitrust is about protecting the process, not guaranteeing a particular result at a particular time. Our free market system rests on the conclusion that markets in which firms must endure competitive pressures will produce favorable outcomes in terms of price, output, quality, and innovation in the long run. But if some competitors seem to be winning the race at a point in time, we should not use antitrust enforcement to hamper them or to require them to compete less aggressively, as long as they are not corrupting the competitive process. As the Supreme Court observed in National Society of Professional Engineers even "occasional exceptions to the presumed consequences of competition" are not grounds for antitrust enforcement.[32]

We should also carefully examine some of the assumptions made by those who would seek a more interventionist role for competition enforcement involving online platforms, which are present in many sectors. Perhaps the most troubling assumption here is that regulators can divine how new technologies should develop and where and how they should be used. Our enforcement agencies are specialists in analyzing and enforcing antitrust law, not in divining the next big innovation in technology-based offerings.[33]

In considering whether to replace antitrust with a detailed regulatory structure, we should think about some of the subsidiary questions that would require the government to decide.[34] Can these

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[31] Id. at 58.

[32] Nat'l Soc'y of Prof's Eng'rs v. United States, 435 U.S. 679, 695 (1978)

[33] The ability to predict the future success of any new product is highly uncertain even for the most sophisticated technology companies. See, e.g., Sean Ellis & Morgan Brown, Hacking Growth, How Today's Fastest Growing Companies Drive Success (2017), pp. 59-60 (noting the failure of Google Glass, Amazon's Fire Phone, and Microsoft's Zune music player).

[34] For an excellent discussion of the troubled history of regulatory capability to structure markets, see Christine Wilson, Remembering Regulatory Misadventures: Taking A Page from Edmund Burke to Inform Our Approach to

technology firms branch out into new markets, or must they narrowly focus on their original, core competency? When a technology company lowers prices, should that be permitted by regulators because it helps consumers or prohibited because it makes some other business less likely to succeed? How should a regulator weigh these effects against each other?

Also, even well-intentioned regulatory interventions can have unintended, substantial negative impacts on competition, as the recent adoption of the General Data Privacy Regulation (GDPR) in Europe demonstrates. A recent op ed by several economists described the results of their study on the impact of GDPR on investment in Europe, which found the observed effects on small technology firms "were immediate, pronounced, and negative."[35]

Furthermore, the U.S. has consistently been a strong voice globally in advocating for competition law to focus on consumer welfare goals and not to include other policy goals. I fear that abandoning this clear position in the U.S. will encourage regimes around the world to pursue industrial policy goals, such as favoring domestic industry, to the detriment of U.S. consumer and business interests.[36]

Conclusion

I hope my remarks have provided some helpful context on the role of antitrust law in protecting competition, including in markets with online platforms. This nation's antitrust enforcers have many tools in their arsenal to combat anticompetitive mergers and practices by any company, including platforms, but these tools are powered by the facts and evidence specific to each case,

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Big Tech (June 28, 2019) available at https://www.ftc.gov/system/files/documents/public_statements/1531816/wilson_remarks_biicl_6-28-19.pdf.

[35] Jian Jia, Ginger Jin, Liad Wagman, The short-run effects of GDPR on technology venture investment, Jan. 7, 2019, https://voxeu.org/article/short-run-effects-gdpr-technology-venture-investment . The study is available at Jian Jia, Ginger Zhe Jin, Liad Wagman, "The Short-Run Effects of GDPR on Technology Venture Investment" (working paper, National Bureau of Economic Research, November 2018), https://www.nber.org/papers/w25248). ("EU technology firms, on average, experienced double-digit percentage declines in venture funding relative to their US counterparts after GDPR went into effect. At our aggregate unit of observation, EU venture funding decreased by $3.38 million at the mean of $23.18 million raised per week per state per crude technology category. This reduction takes place in both the intensive margin (the average dollar amount raised per round of funding, which decreased 39%) and the extensive margin (the number of deals, which incurred a 17% average drop). GDPR's effect is particularly pronounced for young (0–3 year old) EU ventures, where an average reduction of 19% in the number of deals is observed. From the US Census data, we know business startups contribute substantially to gross and net job creation (Haltiwanger et al. 2013). If GDPR leads to fewer new ventures and less capital per venture, there could be fewer jobs as a result. Our back-of-the-envelope calculation suggests that the investment reduction for young ventures could translate into a yearly loss between 3,604 to 29,819 jobs in the EU, corresponding to 4.09% to 11.20% of jobs created by 0–3 year old ventures in our sample.)

[36] See Prepared Statement of the FTC Before the U.S. House of Representatives Committee on the Judiciary Subcommittee on Regulatory Reform, Commercial and Antitrust Law "International Antitrust Enforcement: China and Beyond" (June 7, 2016) ("We have long advocated that competition law be applied with the goal of protecting competitive markets and promoting consumer welfare, and to all market participants in a non-discriminatory manner. Using competition law for protectionist ends to promote a domestic competitor or industry would rob consumers of the intended benefits of competition law enforcement and undermine the legitimacy of the competition law system globally.") available at https://www.ftc.gov/system/files/documents/public_statements/953113/160607internationalantitrust.pdf

as they should be in our system of limited government. We should reflect very carefully before asking our enforcers to go beyond this well-established mission of antitrust.

Mr. CICILLINE. Thank you very much.
I now recognize Mr. Szabo for 5 minutes.

TESTIMONY OF CARL SZABO

Mr. SZABO. Mr. Chairman, members of the committee, thank you again for the opportunity to be here. It's been a long day so I'm just going to give three points and then kind of explain them a little further.

First, markets have an outstanding record at eroding first-mover advantages that help small business become large; two, bigger is better for consumers looking for choices or for small businesses looking for customers; and three, competition is robust, Americans know it, and Americans know that weaponization of antitrust isn't for their benefit.

We've seen throughout the 21st century that markets naturally erode the first-mover advantages that help them get big. Search was once dominated by Yahoo. It was later overtaken by Google. MySpace was the dominant social network later overtaken by Facebook. And as the chairman pointed out, Facebook is now facing robust combination from TikTok, a new entrant, and that's just in the past couple of years.

And with the advent of the internet, we've removed the high startup costs that are often seen in traditional markets. The next big innovation is readily buildable and distributable, further advancing the natural erosion of the first-mover advantage.

For Americans and America's small businesses, bigger is better. What we see here are two-sided markets. You have consumers on one side and small businesses on the other. These platforms are operating as the bridge between the two. The connection is providing a much needed lifeline to America's Main Street businesses.

And the bigger the platform, the better it is for these small businesses because it gives greater access to more potential customers. It drives down prices for advertising, and with micro targeted ads, American businesses can be sure that every dollar they spend on advertising actually leads to sales, something you didn't have in traditional media.

And don't take my word for it. Polling shows that online platforms have helped nearly 60 percent of Americans discover new small businesses. And good news for those worried about the death of entrepreneurship, the esteemed Coffman Index, a nonpartisan group, shows that entrepreneurship is at its highest levels in over a decade.

Third, competition is robust. Americans know it, and then they know weaponization of antitrust is not for their benefit. There's never been more choice and more opportunity. For anyone whose home was damaged in the recent storms, they can easily find repairs on Yelp, Thumbtack, TaskRabbit, Google, or Angie's List. When looking for social media, there's Instagram, Snapchat, Discord, Reddit, Twitter, and YouTube.

For anyone looking to replace lost commodities they can turn to eBay, Overstock, Wal-Mart, Wayfair, Amazon, Rakuten, and many, many more. Americans can quickly and easily do comparison shopping on price and services on multiple platforms and on multiple search engines. The internet continues to create more choices,

lower prices, and better services. These are all things you don't see in a consolidated market.

But advocates on this panel are calling for weaponization of antitrust to address perceived injustices, and that's just not the reality. Some of today's panelists say that 50 percent of a market should now be considered a monopoly, others unable to prove that a dominant firm exists say, well, let's just take the top two, add them together, call it a duopoly. This isn't legitimate antitrust analysis.

And at the end of the day, advocates calling for weaponization of antitrust standalone from the rest of the country. Polling shows that only one in 20 Americans think tech should be the focus of government oversight. And less than one in five think consumers are the beneficiaries of a breakup of big tech. That's because markets have an outstanding record at eroding the first-mover advantage. Bigger is better, especially for America's small businesses. Competition is robust, and your constituents know it.

Thank you, and I welcome your questions.

[The statement of Mr. Szabo follows:]

Statement of

Carl Szabo,

Vice President & General Counsel

NetChoice

Testimony before the

United States House of Representatives Committee on the Judiciary,

Subcommittee on Regulatory Reform, Commercial and Antitrust Law

Hearing on:

Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship

July 16, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and members of the committee, I am pleased to submit this testimony for your hearing on *Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship*.

NetChoice[1] is a trade association of leading e-commerce and online companies promoting the value, convenience, and choice of internet business models. Our mission is to make the internet safe for free enterprise and for free expression.

We work to promote the integrity and availability of the global internet and are significantly engaged in issues in the states, in Washington, and in international internet governance organizations.

New developments in markets and in business-to-business and business-to-consumer relationships show robust competition and innovation

The online environment is robust, healthy, and market players are numerous. For consumers, prices are low. For small businesses, opportunity and entrepreneurship are growing. And these results are because competition is robust.

Today, American consumers have more choices and more information than ever. Historically, consumers had to rely upon only a handful of nearby businesses from which to purchase products and services. These businesses could set prices higher than competitors located further away, and customers had a difficult time researching the comparative value and quality of options.

Today, thanks to the internet, consumers have access to a smorgasbord of products, businesses, and information about pricing. With a couple of clicks customers can find the lowest prices for goods they want. No longer limited to just nearby stores, the internet enables customers to buy from hundreds of thousands of stores across the country.

Online services have evolved to help consumers find the lowest prices. Websites such as Slickdeals[2] help consumers find active discounts. Services such as Honey[3] enable real-time price comparison and coupon testing at checkout. Today, customers can easily find the products they want at the lowest prices.

For businesses, the internet has reduced barriers to entry and increased their potential marketplace. Now an art student can easily sell paintings from her studio to anyone around the world, without first obtaining access to dealers and conceding markups to galleries. A parent can sell their childrens' old toys in a large market rather than relying on a one-day neighborhood yard sale. Anyone can compete with any business, big or small.

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[1] NetChoice is a trade association of e-Commerce and online businesses, at www.netchoice.org The views expressed here do not necessarily represent the views of every NetChoice member company.
[2] Slickdeals.net
[3] JoinHoney.com

There is no dearth of competition. The marketplace has never been more competitive.

Large platforms help small businesses

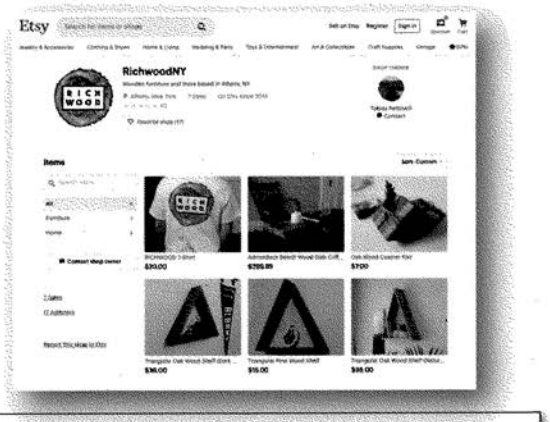
Anti-business advocates claim that "big is bad." But for America's small and mid-size businesses, the bigger the platform the better for reaching larger audiences.

Consider the local custom furniture store. Just fifteen years ago businesses like this could barely afford to place an ad in a local newspaper, let alone on TV or radio. ***Thanks to large online platforms, for less than ten dollars a small business can reach thousands of potential customers and target them more accurately than ever.***

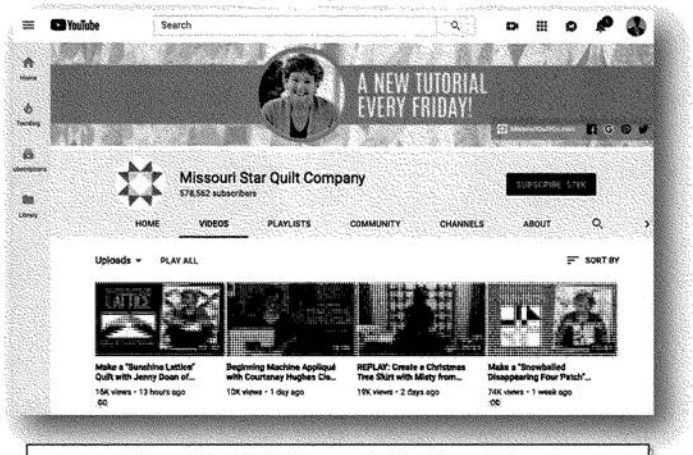
Large online platforms have given new growth opportunities to America's small businesses. Consider the app stores on the Apple and Android platforms. Developers can reach markets of millions of customers. And the costs for a developer to distribute an app are intentionally low, to empower small developers to compete. Fifteen years ago, this was only possible through significant outlays for advertising, distribution, and logistics to move software to customers. And even if developers decide to not publish their apps in the Android or Apple marketplaces, they can make their services available via device websites.

Or consider how the platforms Etsy and eBay enable small sellers to find customers across the country and even around the world.

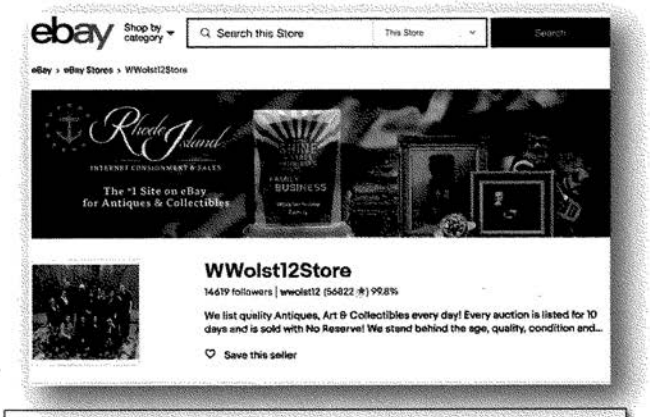
These benefits are the result of allowing online platforms to grow and flourish because America's antitrust law has relied upon the consumer welfare standard to regulate that growth.



In Albany, NY, woodworker RichwoodNY uses Etsy to find customers from across the country.



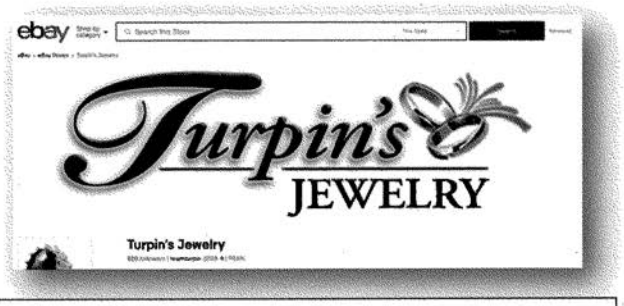
Missouri Star Quilt Company in Hamilton, MO uses YouTube to advertise to customers across the country.



William Wolstenholme in Cumberland, RI uses eBay to sell consignment to customers across the country.



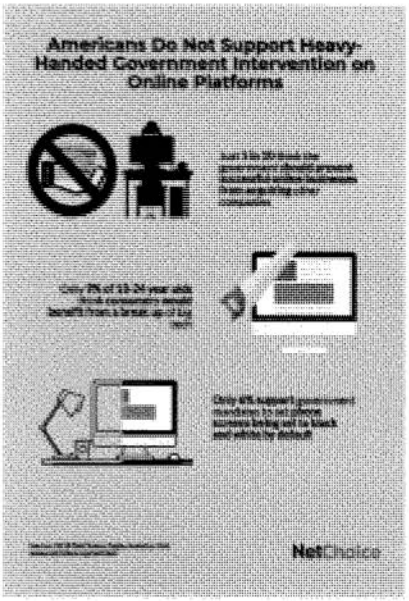
The Whatever Shack in Rock Springs, WY uses Facebook Marketplace to find customers from across the country.

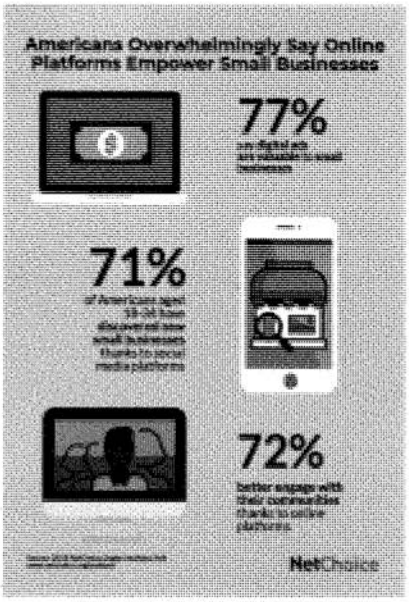


Turpin's Jewelry in Dillard, GA uses eBay to find customers from across the country.

Polling shows that Americans oppose government limitations on business acquisitions and Americans do not see consumers as the chief beneficiaries of big-tech breakups

Polling of Americans conducted by Zogby Analytics and commissioned by NetChoice found overwhelming opposition to limitations on acquisitions by large online platforms.[4] Moreover, this polling found overwhelming concern with breaking-up large online platforms.





Question: *Some groups are calling for the break-up of large tech businesses. Who do you believe would most benefit from a break-up?*

- 28% of those with an opinion said, "Consumers" would most benefit.
- 53% of those with an opinion said, "Traditional industries competing with tech businesses" and "Anti-business groups" would most benefit.

Question: *If an online business becomes successful, should the government prevent them from acquiring any tech startups that seek to be acquired?*

- 86% of those with an opinion said "No"

That same polling shows that:

- Only 10% of Americans think the government should prevent successful online businesses from acquiring other companies.

Americans said that the government should most focus its anticompetitive resources on sectors *other than tech*.

When asked:

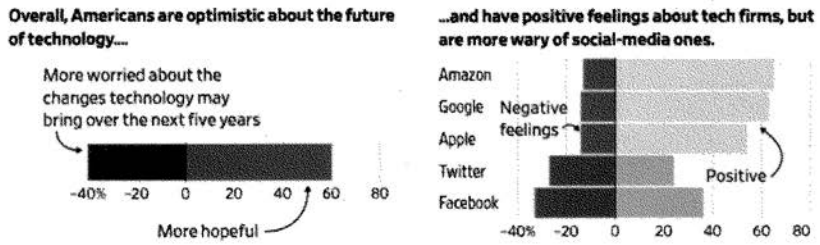
- Only 5% of Americans say the government should most focus its anticompetitive enforcement on tech platforms.[5]

To compare:

- 29% of Americans say the government should most focus its anticompetitive enforcement on pharmaceutical companies, and
- 11% of Americans say the government should most focus on the electricity and gas industry.

These findings are also seen in an NBC poll, ***"By a more emphatic 68% to 28%, respondents said such decisions [about big-tech breakups] should be left to the free market rather than government."***[6]

While a *Wall Street Journal* - NBC poll shows that a majority of users have privacy concerns, there are other findings that are far more relevant to today's hearing. For example, their polling shows that Americans have very positive feelings about the large platforms (see image below).[7]



Disruptive and generational changes in technology provide new avenues for competition

With changes in technology, and in particular the growth of online platforms, we've seen a breakdown of barriers for new entrants into established markets. Rapid innovation, combined with low barriers to entry, forces existing businesses to innovate and compete.

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[5] *Id*

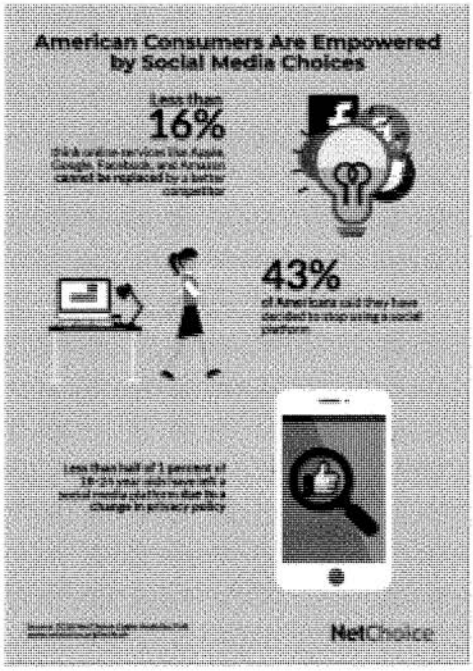
[6] John Harwood, *Americans don't support Sen. Elizabeth Warren's plan to break up big tech: Poll*, CNBC (Apr. 5, 2019)

[7] John D. McKinnon and Danny Dougherty, *Americans Hate Social Media but Can't Give It Up, WSJ/NBC News Poll Finds*, Wall St. Jo. (Apr. 5, 2019).

Despite claims by some that "consumers are locked into large platforms and will not leave" public opinion and consumer behavior shows just the opposite.

When it comes to online shopping the growth of new market entrants like Jet.com and Rakuten show competition is robust. Online search enjoys robust competition, too. For local search Americans choose from Yelp, TripAdvisor, UrbanSpoon, and Angie's List to name a few. For travel searches there are Expedia, Travelocity, Kayak, and many others. More shoppers start their product searches on Amazon than on Google.[8] And for general search we've the incredible growth of new search engines like DuckDuckGo.[9]

As Yelp describes it in its latest earnings report, "***We compete in rapidly evolving and intensely competitive markets, and we expect competition to intensify further in the future with the emergence of new technologies and market entrants.***"[10]



[8] Krista Garcia, *More Product Searches Start on Amazon*, eMarketer (Sept. 7, 2018) ("Nearly half (46.7%) of US internet users started product searches on Amazon compared with 34.6% who went to Google first, according.").
[9] Matt Southern, *DuckDuckGo Traffic Up 50% from Last Year, Hits New Record of 30M Daily Searches*, Search Engine Journal (oct. 11, 2018).
[10] Yelp Inc., 10-Q, May 2019.

Competition is only an innovation away.

Nationwide polling conducted by Zogby Analytics and commissioned by NetChoice[11] showed consumers can and do leave platforms when better options are available.

> *Question: Do you think that the services offered by online platforms like Apple, Google, Facebook, and Amazon can be replaced if a better competitor comes along?*
>
> - 70% of those with an opinion said "Yes"

Online advertising is competitive and new competitors are growing fast

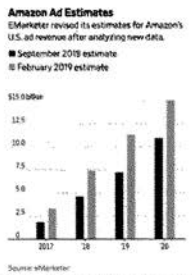
In the online advertising environment it is clear that there is robust competition to serve advertisers.

But regulators should first question why they are limiting any market analysis to an "online environment." Rather than look only at the *online* market, regulators should expand their analysis and market definition to cover *all* advertising – including television, radio, and newspapers. When it comes to these three markets they are often controlled by a few large players. Moreover, advertising on TV and radio stations is exclusively controlled by the owners.

Rather than look at online advertising in a vacuum, it is incumbent on regulators to look at consumers as multi-homing. Americans no longer spend so much time watching broadcast television or listening to the radio.

Americans now engage in multitasking – surfing the web on their phones while watching a sporting event, for example. In that scenario there is an overlap in advertising and regulators should include this overlap in their analysis.

Second, if regulators incorrectly limit their market analysis to only *online* advertising, they should discover that the online market is clearly competitive and new entrants are growing. While Google and Facebook remain the two largest online advertising platforms, Amazon's service is catching up fast. From the Wall Street Journal:[12]



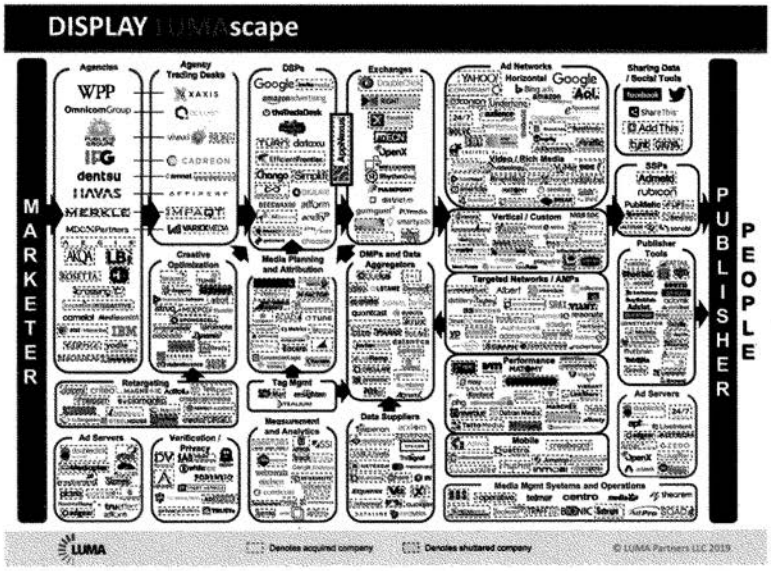
Wall St. Jo. Amazon's Ad Business May Be Growing Faster Than Thought

> Amazon's ad revenue is expected to increase to $15 billion in 2020, or just under 10% of the digital ad market share in the U.S., from $11.3 billion in 2019 and an 8.8% share, according to the latest forecast.

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[11] *See* Zogby Analytics survey of 1222 adults in the United States conducted from August 6, 2018 to August 8, 2018.
[12] Alexandra Bruell, *Amazon's Ad Business May Be Growing Faster Than Thought*, Wall St. Jo. (Feb. 20, 2019).

LumaSCAPE[13] (below) shows just how diverse and complex the online advertising ecosystem is.



With such prolific diversity among advertising platforms, ad exchanges, and ad networks, it is clear that competition is robust. And using Amazon as an example, growth for new competitors is happening.

Failure of anti-business proponents to prove their case

Proponents of breaking-up tech companies via new theories of antitrust have failed to substantiate their allegations – even though the burden of proof rests with these accusers.

Consider Sen. Elizabeth Warren's *Medium* post,[14] where she proclaims Facebook and Google as "monopolies" while ignoring their actual market share and growing competition in every market they serve.

With less than 20 million U.S. users, Facebook's messaging tool WhatsApp is much smaller than Apple's iMessage, which connects over 90 million American consumers.

TikTok, a fairly new competitor in the social media market, has over half a billion users worldwide.

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[13] LumaScape, *available at*, https://lumapartners.com/content/lumascapes/display-ad-tech-lumascape/
[14] Sen. Elizabeth Warren, *Here's how we can break up Big Tech*, Medium (Mar. 8 2019).

And in search, Google's competition is a click away as we see the rapid ascent of new general search engines like DuckDuckGo[15] and Google competes with tailored search like Yelp for restaurants and AngiesList for services.

> The consumer welfare standard looks to overall consumer welfare and economic efficiency as the main factors when engaging in antitrust analysis.

These American businesses are not consumer-harming monopolies as some claim but are social networking services that have earned global success in a competitive marketplace.

American success stories, such as Google, Apple, and Facebook, empower small businesses to reach new customers all over the world like never before. From online marketplaces, to app stores, to photo sharing services, these platforms allow individuals to connect with the world in ways only dreamt of twenty years ago.

We have seen other anti-business proclamations without facts from Tim Wu, who fails to make a substantive case throughout his book, *The Curse of Bigness*, despite having 300 pages in which to do so.

Consider one of Wu's first points. He cites indexes showing fewer large firms as evidence of consolidation. But Wu ignores similar indexes showing the resurgence in *small* firms.

The Kauffman Index of Growth Entrepreneurship shows that entrepreneurship is at its highest levels since 2008. Main street growth and startup activity are likewise up.[16] The US Bureau of Labor Statistics found self-employment is up since 2014 and is projected to grow at 7.9% — faster than the projected rate for all workers.[17] This shows the inherent danger in making snap-decisions that ignore market changes over time.

In essence, there is a direct correlation between the growth of small entrepreneurs and online platforms like eBay, Facebook, and Google. These platforms are helping small businesses the same way a large retailer operates as an anchor for a shopping center or mall.

The larger these platforms grow means the more customers small businesses can reach with better targeting and lower costs. ***To America's entrepreneurs, bigger is better when finding a platform for the most effective advertising.*** 58% of Americans, and 73% of those between 18 and 24 years old, say online platforms helped them discover a small business they had not previously known.[18]

Tim Wu sees a world where one business controls the market and once it has dominance, it raises prices on consumers and businesses. Take for example the oil industry, the example around which Wu bases his theory.

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[15] Matt Southern, *DuckDuckGo Traffic Up 50% from Last Year, Hits New Record of 30M Daily Searches*, Search Engine Journal (oct. 11, 2018)

[16] Kauffman Indicators of Entrepreneurship, *available at* https://indicators.kauffman.org

[17] Bureau of Labor and Statistics, *Small-business aptians: Occupational outlook for self-employed workers, available at* https://www.bls.gov/careeroutlook/2018/article/self-employment.htm

[18] NetChoice.org/TechlashPoll

But under the existing consumer welfare standard, if big oil uses market power to raise prices, that would violate our existing antitrust standards. Moreover, Wu ignores President Teddy Roosevelt's apprehension about the break-up. Roosevelt lamented, "I do not see what good can come from dissolving the Standard Oil Company into 40 separate companies."[19]

Wu also cites actions against AT&T and IBM as evidence of antitrust failures. So, while Wu thinks he has found a slam-dunk argument against the consumer welfare standard, he actually shows that the current antitrust system and standards work effectively.

Back in 2010, Tim Wu complained[20] that Facebook's size alone precludes new entrants. Yet Wu's prognostications missed emerging Facebook competitors Twitter, Snapchat, Reddit, YouTube, and LinkedIn. And since 2010, we've seen the rise of additional social media competitors like Twitch, TikTok, Pinterest, and Tumblr.

Likewise, Tim Wu and Sen. Warren complain about businesses giving preference to their own products ahead of others. But it's become expected for retailers – online and off – to offer their own brands to consumers seeking lower cost alternatives from a producer they trust.

For example, Costco features its Kirkland brand in stores. Safeway features its O Organics and Signature Cafe brands. Kohl's is known for its Tony Hawk brand while Macy's has over 20 of its own private label brands. Trader Joe's and Aldi markets prominently feature their proprietary products.

If the prosecutor fails to prove their case, as Sen. Warren, Tim Wu, and their allies have, then governmental action cannot be justified.

Reviewing merger consent decrees

When the termination date of a merger or acquisition consent decree is approaching, that is a prime opportunity to do a second review of market conditions and company conduct. The overseeing agency should review the current market and identify whether the concerns that gave rise to the earlier consent decree remain relevant. If those concerns are no longer relevant, the consent decree should be allowed to expire.

However, if pre-acquisition or pre-merger concerns remain, or the company shows evidence of anti-competitive behavior, then the consent decree should be extended.

For example, the approved merger of Ticketmaster and Live Nation was subject to a 10-year consent decree that expires in 2020.[21] This approved vertical merger allowed the dominant ticketing platform to merge with the largest promoter of concerts.

When reviewing the Ticketmaster-Live Nation transaction in 2010, the Department of Justice raised concerns that "This loss of competition likely would result in higher prices for and less

[19] Crane, *All I Really Need to Know About Antitrust I Learned in 1912*, Iowa Law Review Vol. 100:2025, 2030.
[20] Tim Wu, *In the Grip of the New Monopolists*, Wall St. Jo (Nov. 13, 2010).
[21] *U.S. v. Ticketmaster Entertainment, Inc.*, Case: 1:10-cv-00139 (U.S.D.C. 2010).

innovation in primary ticketing services."[22] The DoJ was prescient: in the decade since that merger, Ticketmaster continues to maintain a market share of 70-80% in primary ticket sales.[23]

Ticketmaster and Live Nation are now expanding efforts to control event ticketing transactions, by restricting how fans sell or give away their tickets. They are preventing resale of tickets on non-Ticketmaster platforms, using their dominance in primary ticket sales to prohibit competition with respect to ticket resales.

In addition to using terms and conditions, technology, and business conditions with their partners to restrict transferability of tickets amongst consumers,[24] Ticketmaster-Live Nation also uses threats of retaliation to dominate the ticket market and impede competition.[25]

Any objective review of Ticketmaster-Live Nation would conclude that the consent decree is not working. This is a prime example of where oversight agencies should use their merger review powers to maintain a competitive marketplace that serves consumer interests and institute remedies that will ensure competition in the ticket industry.

Congress should proceed carefully when hearing calls to "break-up" technology businesses – no matter how loudly a few are complaining. Instead, Congress should retain and protect the model on which consumers and business have relied and it has and will continue to work – the consumer welfare standard for antitrust

We thank you for your consideration and look forward to your questions.

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[22] *Id.*

[23] *Id.*

[24] *See*, Ticketmaster Credit Card Entry, *available at* https://www.ticketmaster.com/h/credit-card-entry.html ("Can I sell Credit Card Entry tickets? That's up to the artist, team, or venue! If they give the green light you'll see a Sell button when you click the order number under Order History in My Account.").

[25] *See, e.g.*, Jem Aswad, *Department of Justice 'Looking Into Accusations' Against Live Natian, Report Claims*, Variety (Apr. 1, 2018) (""They have been reviewing complaints that Live Nation, which manages 500 artists, including U2 and Miley Cyrus, has used its control over concert tours to pressure venues into contracting with'").

Mr. CICILLINE. Thank you. And before I recognize Mr. Reed, I do want to correct the record. I did not at all suggest that TikTok provided robust competition for Facebook. In fact, I was making the point that, despite their efforts, Facebook continues to capture 80 percent of global social media revenue. So, with all due respect, I don't want you to mischaracterize my opening statement.

And, with that, I'll recognize Mr. Reed for 5 minutes. They've called votes, but we are going to, I think, be able to get through the questioning.

TESTIMONY OF MORGAN REED

Mr. REED. I'll make it as fast as possible. Good afternoon, Chairman Cicilline and members of the subcommittee. Thank you for holding this hearing and finally at the end of the whole list get down to actually giving small businesses a voice at the debate. Thank you.

I get to start with good news. We've heard a lot of bad news today, but I'm going to start with some good news. The app economy in America is thriving. Growing up from virtually nonexistent in 2007 to $1.3 trillion today, it has created 5.7 million jobs globally—we heard earlier about 1.5 million here in the U.S.—and is revolutionizing traditional industry verticals, making everything from agriculture to healthcare better and smarter.

My written testimony contains a slew of facts and figures that help to define the breadth and scope of the app ecosystem and how platforms have benefited my community. But I wanted to share how the app economy is thriving in your district and what the world looked like for software companies before the platform revolution.

Mr. Chairman, in Providence, Mojo Tech is a company with 65 employees creating software solutions for healthcare, finance, and e-commerce companies. Your district has one of the leaders in cloud deployment for mobile and project management for Android and Iowa solutions.

Representative Armstrong, in Fargo there's a company called Bushel. It's an agricultural tech company that provides subscription-based web——

Mr. ARMSTRONG. You're stealing my thunder.

Mr. REED. Oh, no. I'm sorry. Well, let's get through it. So Bushel basically has developed hardware for the grain supply chain. There are more than 1,000-grain facilities utilizing their platform. It's a great example of the way that mobile apps have that niche and really take advantage of it.

Representative Johnson, I've talked to you a few different times about coal companies in your district, so this time I thought I'd come and talk a little bit about Atlanta-based Turbojet. It's a smaller shop that's doing solutions for nonprofits, including their website buildout, mobile-enabled capabilities more in the nonprofit space.

So, in all of these cases, Representatives, I have thousands of stories just like these from all 435 congressional districts, each one benefiting from the explosion of platforms like the App Store or Google Play, Amazon, Web Services, Microsoft Azure.

And you know who else benefited? Consumers. Here on the table I have a copy of OmniPage Pro. This was a software you bought if you needed to scan documents. If you wanted to turn it into a processor—into a way you could look at it in a word processor.

I've also got this great review from PC World. They loved it back in 2005. But the important fact here in this review is it says the street price of this software in 2005 was $450.

Now, right here, I've got an app from a company called Readdle that is nearly the same product level, has a bunch of features that this one doesn't. It's $6. Basically now consumers pay less than 1 percent of what they used to pay for some of the same capability. And what's even better about that, even though I love the product from Readdle, there are dozens of competitors in the app space. So, when you look at it from that perspective, consumers are getting a huge win.

How have platforms made this radical drop in price possible? Simply put, they've provided three things: a trusted space, reduced overhead, and given my developers nearly instant access to a global marketplace with billions of customers.

Before the platforms, to get your software onto a retail store shelf, companies had to spend years and thousands of dollars to get to the point where a distributor would handle their product. Then you'd agree to a cut of sales revenue, write a check for upfront marketing, agree to refund the distributor the cost of any unsold boxes, and then spend tens of thousands of dollars to buy an end cap.

Digging in a little bit on this, I don't know how many of you know or are aware that the products you see on your store shelf or on the Sunday flyer aren't there because the manager thought it was a cool product. Those products are displayed at the end of an aisle, or end cap, because the software developer or consumer goods company literally pays for the shelf space.

In fact, for many retailers the sale of floor space and flyers makes a huge chunk of their profitability for their store. And none of this takes into consideration printing boxes, manuals, CDs, dealing with credit cards if you go direct, translation services, customs authorities if you want to sell abroad.

In the 1990s, it cost $1 million to start up a software company. Now it's $100,000 in sweat equity. And thanks to these changes, the average cost for consumer software has dropped from $50 to $3. For developers, our cost to market has dropped enormously and the size of our market has expanded globally.

Of course, it's not all roses and sunshine. Platforms need to improve in important ways, and we appreciate this committee for monitoring the platform ecosystem to better understand what's happening.

One area where we see some fault where some of the platforms have fallen short is transparency. Platforms should communicate to developers the guidelines and any changes they make to them clearly and explain what they mean to my developers.

Another is safety and security. Some platforms have control over device security, and others don't, but all of them should strive for security practices that protect everyone who uses the platform.

Lastly, platforms have a role to play in removing pirated apps. Platforms should diligently respond to even the smallest developer when it comes to protecting IP. Thank you.

[The statement of Mr. Reed follows:]

ACT | The App Association

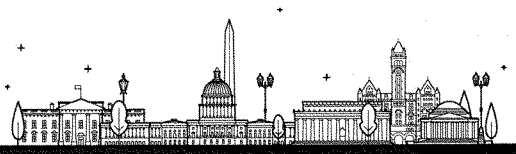
Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship

Testimony of

Morgan Reed
President
ACT | The App Association

Before the

U.S. House of Representatives Judiciary Committee,
Subcommittee on Antitrust, Commercial and Administrative Law



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I. Introduction

We applaud the House Judiciary Committee's Subcommittee on Antitrust, Commercial and Administrative Law for holding this hearing on innovation and platforms and examining important competition law concepts as they apply to the dynamic app economy and platforms. In previous competition hearings across Capitol Hill, Members of Congress heard from a broad swath of large company and consumer group interests. Even in those hearings, the discussion turned to how the consolidation and practices of large platforms affect innovative small businesses like ACT | The App Association members. The time is right to consider the views of our members, and we commend the Subcommittee for giving small companies a voice on the role of competition law in safeguarding innovative market activity and job creation in tech-driven industries.

The App Association is a trade group representing about 5,000 small to mid-sized software and connected device companies across the globe. In the United States, our member companies are part of a $1.3 trillion industry, supporting about 5.7 million jobs. We regularly participate in legal and regulatory proceedings affecting the relationship between consumers, small innovators, and platforms.[1] Further, we actively facilitate engagement between app developers, investors, and platforms in fora across the country.[2] We will continue this engagement by hosting events across the nation this year, with a list of destinations that includes Atlanta, New York, Providence, and Denver. The constituents of members of this Committee are driving competition in the platform ecosystem, and with these events, we aim to show that innovation is happening everywhere in the United States.

While competition is not a static concept, static antitrust principles should guide antitrust authorities as they enforce antitrust laws, including where acts or practices foreclose competition and harm consumers. We urge this Committee to carefully consider how any potential changes to competition law would affect industries across the economy. There is no longer a "tech industry" as it was commonly perceived when personal computers (PCs) first connected to the internet. Ubiquitous connectivity and access to cloud computing superimpose a tech-driven element to virtually all industries across the economy. As a result, competition has new and dynamic characteristics not just in tech, but everywhere. App Association member companies are at the center of these market changes and their continued ability to create jobs in your congressional districts depends on robust enforcement of antitrust laws where appropriate and allowing competition to take place where intervention is inappropriate.

This hearing takes place at an important moment for antitrust law in our history. The proliferation and democratization of technology create less definable markets where value chains are not as traceable, based on data rather than tangible goods, and undergirded by two-sided platforms. We call on the Committee to appreciate the complexity of the market while also keeping in mind a few straightforward concepts that define the evolution of platform-driven markets. First, app developers have direct relationships with their customers and clients—they are not "suppliers or manufacturers" of apps on behalf of platforms. Second, platforms provide significant value for developers and consumers, demonstrated by the increase in choices, access to new markets, and the reduction in prices for software since platforms entered the market. Third, platforms are not perfect. Developers want more transparency and continued improvements to security and safety. Our member companies want platforms to compete for their business, and they want to ensure competition is robust.

II. Platforms Provide Greater Autonomy to Developers

Before discussing the details of modern mobile software markets, we should establish some basic parameters. Although platforms help software developers and device makers reach their clients and customers, the relationship between the client or customer and the developer is direct. The majority decision of the Supreme Court of the United States (SCOTUS) in Apple v. Pepper—a split 5-4 decision—mistakenly conceives of platforms as "retailers" of apps, while app developers are mere "manufacturers or suppliers."[3] But our member companies do not "manufacture" or "supply" software on behalf of a platform. Platform companies do not order apps to be built to specifications like they would with contract manufacturers. Developers sell directly to consumers and clients.

In *Apple v. Pepper*, SCOTUS was grappling with whether an app buyer has standing to sue a platform company under antitrust law, even though the app developer sets the app's price. Important to that determination is whether the buyer is also a direct buyer from the platform, which in turn is in part a function of whether the developer's product is distinct from the platform's. This line-drawing may seem semantic, but it is an important exercise from a competition perspective. Developers can choose the best platform through which to reach these customers and clients, and platforms compete with each other for the ability to provide that service to our member companies. The result of *Apple v. Pepper* is that legal precedent now treats app developers as part of a distribution chain controlled by platforms, at least for purposes of whether a platform can be sued for app prices charged by app developers. But the relationships between developers and their customers and clients are direct and separate from the exchange of value for app developer services that comprises the platform-to-business market.

III. Platforms Have Reduced Costs for Developers and Enhanced Competition and Choices for Consumers

Consumers and developers experienced significant changes since the various platforms entered the market. In addition to having more choices, consumers also benefit from lower prices for software and even access to new markets that did not previously exist. Similarly, developers benefit from lower overhead costs, built-in customer trust, and wider distribution and market access.

Choices proliferated because entry into the software market is much easier now than it was before platforms.[4] Before platforms, the nature of the marketplace forced software developers to take on tasks that were well beyond their core competencies—from marketing to protecting their intellectual property and negotiating with a variety of different types of companies to distribute their products. The transaction costs of taking on all these extra tasks were significant, and platforms have eliminated many of them.

Before the ubiquity of mobile platforms, the software ecosystem ran on personal computers. This forced early app companies, often with teams of one to two developers, to wear many hats to develop, market, and benefit from the sale of their products. App companies were not only required to write code for their products, but they were also responsible for: 1) managing their public websites, 2) hiring third-parties to handle financial transactions, 3) employing legal teams to protect their intellectual property, and 4) contracting with distributors to promote and secure consumer trust in their product. App developers, trained in software coding and project management, were not well-equipped to carry out these tasks, and the additional steps cost them valuable time and money, with little tangible benefit.

Without platforms, developers had to take all of these additional steps, creating friction at each point, which meant that the only software titles that were available to the public were those that made the complicated journey from development to publishers to retailers like CompUSA or Best Buy. At one point, in 2003, CompUSA rolled out an early concept of a software platform consisting of a kiosk that burned made-to-order CDs containing software applications. With this system, the retailer could offer more software programs than it could fit on its shelves (which is how software was sold at that time), providing 1,200 titles from 200 different publishers.[5] Now, there are more than 317,673 companies active in the mobile app market in the United States[6] and more than 2 million apps available on the major app platforms. The kiosks are now in our smartphones—there are more than 5.28 billion mobile broadband subscriptions worldwide as of 2018[7]—which are in the pockets of over 80 percent of Americans.[8] In an especially illustrative example of how the instantaneous worldwide distribution platforms has led to lower costs, optical character recognition (OCR) software Omnipage cost a staggering $450 in 2006.[9] Now, most OCR apps cost $10 or less,[10] thanks to the availability of a much wider market enabled by platforms.

In the internet economy, immediate consumer trust is almost impossible without a substantial online reputation, and not attaining it spells death for any app company. However, what does "trust" mean? In this context, trust refers to an established relationship between the app company and consumer where the consumer has the confidence to install the app and disclose otherwise personal information to an app company. Prior to platforms, software developers often handed over their products to companies with a significant reputation to break through the trust barrier.

Bungie—developer of popular games Halo, Myth, Oni, and Marathon—chronicled in 1996 the difficult and sometimes oppressive distributor requirements placed on software developers that predated the platform ecosystem. When dealing with retail distributors, Bungie was required to guarantee a competitive price, pay 3 to 6 percent of sales as a marketing fee in addition to $10,000 for product launch marketing, pay the shipping costs to deliver their products to distributors, and agree to buy back unsold products.[11] Once contracts were negotiated, software developers were often required to spend additional money so that in-store catalogs would feature their product or retail stores would place their product on an end cap display, all before consumers even saw the products.[12]

However, with the advent of the smartphone, the experience Bungie described is a relic of the past. The smartphone, in its brief history, revolutionized the economy at large and established a symbiotic relationship between platforms and developers. And in the decade since the introduction of the App Store and other platforms, those developers and app companies contributed both to the overall success of smartphones and improved their functionality for consumers.

At first, developers were reluctant to join platforms, worried that the model might not accommodate their ability to "launch fast and iterate"[13] their apps. But successful platforms changed the app ecosystem by providing app developers with ubiquitous access to a broader swath of consumers. Platforms provide a centralized framework for app developers to engage and secure visibility with the 3.4 billion app users[14] worldwide. With lower costs and barriers to entry, both fledgling and established app developers can find success. For example, educational app company L'Escapadou secured 1.3 million downloads and earned more than $1.5 million from app sales between 2010 and 2014,[15] a success attributed to the centralized nature of platforms. Founder Pierre Abel specialized the language, content, and pricing of each of his apps based on consumer and market needs and marketed them on different platforms to reach a variety of consumers around the world.[16]

IV. There's a Platform for That

As successful as the past 12 years have been for the app economy, the next decade could be even better. In just the first half of 2019, the two major app stores generated $39.7 billion in revenue—a robust 15.4 percent increase over the first half of 2018's $34.4 billion.[17] This growth suggests the developer-platform model is still succeeding. Moreover, app economy growth is likely to continue because developers are continuing to create new products, services, and markets that did not exist prior to platforms. Perhaps the most notable of these is the market for ridesharing. Connecting a driver—using his or her own car—to a potential passenger in real-time for an on-demand ride to a destination selected by the passenger was impossible before developers could use the GPS capabilities and data connections of smartphones. Ridesharing is an important example of how app developer ingenuity meets the capabilities, built-in trust, and developer services of platforms to create new options for consumers.

The same combination of technologies and network effects has created new possibilities for delivery services. For example, GetSwift created a white label—that is, a program created by GetSwift but with the client's branding—delivery tool enabling shippers in any type of industry to move their products to their customers quickly, efficiently, and easily.[18] The application works the same whether the shipper is a restaurant delivering food, an auto parts store supplying repair shops, a lumber yard supplying a job site, or a rural farm that delivers fresh vegetables to homes and restaurants, as the real-time connectivity provided has been show to reduce late or missed deliveries by more than 25 percent.[19]

Just as ridesharing fundamentally changed how we get around, developers and platforms also revolutionized how we access healthcare. A current shortage of about 30,000 physicians in the United States—which is projected to increase to about 90,000 in the next 15 years—contributed to the need for caregivers and patients to find new ways of communicating. Devices, sensors, and software are now capable of gathering and analyzing physiological data like movement, heart rate, or blood oximetry so that physicians can better monitor their patients and address potential problems before they occur or worsen.[20] Studies show that preventive care regimes that use connected health tools are especially useful for patients with chronic conditions like diabetes and heart failure, which tend to affect underserved communities especially.[21] But how do these capabilities reach patients and consumers, specifically those who need them most? Most Americans already interact with platforms, through a variety of different types of devices. We know that smartphone adoption rates are increasing among underserved populations in the United States and that for many, their handheld device is their only means of accessing the internet.[22] Here again, developers are leveraging the ubiquity and trusted framework of platforms to produce healthcare innovations that address a variety of health conditions. Moreover, in this case, the platform-developer dynamic helps caregivers reach patients in rural and underserved areas.

Finally, the platform-driven app economy gave rise to a new set of business-to-business markets. Many of our member companies fall into the category of white label software developer, commonly referred to as a "dev shop." Dev shops like MojoTech based Providence, RI (with an office in Boulder, CO), serve a variety of clients from healthcare to finance, eCommerce and data visualization suppliers.[23] Although software-as-a-service (SaaS) existed prior to platforms, these dev shops leverage the platform infrastructure, along with continuous cloud access, to create custom software solutions that adapt quickly and rival the products and services of larger SaaS companies. As MojoTech puts it, "Big no longer eats small – fast eats slow."[24] Similarly, Orlando-based Concepta has fewer than 50 employees and yet builds sophisticated technology tools for clients like Walt Disney World and Warner Music Group.[25] It is one of the 10 fastest-growing companies in the Orlando area. This is possible because platform-enabled market entry put small companies on the same playing field as larger companies, allowing them to compete for the same customers, users, or clients.

It is hard to argue that the creation of new markets is an anticompetitive development. Moreover, the competitive conditions over the past 10 years, and presently, suggest that the nature of competition in this space will continue to evolve and benefit consumers on the whole. One of the central markets at issue in the debate around the role of antitrust in the platform ecosystem—informally, we could call it the market for developer services, where a developer pays a platform for various services including distribution, marketing, etc.—also experiences vigorous competition. There is a tendency to include only two platform companies, Apple and Google, in this category of competitors. But for developers, the market is much wider. A game developer can choose platforms like Epic or Steam and enterprise

developers can look to hundreds of proprietary, custom platforms or could create their own. For example, companies like App47 create app platforms for everything from "bulldozers to ultrasound devices."[26] Moreover, for developers looking to reach a general audience, using the web is an alternative, especially for companies that are looking for different kinds of distribution or search services than those available on platforms. Additionally, Amazon and Facebook often present options for developers looking to reach consumers while the reach of giant Chinese platforms dwarfs that of U.S. companies. It should be noted, however, that there are arguably some important distinctions between software platforms—which provide a marketplace for software apps like the App Store—and aggregators that connect people with information and run on data.[27] These differences illustrate the diversity in the market for distribution methods, as developers may prefer one model over another.

Perhaps most importantly, the universe of platforms is continuing to evolve and expand as different kinds of hardware begin to connect to the network. New platforms are cropping up for wearables like FitBit. Connected home setups and cars that are increasingly autonomous are driving cross-platform interoperability so that Alexa or Cortana can communicate with your Samsung appliances or your Ford Fusion—further weighing against conceptions of platform markets where a single player wields market power. Moreover, pricing is competitive too, as developer services on the largest platforms for the 90 to 95 percent of apps offered for free only cost the developers a $100 registration fee. These characteristics tend to show that developer services will continue to improve and evolve along with demand. Enforcement of antitrust laws is necessary where market power exists and is used to raise prices undisciplined by competition, maintain a monopoly position, or lower quality or decreases output. But when those factors are not present and competition drives the market, as it does in developer services, intervention is unlikely to help and may harm competition or consumer welfare.

V. Platforms Aren't Perfect

Although developers can choose from multiple platforms, there is no such thing as a perfect platform. Our member companies pay a fee for developer services to platforms, and they expect those services to meet their needs. Just as online companies must clearly communicate their data practices to consumers, so must platforms clearly define the requirements and details of their terms of service to developers. For example, when platforms change their developer guidelines, they must communicate clearly and ensure developers understand what the changes mean for them and their customer relationships. Occasionally, we hear from a member company that an ill-defined change significantly impacted their business. For example, a platform recently put a member company that provides a call blocking app on notice for temporary removal unless it made changes to how it obtained permission for gathering incoming call data.[28] The platform did not clearly explain how its policies changed or why they would necessitate action on the app's part, but it was the first removal notice of its

kind in the app's nine years on the platform. Ultimately, the platform did not remove the app. but the process for remaining on the store was opaque and difficult enough to navigate that the company looked to us, their trade association, for help. Relevantly, this occurred amid a major update to California's privacy laws, so it may be an example of the unintended consequences of government intervention.

Especially for enterprise app developers, a platform's safety and security are important elements of developer services. Platforms' security features improved markedly over the course of their existence. Whereas unlocking a device used to require a four-digit passcode, devices are now capable of biometric-based authentication, and platforms make these authentication measures available to developers as well so that they can also benefit from these heightened security measures. But the game of cat-and-mouse between cybersecurity professionals and hackers will never end, and security must continue to evolve to meet and beat the threats. Although some platforms do not control device security, developers want the platform's security features to work seamlessly with any relevant hardware and that they account for all attack vectors. Platforms should continue to improve their threat sharing and gathering capabilities to ensure they protect developers across the platform, regardless of where threats originate. Moreover, they should approve and deploy software updates with important security updates rapidly to protect consumers as well as developers and their clients and users. The same is true when it comes to privacy controls. App developers strongly desire platform-level privacy controls they can adapt for their products and services. The types and nature of these controls vary among platforms and this variation should result in continuously improving options that iterate with end user expectations and privacy risks.

Similarly, platforms play an important role in helping small developers enforce their intellectual property (IP) rights. Our member companies' IP helps eliminate the inherent disadvantages of being a small, innovative company by enabling them to protect the fruits of their ingenuity from larger firms that might want to take it. Unfortunately, some of our member companies fell victim to IP thieves that succeed in selling the pirated content or using it to steal ad revenue on platforms. Ad networks can and do help mitigate the pirated ad revenue problem,[29] but platforms must also vigorously police their app stores for stolen content. With vast online stores, it is difficult for a platform to verify legitimate requests to remove allegedly pirated content. But a single app developer should not need the help of a legal team or trade association to resolve the issue. In one instance, an App Association member company, Busy Bee Studios, approached us when it was unable to convince the platform to investigate an app that appeared to have been stolen from Busy Bee. With our assistance, the platform investigated the issue and found that the infringing app was in fact stolen content.[30] But the time and resources it took our member company—which only has a few employees—to resolve the issue were significant and could have gone toward the development of their next app. Since this issue arose, IP resolution processes improved across the board, but the story is a reminder that they are important and in-demand developer services that platforms should improve in order to compete for developers.

Conclusion

We appreciate this opportunity to provide testimony in this important hearing. Our member companies have a strong interest in maintaining a competitive app economy that enables them to compete with larger firms and continue to create innovative products and services for their customers and clients. The entry of platforms created novel opportunities for consumers and developers. But while platforms provide some of the infrastructure, developers bring smart devices to life. Without apps, a smartphone is just a phone. The symbiotic relationship between apps and platforms is not perfect, but it has created a powerful ecosystem that continues to benefit consumers. We look forward to discussing the pro-competitive effects and antitrust concerns platforms have generated and welcome this debate.

End Notes

[1] See, e.g., Brief for ACT | The App Association as Amicus Curiae Supporting Petitioner, Apple v. Pepper, 587 U.S. ___ (2019) (No. 17-204), available at https://actonline.org/wp-content/uploads/ACT-Amicus-Apple-v.-Pepper.pdf; Comments of ACT | The App Association to the Fed. Trade Comm'n on Competition and Consumer Protection in the 21st Century (Question 3: "The Identification and Measurement of market power and entry barriers, and the evaluation of collusive, exclusionary, or predatory conduct or conduct that violates the consumer protection statutes enforced by the FTC, in markets featuring "platform" businesses," Aug. 20, 2018, available at http://actonline.org/wp-content/uploads/Q3-ACT-Comments-re-FTC-2018-Consumer-Protection-Hearings-082018-FINAL.pdf.

[2] See, e.g., ACT | The App Association, "Queen City Mobile Summit highlights Cincinnati as mobile tech hub," (Feb. 23, 2016), available at https://actonline.org/2016/02/23/queen-city-mobile-summit-highlights-cincinnati-as-mobile-tech-hub/.

[3] Apple v. Pepper, 587 U.S. ___ (2019) (No. 17-204), at 2 (May 13, 2019).

[4] Daniel Ershov, The Effects of Consumer Search Costs on Entry and Quality in the Mobile App Market, Toulouse School of Econ. (Apr. 18, 2018), available at https://www.cemfi.es/ftp/pdf/papers/wshop/DErshov_MobileAppCompetition_Jan2018.pdf.

[5] Brian Osborne, "CompUSA offers software vending machines," Geek.com (Dec. 12, 2003), available at https://www.geek.com/news/compusa-offers-software-vending-machines-551706/.

[6] Deloitte, The App Econ. In the United States (Aug. 17, 2018), available at http://actonline.org/wp-content/uploads/Deloitte-The-App-Economy-in-US.pdf.

[7] Mike Murphy, "Cellphones now outnumber the wrold's population, Quartz (Apr. 29, 2019), available at https://qz.com/1608103/there-are-now-more-cellphones-than-people-in-the-world/.

[8] Adam Lella, U.S. Smartphone Penetration Surpassed 80 Percent in 2016, comScore (Feb. 3, 2017) Available at: http://bit.ly/2pT04qo.

[9] Richard Jantz, "First-Class OCR for a Price," PCWorld (Sept. 27, 2005), available at https://www.pcworld.com/article/122669/article.html.

[10] Jill Duffy, "The Best Mobile Scanning and OCR Apps," Zapier (Sept. 3, 2018), available at https://zapier.com/blog/best-mobile-scanning-ocr-apps/.

[11] Alexander Seropian, Distribution Myths and Lies, TidBITS (Nov. 4, 1996) available at http://bit.ly/2hitGau.

[12] Alexander Seropian, Distribution Myths and Lies, TidBITS (Nov. 4, 1996) available at http://bit.ly/2hitGau.

[13] To launch fast and iterate is often used to describe a software developer's business plan, where software developers like to launch products as soon as they are finished and like to update newer iterations of their product actively. Paul Graham, Apple's Mistake, paulgraham.com (Nov. 2009), available at http://www.paulgraham.com/apple.html.

[14] Simon Kemp, The global state of the internet in April 2017, TNW (last visited Jan. 17, 2018) Available at: https://thenextweb.com/contributors/2017/04/11/current-global-state-internet/.

[15] Steve Young, Making $1.5 Million with Educational Apps with Pierre Abel, App Masters (Apr. 30, 2015) Available at: http://bit.ly/2hgDzZH.

[16] Steve Young, Making $1.5 Million with Educational Apps with Pierre Abel, App Masters (Apr. 30, 2015) Available at: http://bit.ly/2hgDzZH.

[17] SensorTower Store Intelligence, "Global App Revenue Reached $39 Billion in the First Half of 2019, Up 15% Year-over-Year (Jul. 9, 2019), available at https://sensortower.com/blog/app-revenue-and-downloads-1h-2019.

[18] GetSwift, available at https://www.getswift.co/.

[19] Case Studies, GetSwift, available at https://www.getswift.co/getswift-case-studies.

[20] See, e.g., How Mabu Works, Catalia Health, available at http://www.cataliahealth.com/how-it-works/.

[21] See, e.g., Clinical Outcomes, Care innovations, at 2, available at http://www.connectwithcare.org/wp-content/uploads/2017/06/2016_Outcomes_Clinical-1.pdf (showing the results of a study by Care innovations and University of Mississippi Medical Center, indicating that the first 100 patients with diabetes enrolled in a program with a remote monitoring component saved the state $336,184 in Medicaid dollars over six months); Testimony of Michael P. Adcock, Exec. Dir., University of Mississippi Med. Ctr., Hearing on "Telemedicine in the VA: Leveraging Technology to Increase Access, Improve Health Outcomes & Lower Costs," (May 4, 2017), available at https://www.appropriations.senate.gov/imo/media/doc/050417-Adcock-Testimony.pdf ("The Mississippi Division of Medicaid extrapolated this data to show potential savings of over $180 million per year if 20 percent of the diabetics on Mississippi Medicaid participated in this program").

[22] Charkarra Anderson-Lewis, MPH, PhD, et al, "mHealth Technology Use and Implications in Historically Underserved and Minority Populations in the United States: Systematic Literature Review," (Jun. 18, 2018), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6028762/.

[23] MojoTech, available at https://www.mojotech.com/.

24 How We Work, MojoTech, available at https://www.mojotech.com/how-we-work/.

[25] Concepta, available at https://conceptainc.com/.

[26] App47, available at https://app47.com/.

[27] See, e.g., Ben Thompson, "Tech's Two Philosophies," Stratechery (May 9, 2018).

[28] Graham Dufault and Madeline Zick, "What's More Control with Fewer Options?" ACT | The App Association (May 21, 2019), available at https://actonline.org/2019/05/21/whats-more-control-with-fewer-options/.

[29] See, e.g., Trustworthy Accountability Group, available at https://www.tagtoday.net/.

[30] See Alex Cooke, Member Monday: How One Small Developer Fought a Rogue App, (Nov. 26, 2018), available at https://actonline.org/2018/11/26/member-monday-how-one-small-developer-fought-a-rogue-app/.

Appendix: App Economy Innovators in Your Districts

Majority

Chairman David Cicilline (RI-1)
Company: MojoTech
Headquartered in Providence and founded in 2008, MojoTech has just over 50 employees. MojoTech is a software development firm with a service portfolio that includes iOS, JavaScript, API design and development, and agile/SCRUM and UX/UI/CX design. They have clients in varying industries from healthcare and finance to eCommerce. As suppliers of data visualization, MojoTech continues to advance the mission of each and every client. Although MojoTech began as an engineering-only consultancy, they adapted to the rise of cloud and mobile computing and expanded their development roster.

Vice Chair Joe Neguse [Ne-GOO-see] (CO-2)
Company: Sphero, Inc.
Based in Boulder and founded in 2010, Sphero boasts more than 100 employees. Sphero is a consumer robotics and toy company that creates small, programmable robots controlled from a mobile app via a smartphone or tablet. Their products range from educational bots designed to teach children how to program to a little droid modeled after the loveable Star Wars character BB-8. Their robots are valuable teaching tools and used in more than 20,000 math and science classrooms in schools around the globe.

Representative Hank Johnson (GA-4)
Company: Turbojet Technologies
Founded in 2015 just outside Atlanta, Turbojet Technologies is an individual web developer who works for other small businesses and non-profits. Turbojet provides website buildout, as well as support programs and integration across Drupal, WordPress, and other PHP-based websites. While Turbojet is a small operation, they occasionally hire contract designers from across the country if they need to scale up for a larger project.

Representative Jamie Raskin (MD-8)
Company: Simpalm
Located in North Bethesda, Simpalm was founded in 2009 and is a full-service web and mobile application development shop with nearly 50 employees. Throughout their decade serving industries that range from entertainment and education to healthcare and government agencies, Simpalm completed more than 250 projects across a multitude of platforms, including Android, iOS, and Windows.

Representative Pramila Jayapal (WA-07)
Company: Digital World Biology LLC
Headquartered in Seattle and founded in 2008, Digital World Biology creates digital educational tools to help students learn modern biology. Their app, Molecule World, is an easy to use visualization of 3D molecular structures ready for classroom use upon download. They also have a variety of textbook-like materials that help students learn quickly with visual aids and assist teachers with keeping students engaged with hands-on activities throughout the chapters.

Representative Val Demings (FL-10)
Company: Concepta Inc.
Founded in Orlando in 2006, Concepta specializes in enterprise technology and the creation of innovative solutions in mobile, web, and other software development areas. Their international portfolio comprises Fortune 500 and Franchise 500 companies that include the likes of the Warner Music Group, General Electric, and Walt Disney World. With nearly 50 employees, Concepta built multiple top 20 apps on both the App Store and Google Play and is one of the 10 fastest-growing companies in Orlando.

Representative Mary Gay Scanlon (PA-5)
Company: MacGuyver Media
MacGuyver Media is a custom web and application development company that creates web-based software solutions for businesses. Based in Glenolden, MacGuyver has only 5 employees and was founded in 2015. Through website, app, and e-commerce development, website maintenance and assessments, and the ability to integrate into any database or API source, MacGuyver provides their clients with solutions and services to help their businesses to succeed. Their clients range from companies in the financial sector to alcohol distribution and dozens more.

Representative Lucy McBath (GA-6)
Company: Zyrobotics, LLC
Based in Atlanta, Zyrobotics is changing the way kids learn by creating educational tools that help build a quality STEM foundation for the next generation. Their lineup showcases a variety of products including an AI-powered learning tool that makes learning fun with educational games, connected e-books, learning analytics tools, and coding apps. Zyrobotics was founded in 2013 and has just over 10 employees.

Minority

Ranking Member Jim Sensenbrenner (WI-5)
Company: Access HealthNet
With 25 full-time employees, Access HealthNet is a small Milwaukee-based company founded in 2014 that created a thriving e-commerce platform for healthcare. Their platform allows users to browse and compare health services online and filter those services by distance, quality, cost, and more with helpful descriptions of the provider included. Their solution is intended to create the competition that drives healthcare prices down and allow both patients and employers to save money.

Representative Matt Gaetz (FL-1)
Company: Core Mobile Apps
With nine employees, Core Mobile Apps has a broad reach across the United States and develops both mobile applications and web development for businesses. Their apps are available across various mobile platforms and include apps like Skill Set Connect, an app that connects digital nomads with people and businesses that need contracted development services.

Representative Ken Buck (CO-4)
Company: Project Ricochet
Although Project Ricochet was founded in California, their largest collection of developers under one roof is in Greely, Colorado. Founded in 2006, they have 13 employees and focus on web development and design services utilizing open source. Their specialties include Drupal, WordPress, and JavaScript. While typically providing services to larger companies across the United States, they hope to increase the local clientele in Greely.

Representative Kelly Armstrong (ND-At Large)
Company: Bushel
Founded in 2017 and headquartered in Fargo, Bushel is an agricultural technology company that provides a subscription-based web and mobile application specifically designed to harness reliable data for every level of the grain supply chain. The Bushel platform has more than 1,000 grain facilities that are active users including producers, retailers, and processors of grain. The platform covers contracts between grain facilities and their producers with an included e-signature capability to handle business on their app – all with no paper required.

Representative Greg Steube (FL-17)
Company: Rave Digital
Rave Digital is a team of certified software engineers that provide customized web and mobile solutions across platforms. Founded in 2006 and based in Coral Springs, Rave Digital has a broad range of capabilities to harness when working to accomplish their customers' goals. Their portfolio ranges from educational and events apps to financial and security-focused apps.

Mr. CICILLINE. Thank you, Mr. Reed.

And I'm going to reduce the time to 3 minutes so we can be sure to get our questions in. I thank everyone, and I apologize for the shortness, but they've just called votes again.

I want to start off, Ms. Mitchell, with you, if I may. You've written about a number of ways in which Amazon leverages its core shopping platform to gain a competitive advantage over entrepreneurs, small businesses, and other third-party sellers that attempt to sell their products on Amazon.

Can you explain, elaborate a little on that, particularly in light of the testimony that was presented in the first panel, how Amazon leverages its core platform to disadvantage small businesses and third-party sellers and how such tactics harm entrepreneurship and innovation online, you know, how it impacts everyday people who live in our districts.

Ms. MITCHELL. Yeah. You know, I spend a lot of time interviewing and talking with independent retailers, manufacturers of all sizes. Many of them are very much afraid of speaking out publicly because they fear retaliation.

But what we consistently hear is that Amazon is the biggest threat to their businesses. We just did a survey of about 550 independent retailers nationally. Amazon ranked number one in terms of being what they said was the biggest threat to their business above rising healthcare costs, access to capital, government red tape, anything else you can name. Among those who were actually selling on the platform only 7 percent reported that it was actually helping their bottom line.

Amazon has a kind of God-like view of a growing share of our commerce, and it uses the data that it gathers to advantage its own business and its own business interests in lots of ways. A lot of this, as I said, comes from the kind of leverage, its ability to sort of leverage the interplay between these different business lines to maximize its advantage, whether it's promoting its own product because that's lucrative or whether it's using the manufacturer of a product to actually squeeze a seller or a vendor into giving it bigger discounts.

Mr. CICILLINE. Thank you so much.

Professor Wu, you have written and spoken extensively about the importance of enforcing the antitrust laws and the digital markets in order to spur innovation. That's the subject of this hearing. Would you speak a little bit about why competition is so important to innovation and how does it affect people's lives, also how do you respond to the companies who say we are innovative ourselves, like we're innovative enough. We don't need competition because we'll continue to innovate.

And, specifically, would you also address Mr. Szabo's use of the word "weaponizing" antitrust? I'm not sure what he meant by that, but I think the Antitrust Subcommittee takes our responsibility to enforce antitrust laws or to take the architecture of their enforcement very seriously because we understand the value of competition.

I'm not exactly sure why anyone would suggest that's weaponizing it, but maybe if you could respond to the critical nature of competition as it relates to innovation and why what we're

doing is not actually weaponizing them but trying to promote competition.

Mr. WU. Right. No, thank you for the opportunity. Yes. To the word "weaponization" I prefer the word "enforcement." You know, when we talk about enforcing the criminal laws, we don't talk about weaponizing. We talk about enforcing the laws. And I think that, you know, the Justice Department, FTC, the States have a duty to enforce the laws. Congress passes them, and so that's, you know, the way to think about this.

I think, historically speaking, the United States has experimented with two different types of innovation environment. One is centralized, where we allow industries to monopolize or oligopolies and we sit back and figure out what IBM is going to invent next or AT&T. The other and contrasting model is one where we have taken action, such as the AT&T breakup or the IBM suitor, Microsoft, or taken regulatory action and done a lot to reduce the barriers to entry.

And what we've seen are a very different pattern of innovation, much more disruptive, much more kind of what economists sometimes call disruptive innovation or competition for the market as opposed to incremental, you know, adding call waiting to AT&T.

And I think the comparative economic vantage of the United States over the last century has been its ability to start entire new industries. And in these big sort of centralized innovation industries, you don't see that. Instead, you see what's called the Kronos effect, an effort to stop the advance of new industry.

So I think if the United States wants to be in the next century the tech leader, preeminent power, it needs to understand our own legacy and the advantages of competitive innovation.

Mr. CICILLINE. Thank you.

I now recognize the gentleman from North Dakota for 3 minutes.

Mr. ARMSTRONG. First, I'd like unanimous consent to enter Ranking Member Collins' statement into the record.

[The statement of Mr. Collins follows:]

MR. ARMSTRONG FOR THE RECORD

Statement of Congressman Doug Collins
Subcommittee on Antitrust, Commercial and Administrative Law
Hearing on "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship"
Tuesday, July 16, 2019

Thank you, Chairman Cicilline and Ranking Member Sensenbrenner for holding this hearing.

Innovation and competition in the tech sector have produced so much value for consumers it is hard to imagine going through a day without benefitting from access to online platforms and digital devices. It should be clear to everyone tech companies not only form a critical part of our economy — they represent some of America's best innovation.

The companies at our hearing today have in fact been so effective at innovation they have become some of the biggest companies in the world. To some that is a cause of concern, so they've proposed breaking up these companies.

But companies that offer new innovations, better solutions, and more consumer benefit at lower prices often become big to the benefit of society. What is more, big online platforms often provide a gateway through which other companies — including countless small companies — can better reach their own consumers.

As I stressed when this subcommittee launched its investigation of competition in the tech sector, big is not necessarily bad. We shouldn't endeavor to punish successful innovators just because their success enables them to become big. We must instead determine, first, whether true harms in an antitrust sense are occurring in the tech sector and second, if so, whether the existing antitrust laws are adequate to address them.

I hope today's hearing will focus on ways we can encourage both innovation and competition, and both success and growth. These things are not mutually exclusive but usually go hand in hand — to the benefit of consumers and the advancement of our economy.

If during our inquiry, we identify on a bipartisan basis ways in which it is clear the antitrust laws should be modernized to meet challenges in the digital economy, this will have been a productive hearing. It will also be productive if we shed light on this topic only to find the antitrust laws as written are up to the task. Once we know that, we will be better able — on a bipartisan basis — to encourage the antitrust agencies to enforce those laws as needed.

Finally, scoping out from the topic of today's hearing, there are two other issues I hope we can address during the broader course of our investigation.

Almost all online engagement by individuals and businesses today runs through a few large platforms. When it comes to online communication, therefore, the platforms must be careful in how their businesses affect free expression.

When it comes to online commerce, these platforms must be careful they are not putting consumers at increased risk of harm or facilitating illicit conduct.

These expression and conduct issues raise different challenges that should not be conflated, but both issues can and should be discussed. As part of these discussions, we should consider if platforms' business models give them less incentive than other companies to exert the requisite amount of care, yet be subject to a lower expectation of accountability.

I hope today we have a productive conversation with some of the most successful companies and innovators in the world, as well as with the experts from academia and the legal community who have generously agreed to testify before us.

I look forward to the witnesses' testimony and yield back the balance of my time.

Mr. CICILLINE. Without objection.

And I also introduce the opening statement of the chairman of the committee, Mr. Nadler, and a group of letters from a group of organizations that are contained on this list, without objection.

[The statement of Chairman Nadler follows:]

MR. CICILLINE FOR THE RECORD

Statement of the Honorable Jerrold Nadler, Chairman, Committee on the Judiciary, for Hearing on "Online Platforms and Market Power, Part II: Effects on Entrepreneurship and Innovation," before the Subcommittee on Antitrust, Commercial, and Administrative Law

Tuesday, July 16, 2019 at 2:00 p.m.
Room 2141 of the Rayburn House Office Building

Thank you, Mr. Chairman, for holding today's hearing.

The open Internet has delivered enormous benefits to Americans, including a surge of economic opportunity, massive investment, and new pathways for education online. But there is growing evidence that a handful of corporations have come to capture an outsized share of online commerce and communications.

Today, it is effectively impossible to use the Internet without using, in one way or another, the services of the 4 providers appearing before us here today.

From providing the dominant search platform, retail platform, and online messaging platform, to providing the underlying mapping services and cloud computing on which hundreds of thousands of other businesses rely, these dominant platforms now comprise the essential infrastructure for the 21st century.

When journalist Kashmir Hill last year performed an experiment to determine whether she could live without these services, she quickly discovered that entire portions of the Internet stopped working and modern life became effectively impossible to navigate.

By virtue of controlling essential infrastructure, these companies appear to have the ability to control *access to markets*. In some basic ways, the problem is not unlike what we faced 130 years ago, when railroads transformed American life—both enabling farmers and producers to access new markets, but also creating a key chokehold that the railroad monopolies could exploit.

Railroads notoriously abused this gatekeeper power in a variety of ways. They charged tolls, extorting the producers reliant on their rails. They discriminated among farmers, picking winners and losers across the economy. And by expanding into lines of business that competed directly with producers, they could use their dominance in transportation to favor their own services.

These tactics by the railroads spurred fury and despair across the country. Congress initiated investigations to document these problems and enacted legislative solutions to halt and outlaw these anticompetitive practices.

These included the Interstate Commerce Act, which made it illegal for railroads to discriminate and also created the first modern regulatory agency, as well as the Hepburn Act, which prohibited common carrier railroads from transporting any goods in which they held an interest.

Importantly, congressional oversight and legislative reforms during this period did not prevent or encumber the inexorable arrival of new technology or human progress.

Instead, Congress recognized that these powerful new technologies had reshaped the balance of power in our economy—and that it was the role of Congress to ensure the new monopolists could not abuse their power.

Congress and the courts also recognized that certain businesses play such a critical role in shaping the economy that they warrant special scrutiny. In the words of the Supreme Court, certain industries are "affected with the public interest" in ways that demand special rules.

Today, the digital economy presents similar challenges. While the underlying technology is dramatically different, new digital intermediaries have the ability to control access to critical markets. If you are an independent merchant, developer, or content producer, you are increasingly reliant on these powerful intermediaries to access markets and consumers. Across the economy, businesses live in fear of exclusion from these platforms, a fact that many companies have shared with the Committee following the announcement of its investigation into competition in digital markets.

The purpose of today's hearing and of our investigation is to understand how intermediaries are affecting the shape of our economy and our democracy. How can and do these platforms use their market power? What are the effects of this conduct? And how should policymakers respond?

With those questions in mind, I thank both panels of witnesses for appearing before us today, and I look forward to hearing from them.

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I yield back the balance of my time.

[The information follows:]

MR. CICILLINE FOR THE RECORD



Statement of the Open Markets Institute

Before the
U.S. House of Representatives Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law

On
Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship

Tuesday, July 16, 2019

Strong Antitrust Enforcement is Good for Entrepreneurs & Small Business

Wide-ranging concentrations of power within a few companies in the American economy hurt small businesses and the American economy as a whole. From pet food to coffin makers, peanut butter to eye glasses, only a handful of companies control enormous shares of the economic activity in this country.[1]

Small businesses in particular have been suffering over the past decades. The rate at which people start new businesses is half of what it was in the 1970s.[2] According to Census Bureau data, there were only 433,000 new startups in 2016, a 22 percent decrease from pre-recession levels.[3]

Monopolists, especially platform monopolists, can hurt small businesses and entrepreneurs in a number of ways. These including preventing competitors from even forming in the first place or deciding what competitors gain visibility and market access as well as exploiting their size or market share to drive competitors out of business. A particularly pernicious effect of monopoly can occur when a monopolist controls an essential intermediary to commerce. That bottleneck power gives it enormous power to dictate the actions of dependent companies and competitors.

I. Monopolists Can Chill or Dictate Innovation and Entrepreneurship

When investors today consider a company to fund, platform monopolists' control over a range of industries restrict investors choices. Often, investors' strategy is not to establish a sustainable, independent business. Instead, as researchers Jonathan Tepper and Denise Hearn write, "Most

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[1] Open Markets Institute, "America's Concentration Crisis: An Open Markets Institute Report," https://concentrationcrisis.openmarketsinstitute.org/.
[2] Stacy Mitchell, "Monopoly Power and the Decline of Small Business," Institute for Local Self-Reliance, August 2016, https://ilsr.org/wp-content/uploads/downloads/2016/08/MonopolyPower-SmallBusiness.pdf.
[3] Olivia Solon, "As Tech Companies Get Richer, is it 'Game Over' for Startups?" *The Guardian*, October 20, 2017, https://www.theguardian.com/technology/2017/oct/20/tech-startups-facebook-amazon-google-apple; "Firm Age," Firm Characteristics Data Tables, Census Bureau, 2016, https://www.census.gov/ces/dataproducts/bds/data_firm2016.html.



small companies now do not expect to succeed on their own and their only goal is [to] 'exit' to one of the big tech companies before they are crushed."[4]

This pattern is especially stark in the online advertising industry, where Google and Facebook control 58 percent of the U.S. digital advertising market, followed by Amazon.[5] In the advertising technology industry, venture capital money for startups in the advertising technology industry has fallen by more than half since 2015, while the total number of advertising technology companies has fallen 20 percent since 2013.[6] Facebook and Google's dominance in online advertising, capturing over 90 percent of the industry's growth in 2017, is responsible for much of the decline.[7]

This relationship between new businesses and giant platform monopolists like Amazon, Apple, Facebook, and Google is not unique to the advertising technology industry. As *Financial Times* columnists Rana Foroohar and Edward Luce put it, "There are entire areas of innovation that are now functionally closed to start-ups."[8]

Since 2000, Google and Microsoft have acquired over 200 companies each while Amazon and Facebook have acquired roughly 80 each.[9] To a large extent, platform monopolists' innovation comes from wielding their enormous size to acquire the innovations of other startups.

II. Monopolists Can Use Their Size or Market Share to Hurt Small Business Competitors and Suppliers

Monopolists can also use their size or large market share to disadvantage other, smaller competitors, independent of their product or business sill. One prominent example of this is Amazon's competition and eventual acquisition of rival e-commerce site Diapers.com, owned by a company called Quidsi. Amazon aggressively cut diaper prices, dumping cheap product into the market to undercut a competitor, and intentionally losing nearly $100 million in one

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[4] Jonathan Tepper and Denise Hearn, "If You Don't Think Today's Tech Giants are Vicious, Just Ask Venture Capitalists," *ProMarket*, November 27, 2018, https://promarket.org/silicon-valley-vicious-dark-jungle/.
[5] Alexandra Bruell, "Amazon Forecast to Be No. 3 Digital Advertising Player in 2018," *The Wall Street Journal*, September 19, 2018, https://www.wsj.com/articles/amazon-forecast-to-be-no-3-digital-advertising-player-in-2018-1537351201?mod=article_inline.
[6] Claire Ballentine, "Google-Facebook Dominance Hurts Ad Tech Firms, Speeding Consolidation," *The New York Times*, August 12, 2018, https://www.nytimes.com/2018/08/12/technology/google-facebook-dominance-hurts-ad-tech-firms-speeding-consolidation.html.
[7] Ibid.
[8] Rana Foroohar and Edward Luce, "Art Imitates Life in the Digital Age," *Financial Times*, April 23, 2018, https://www.ft.com/content/538a29a4-4660-11e8-8ae9-4b5ddcca99b3.
[9] Tim Wu and Stuart A. Thompson, "The Roots of Big Tech Run Disturbingly Deep," *The New York Times*, June 7, 2019, https://www.nytimes.com/interactive/2019/06/07/opinion/google-facebook-mergers-acquisitions-antitrust.html.



quarter.[10] Faced with huge losses, Quidsi agreed to let Amazon buy it in 2010; afterwards, "Amazon went on to raise prices."[11]

Throughout the early 20th century, two sets of policies avoided these conditions and sustained open and competitive marketplaces. One type was called "fair trade" laws. The Robinson-Patman Act for instance, prohibited the practice of selling an item below cost to drive a competitor out of business. Another, the Miller-Tydings Act, gave states the power to let manufacturers set a floor on the prices at which big retailers could sell their products. Specifically, the legislation encouraged competition among retailers that would involve more than just price discounting.

Strong antitrust enforcement against mergers and monopolistic practices also ensured a competitive economy. Government officials understood that concentrated industries made it harder for new businesses to gain entry to a market. As a result, they banned mergers that would increase the size of incumbents.

However, by the mid-1970s, a bipartisan group of politicians worked to repeal these policies. The Consumer Goods Pricing Act of 1975 overturned the Miller-Tydings Act of 1937 and led to the end of most "fair trade" laws. In the early 1980s, the Reagan Administration's Justice Department stopped enforcing the Robinson-Patman Act and re-wrote the Department of Justice's Merger Guidelines. The Supreme Court also revised predatory pricing law and gave dominant firms the freedom to drive out rivals and control markets through below-cost pricing. These changes drove consolidation among retailers, giving them tremendous power over their independent suppliers.

III. Platform Monopolists Leverage Their Intermediary or Bottleneck Position to Squeeze or Shut Out Competitors

Platform monopolists like Amazon, Apple, Facebook, and Google benefit from their ability to place themselves in the middle of countless commercial transactions. Using their position as intermediaries or gatekeepers to commercial life, platform monopolists have enormous power to dictate the terms on which other small, and even large, businesses operate.

One prominent example is Amazon's e-commerce marketplace. Amazon's Marketplace has become an essential site for small businesses and independent sellers to list their goods on. This is because nearly half of all online shopping takes place on Amazon's Marketplace and approximately four out of every five online product searches begin on either Amazon or Google.[12] Marketplace hosts 2.5 million "third-party sellers," or independent businesses who sell

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[10] Tepper and Hearn, "Just Ask Venture Capitalists;" Lina M. Khan, "Amazon's Antitrust Paradox," *Yale Law Journal* 126, no. 3 (January 2017): 768-774, https://www.yalelawjournal.org/note/amazons-antitrust-paradox.
[11] Khan, "Amazon's Antitrust Paradox," 770.
[12] Matt Day and Jackie Gu, "The Enormous Numbers Behind Amazon's Market Reach," *Bloomberg*, March 27, 2019; https://www.bloomberg.com/graphics/2019-amazon-reach-across-markets/; Krista Garcia, "More Product Searches Start on Amazon," eMarketer, September 7, 2018, https://www.emarketer.com/content/more-product-searches-start-on-amazon.



their goods on Amazon.[13] An independent, small business that sells goods on the internet today must be on Amazon to be successful.

At the same time, however, Amazon has access to detailed data on sellers, including what items are becoming more popular. It also extracts significant commissions from sellers and can decide arbitrarily whether to list or de-list a product. Amazon can, according to a 2016 *Bloomberg* report, use that information to determine what products to offer under its own name.[14] The result is that a small, independent business today that sells goods almost always has to do business on, with, and – should they prove too successful – *against* Amazon.[15]

Even relatively successful, bigger businesses are not immune from depending upon platform monopolists. Those small business startups that avoid being crushed or acquired by a dominant platform monopolist are, according to a recent *Bloomberg* investigation, "likely beholden to the tech giants in other ways." The report found that 17 out of 22 technology initial public offerings trying to raise over $100 million since the beginning of 2018 cite Amazon or Google as a competitor or a business risk.[16] Many companies are still dependent on platform monopolists to operate.

For example, in Uber's S-1 filing from April 2019, the ride-hailing company said that it relies on Apple's and Google's respective marketplace for applications in order to reach customers.[17]

Additionally, Uber relies on Google Maps to guide drivers and does "not believe that an alternative mapping solution exists."[18] In the case of Apple cutting Uber off from its App Store or Google cutting Uber off from its application marketplace or mapping software, Uber worries that that would "adversely affect our business."[19]

Apple possesses a particularly strong hold on what applications thrive and which fail. Because users of Apple products must download applications from Apple's App Store, Apple has enormous power over application developers. This includes enacting a 30 percent tax on apps that developers choose to sell. App developers can either give Apple 30 percent of their revenues (plus a fee to be in the App Store at all) or not reach Apple customers.

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[13] David Dayen, "The Biggest Abuser of Forced Arbitration is Amazon" *The American Prospect*, July 10, 2019, https://prospect.org/article/biggest-abuser-forced-arbitration-amazon.
[14] Spencer Soper, "Got a Hot Seller on Amazon? Prepare for E-Tailer to Make One Too," *Bloomberg*, April 20, 2016, https://www.bloomberg.com/news/articles/2016-04-20/got-a-hot-seller-on-amazon-prepare-for-e-tailer-to-make-one-too.
[15] See Josh Dzieza, "Prime and Punishment: Dirty Deadling in the $175 Billion Amazon Marketplace," *The Verge*, December 19, 2018, https://www.theverge.com/2018/12/19/18140799/amazon-marketplace-scams-seller-court-appeal-reinstatement.
[16] Gerrit De Vynck, "The Power of Google and Amazon Looms Over Tech IPOs," *Bloomberg*, July 1, 2019, https://www.bloomberg.com/news/articles/2019-07-01/google-s-and-amazon-s-power-looms-over-procession-of-tech-ipos.
[17] Uber, Form S-1, (April 26, 2019), 53, https://www.sec.gov/Archives/edgar/data/1543151/000119312519120759/d647752ds1a.htm.
[18] Ibid.
[19] Ibid.



Lastly, Google's dominance in the web browser market demonstrates how it stifles innovation and entrepreneurship to the ultimate detriment of users. Small, independent developers looking to improve users' web browsing experience realize that Google owns the software base on which nearly all competing browsers are built, Chromium. That's in large part because other dominant Google services that people use on the internet, like YouTube, Google Docs, and Gmail, don't work as well as browsers built on other bases. But improvements, especially major ones, are approved "by a small circle of senior Google employees."[20]

Yet even despite its dominance in web browsing, Google is not immune from the intermediary power of other competitors. Google will reportedly pay Apple $12 billion in 2019 so that its Search function will remain the default in Apple's Safari browser.[21]

IV. Stronger Antitrust Enforcement and Anti-Monopoly Rules Can Give Entrepreneurs and Small Businesses a Fair Chance

Antitrust enforcement and strong anti-monopoly rules can work to prevent dominant platforms from unfairly exploiting their size, structure, or strategic position in commerce against small businesses.

Federal enforcers could begin this work today with stronger antitrust enforcement. This could take the form of stopping mergers and acquisitions at a lower level of market concentration as well as prosecuting exclusionary and predatory practices. Northeastern University economist John Kwoka has carefully documented the Justice Department and the Federal Trade Commission's recent trend of near-complete abdication of challenging all mergers except for those in the most concentrated situations.[22] At the same time that enforcers have neglected their duty to police mergers that hurt competition, they have allowed dominant platforms to acquire bevies of startups that have only worked to fortify their power.

Stronger antitrust enforcement also includes confronting exclusionary and predatory practices. Predatory pricing (or pricing a good below the cost required to produce it so as to drive out competitors) appears to be an integral element of Amazon's strategy to hurt rival online retailers. Predatory pricing and other below-cost selling strategies allow dominant platforms to use their size to subsidize practices to drive out smaller competitors.

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[20] Gerrit De Vynck, "Google's Chrome Becomes Web's 'Gatekeeper' and Rivals Complain," *Bloomberg*, May 28, 2019, https://www.bloomberg.com/news/articles/2019-05-28/google-s-chrome-becomes-web-gatekeeper-and-rivals-complain.

[21] Lisa Marie, Segarra, "Google to Pay Apple $12 Billion to Remain Safari's Default Search Engine in 2019: Report," *Fortune*, September 29, 2018, https://fortune.com/2018/09/29/google-apple-safari-search-engine/.

[22] John Kwoka, "Reviving Merger Control: A Comprehensive Plan for Reforming Policy and Practice," American Antitrust Institute, October 9, 2018, 22, https://www.antitrustinstitute.org/wp-content/uploads/2018/10/Kwoka-Reviving-Merger-Control-October-2018.pdf.



At the same time, structural separations, or limitations on the lines of businesses that certain companies may enter into, can also be appropriate, especially for dominant platforms. This is because those dominant platforms are, in many ways, essential pathways to commerce. A small business selling online must be on Amazon's Marketplace to survive. At the same time, Amazon extracts commissions from those dependent sellers and sometimes competes against them too. Thus, structural separations prohibiting dominant platforms from using their size and power in one market to enter and dominate another can be a useful tool to structure markets to neutralize dominant platforms' power.[23] One can see a ready example of this in the reports of a proposal from the leadership of the House Financial Services Committee that would forbid technology platforms from acting as financial institutions.[24]

Lastly, additional support and cooperation between federal enforcers and legislators with state attorneys general across the country would help police abusive actions by dominant platforms.

(Portions of this statement were taken from the Open Markets Institute website at openmarketsinstitute.org).

[23] See Lina Khan, "The Separation of Platforms and Commerce," *Columbia Law Review* 119, no. 4 (2019): 973-1098.

[24] Peter Schroeder and Ismail Shakil, "U.S. Proposes Barring Big Tech Companies From Offering Financial Services, Digital Currencies," *Reuters*, July 14, 2019, https://www.reuters.com/article/us-usa-cryptocurrency-bill/us-proposes-barring-big-tech-companies-from-offering-financial-services-digital-currencies-idUSKCN1U90NL.

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The Decline of Black Business

And what it means for American democracy.

by Brian S. Feldman (https://washingtonmonthly.com/people/brian-s-feldman/)

MAGAZINE (https://washingtonmonthly.com/magazine/marchaprilmay-2017/)

At the new National Museum of African American History and Culture in Washington, D.C., a hallway of glass display cases features more than a century of black entrepreneurial triumphs. In one is a World War II–era mini parachute manufactured by the black-owned Pacific Parachute Company, home to one of the nation's first racially integrated production plants. Another displays a giant time clock from the R. H. Boyd Publishing Company, among the earliest firms to print materials for black churches and schools. Although small, the exhibit recalls a now largely forgotten legacy: by serving their communities when others wouldn't, black-owned independent businesses provided avenues of upward mobility for generations of black Americans and supplied critical leadership and financial support for the civil rights movement.

This tradition continues today. Last June, *Black Enterprise* magazine marked the forty-fourth anniversary of the BE 100s, the magazine's annual ranking of the nation's top 100 black-owned businesses. At the top of the list stood World Wide Technology, which, since its founding in 1990, has grown into a global firm with more than $7 billion in revenue and 3,000 employees. Then came companies like Radio One, whose fifty-five radio stations fan out among sixteen national markets. The combined revenues of the BE 100s, which also includes Oprah Winfrey's Harpo Productions, now totals more than $24 billion, a ninefold increase since 1973, adjusting for inflation.

A closer look at the numbers, however, reveals that these pioneering companies are the exception to a far more alarming trend. The last thirty years also have brought the wholesale collapse of black-owned independent businesses and financial institutions that once anchored black communities across the country. In 1985, sixty black-owned banks were providing financial services to their communities; today, just twenty-three remain. In eleven states that headquartered black-owned banks in 1994, not a single one is still in business. Of the fifty black-owned insurance companies that operated during the 1980s, today just two remain.

Over the same period, tens of thousands of black-owned retail establishments and local service companies also have disappeared, having gone out of business or been acquired by larger companies. Reflecting these developments, working-age black Americans have become far less likely to be their own boss than in the 1990s. The per capita number of black employers, for example, declined by some 12 percent just between 1997 and 2014.

What's behind these trends, and what's the implication for American society as a whole? To be sure, at least some of this entrepreneurial decline reflects positive economic developments. A slowly rising share of black Americans now hold white-collar salaried jobs and have more options for employment beyond running their own businesses. The movement of millions of black families to integrated suburbs over the last forty years also is a welcome trend, even if one effect has been to weaken the viability of the many black-owned independent businesses left behind in historically black neighborhoods.

But the decline in entrepreneurship and business ownership among black Americans also is cause for concern. One reason is that it largely reflects not the opening of new avenues of upward mobility, but rather the foreclosing of opportunity. Rates of business ownership and entrepreneurship are falling among black citizens for much the same reason they are declining among whites and Latinos. As large retailers and financial institutions comprise an ever-bigger slice of the national economy, the possibility of starting and maintaining an independent business has dropped. The *Washington Monthly* has addressed the role of market concentration in suppressing opportunity and in displacing local economies in depth (see, for example, "The Slow-Motion Collapse of American Entrepreneurship," July/August 2012, and "Bloom and Bust," November/December 2015). Other studies, including a report published last year by President Obama's Council of Economic Advisors, have substantiated these developments.

The role of market concentration in depressing black-owned businesses is also troubling because of the critical role that such enterprises have played in organizing and financing the struggle for civil rights in America. In the 1950s and '60s, black Americans employed by whites, including professionals like teachers, often faced dismissal if they joined the civil rights movement, whereas those who owned their own independent business had much greater freedom to resist. This is a largely forgotten history, but one that is gaining new urgency for all Americans in the age of Donald Trump. It shows the crucial way in which advancing and protecting basic civil rights can depend not only on moral and physical courage, but also on possessing the economic independence to stand up to concentrated power.

The decline of black-owned independent businesses traces to many causes, but a major one that has been little noted was the decline in the enforcement of anti-monopoly and fair trade laws beginning in the late 1970s. Under both Democratic and Republican administrations, a few firms that in previous decades would never have been allowed to merge or grow so large came to dominate almost every sector of the economy.

This change has hurt all independent businesses, but the effects have disproportionately hit black business owners. Marcellus Andrews, Bucknell University professor of economics, says that pulling back on anti-monopoly enforcement was a "catastrophic intellectual and political policy mistake," and that for the black community, the "presumed price advantages of concentration often do not translate into better economic opportunities."

A case in point is the decline of black-owned financial institutions, including banks and insurance companies. "Mainstream insurers went after black insurance companies for their top personnel to sell their products," says Wichita State professor Robert Weems Jr. When MetLife bought United Mutual Life Insurance Company in 1993, this was the end of the sixty-three-year existence of the last black-owned insurance company in the Northeast. *Black Enterprise* called the 1990s "a virtual bloodbath" for the black insurance industry, noting that from 1989 to 1999, the number of black-owned insurers declined by 68 percent.

Parks Sausage—which many readers of a certain age may remember for its jingle "More Parks Sausages, Mom, please"—also serves as an example of how market concentration led to the decline of black-owned independent businesses. Founded in 1951 by Henry Parks Jr., the Baltimore-based company grew into a multimillion-dollar operation, selling pork products from New England to Virginia. In 1969, Parks took the company public, making the 200-employee firm the first black-owned business on the New York Stock Exchange. Yet by the 1990s, after a turbulent series of ownership changes, the company had fallen into bankruptcy. In 1996, two black Americans, the former football stars Franco Harris and Lydell Mitchell, attempted to revive the company, but faced an increasingly consolidated meatpacking industry in which the four largest meatpackers controlled 78 percent of the market. As Harris put it, before selling out, "it's been hard to get distribution."

Much the same story occurs with black-owned grocers. In 1969, J. Bruce Llewellyn grew ten Bronx supermarkets into the nation's largest minority-owned retail business. By the 1990s, however, a retreat from antitrust enforcement and other fair trade laws permitted a few giant corporations like Walmart to engage in anticompetitive behaviors that in previous decades would have resulted in civil and criminal prosecution. These included undermining the pricing power of suppliers and loss leading, or the practice of selling below cost in order to drive competitors out of business. In 1999, Llewellyn sold his last remaining stores to the Dayton-Hudson Corporation, now known as the Target Corporation.

In 1986, a top executive at Revlon made a prediction about the future of the beauty and hair care industry. "In the next couple of years," he told *Newsweek*, "the black-owned businesses will disappear. They'll all be sold to white companies." The prediction proved accurate. In 1993, IVAX Corp. purchased Johnson Products Co., the thirty-nine-year-old maker of Ultra Sheen, beginning a decade-long series of acquisitions that wiped out remaining black ownership in the hair care industry. One consequence was fewer new hair care products for black customers. Funds once channeled into research and development, University at Buffalo professor Robert Mark Silverman explains, now were accrued as profits by the larger firms.

Much the same has happened to black-owned firms in the entertainment, communications, and publishing sectors. In response to the merger wave, the founder of Black Entertainment Television, Robert Johnson, told an audience at an investment conference in 1997, "You cannot get big anymore by being 100 percent black-owned anything." Four years later, Viacom bought out BET for $2.34 billion. In 2005, Time Warner acquired Essence Communications Partners, the publisher of the then-leading black women's magazine, *Essence*.

Meanwhile, "small enterprises," writes the business scholar John Sibley Butler, "could not compete with the expansion of larger retail chains, shopping malls, and franchises which developed." Black-owned funeral homes are a prime example. During the civil rights era, writes author Suzanne Smith in her book *To Serve the Living*, "funeral directors were usually among the few black individuals in any town or city who were economically independent and not beholden to the local white power structure." Yet, today, black-owned independent funeral homes are an imperiled institution, as national chains like Service Corporation International muscle out more and more businesses. Charlotte Clark, a black funeral home owner in Roanoke, Alabama, explains that these companies "buy local folks' funeral parlors but leave up the signs and play it off like there's been no change, but call the shots from elsewhere." The National Funeral Directors and Morticians Association, which represents black funeral directors, has seen its membership decrease by 40 percent since 1997.

Reflecting on the past three decades, Bob Dickerson, CEO of the Birmingham Business Resource Center in Alabama, says, "Had our institutions and businesses been maintained, had that money been plowed back into our communities, it could have meant a world of difference."

The role of market concentration in driving down the number of black-owned independent businesses becomes all the more concerning when one considers some mostly forgotten history. In principles, people, and tactics, the fight for black civil rights, going back to before the Civil War, was often deeply intertwined and aligned with America's anti-monopoly traditions.

An early example is the Free Soil Party. Emerging in the 1840s, its members opposed slavery on moral grounds. They also opposed all forms of monopoly power as a threat to liberty, including its most terrible manifestation: the monopoly of slave owners over slaves. Marching under the banner of "Free Soil, Free Speech, Free Labor, and Free Men," the movement focused on granting equal citizenship to all Americans, in large part by promoting the then-radical idea of giving black freedmen and slaves the right to own the land on which they labored.



Courtesy Black Enterprise

No more Parks Sausages: Former National Football League star Franco Harris made the cover of Black Enterprise magazine in 1996 when he tried to rescue the first black-owned business listed on the New York Stock Exchange. A rapidly monopolizing meat processing industry doomed the effort.

Free Soilers proposed breaking up land monopolies and dividing western lands into 50-to-100-acre homesteads that would grant white and black families independence. As the antebellum history scholar Jonathan Earle explains, "Opponents of aristocracy, land monopoly, and slavery saw yeoman farming and inalienable landownership as the true opposites of

servitude." It was therefore no surprise when Helen Douglass, the wife of the Free Soiler and abolitionist Frederick Douglass, wrote that his opposition against any type of coercion "not only made him a foe to American slavery, but also to all forms of monopoly."

After the Civil War, passage of the Fourteenth Amendment, which outlawed racially discriminatory laws like the Black Codes, depended in no small part on white supporters who saw it as a means of prohibiting all grants of monopoly or class privilege. An 1866 article in the *Boston Daily Advertiser* said it "[threw] the same shield over the black man as over the white, over the humble as over the powerful." In fact, one of the earliest applications of the law was by a group of independent Louisiana butchers who argued that a state-sanctioned twenty-five-year slaughterhouse monopoly violated the Fourteenth Amendment.

During Reconstruction, the relationship between black political enfranchisement and economic independence gained strength. Abolitionists in Congress passed the Southern Homestead Act, which promised to replace the monopoly of slavery with the creation of a black yeomanry secured with grants of free land. Like General William Tecumseh Sherman's Special Field Order No. 15, with its promise of "forty acres of tillable ground" to newly freed slaves, it fell victim to white backlash and sectional compromise, and was rescinded. Nevertheless, by the 1890s, black Americans who owned or aspired to own their own land joined with independent white farmers in the multiracial Populist Party, in states including Georgia and Texas.



Library of Congress

Keeping it in the community: During the mid-twentieth century, anti-monopoly laws, particularly fair trade legislation, contributed to an increase in the number of black-owned, independent businesses like this one in Harlem.

The natural alliance between supporters of black civil rights and opponents of monopoly, though strained by race-baiting demagogues, especially during the darkest days of Jim Crow, would endure. As a 1913 editorial by the National Association for the Advancement of Colored People (NAACP) put it, the Emancipation Proclamation and the legacy of the Free Soil

movement "gave black men not simply physical freedom, but it attempted to give them political freedom and economic freedom and social freedom. It knew then, as it knows now, that no people can be free unless they have the right to vote, the right to land and capital, and the right to choose their friends."

To be sure, many black leaders during this era recognized that economic independence was a necessary but not sufficient condition for securing full rights as citizens. Unlike their white counterparts, independent black business owners were vulnerable to the brutality of lynching, to voter suppression at the polls, and to the plundering of black business districts by white supremacists. Yet many black leaders nonetheless saw that the fight for racial justice also required expanded economic independence, which in turn depended on containing market concentration.

In the early twentieth century, groups like the National Negro Business League, for instance, supported anti-chain store legislation as a way to preserve black Americans' economic self-sufficiency and freedom. As an editorial in the black newspaper *New Journal and Guide* bemoaned, "Chain stores are constantly draining every dollar, every week, from all of our Southern communities . . . never putting any of it back so that the communities can use it again." Indeed, many black leaders supported these laws, even though the Ku Klux Klan and many racist white populists also championed them for their own reasons.

In 1928, W. E. B. Du Bois validated the black community's embrace of anti-monopolism when he wrote, "To ask the individual colored man . . . to sell meat, shoes, candy, books, cigars, clothes or fruit in competition with the chain store, is to ask him to commit slow but almost inevitable economic suicide." In 1932, the Associated Negro Press and the National Negro Business League, with the cooperation of the U.S. Department of Commerce, printed a newspaper column called "Business and Industry." One article in the series noted that "an embarrassing problem confronts the 70,000 or more Negro-owned individual enterprises in the U.S. today[:] . . . Big Business, which so perceptibly handicaps the small industrial business units in which category Negro enterprise unquestionably belongs."

Coming into the New Deal era, the federal government adopted many policies that enormously benefited whites but did little or nothing to help black Americans. The Federal Housing Authority engaged in redlining, the destructive practice of refusing to issue mortgages in predominately black neighborhoods. The Wagner Act left black workers still unable to join unions. Black agricultural and domestic laborers couldn't reap the benefits of Social Security. "Roosevelt's New Deal," Ta-Nehisi Coates has argued, "rested on the foundation of Jim Crow." But the expansion of anti-monopoly laws that also occurred during this period provided one important exception to this pattern.

These measures included stepped-up antitrust enforcement, along with new fair trade laws, like the Robinson-Patman Act of 1936 and the Miller-Tydings Act of 1937, that prevented dominant firms from exploiting their market power. Combined with anti-chain store measures passed in twenty-seven states, the new legal and regulatory constraints on market concentration benefited independent enterprise, including black-owned independent businesses. Between 1935 to 1939 the number of black-owned retail stores increased by 31 percent and the number of black employees hired by black-owned retail stores grew by 14.5 percent.

Into the 1940s, black leaders battled segregation while continuing to advocate for anti-monopoly laws. In August 1941, the student organization Negro Youth published a list of demands from the National Defense Program, including "that the Attorney General investigate and prosecute all violations of the Sherman Antitrust laws." In response to a 1947 New York fair

trade law that prohibited loss leading, a coalition of black wholesale grocers declared that the law "will afford additional protection to the small businessman, be he Negro or white."

Independent business owners also played a key role in financing civil rights protests, especially during their peak in the 1950s and '60s. In Tallahassee, black grocery store owner Daniel Speed bankrolled a bus boycott similar to that in Montgomery, and his shop served as a meeting ground for black leaders. In Biloxi, Gilbert R. Mason, owner of Modern Drug Store, led a "wade-in" against the whites-only section of a federally funded Gulf Coast beach. In his autobiography, Mason wrote, "Pharmacists represented an economically independent class of black businessmen who might have been thought difficult for the white establishment to control. In many cases, the black-owned pharmacy was itself a nexus in black communities."

Funeral home owners emerged as another powerful bloc of civil rights activists. In 1956, funeral home owner William Shortridge cofounded the Alabama Christian Movement for Human Rights, a group that sought to end employment discrimination and abolish segregation in public accommodations. A. G. Gaston, who built his business empire as the owner of the Smith and Gaston Funeral Home, threatened to transfer his accounts from a white-owned bank unless it removed a "Whites Only" sign from a water fountain. In 1963, he lent Martin Luther King Jr. a room at his Gaston Motel. Soon known as the "War Room," it was there that King decided to submit himself to arrest in Birmingham, a galvanizing moment in the civil rights movement.

King himself connected part of the civil rights movement with the struggle against market concentration. While giving a talk in 1961 to students at the Southern Baptist Theological Seminary in Louisville, King drew parallels between the Sherman Antitrust Act and discrimination in public accommodations, noting, "This is what is said in the Sherman [Antitrust] Act, that if a business is in the public market it cannot deny access . . . [a]nd I think the same thing applies here . . . that a man should not have the right to say on the basis of color or religion, one cannot use a lunch counter that is open to everyone else in another racial group but not to these particular people; he has an obligation to the public."

In this era, support for the civil rights movement and opposition to monopoly were political stands often advocated by the same person. For instance, Justice Felix Frankfurter, who made anti-monopoly policy one of the causes of his life, served on the NAACP's National Legal Committee while also being the first member of the Supreme Court to hire a black law clerk. New York Representative Emanuel Celler sponsored the Celler-Kefauver Act of 1950, a major anti-monopoly law, and also introduced the Civil Rights Act in the House. Sargent Shriver, the architect of Lyndon Johnson's War on Poverty program, said at a dinner reception describing his vision for anti-discrimination laws and programs like Head Start, VISTA, and Job Corps, "The day may well come when Congress enacts a new Sherman Act for the social field—an antitrust law to ensure that . . . monopoly power is not used to expand and perpetuate itself."

Attorney General Robert F. Kennedy similarly drew a link between civil rights and anti-monopoly policy. "The principles of free enterprise which the antitrust laws are designed to protect and vindicate," he said in 1961, "are economic ideals that underlie the whole structure of a free society." Two years later, King, in his sermon "On Being a Good Neighbor," echoed Kennedy's vision when he said, "Our unswerving devotion to monopoly capitalism makes us concerned about the economic security of the captains of industry, and not the laboring men whose sweat and skills keep the wheels of industry rolling."

A seminal moment in the history of the civil rights movement came on a bloody Sunday in 1965 when Alabama state troopers attacked John Lewis and hundreds of others marching across the Edmund Pettus Bridge in support of voting rights. Here, too, the important link between black-owned independent businesses and civil rights was operating behind the scenes. Civil rights leader Amelia Boynton and her husband, Sam, for example, dedicated half the office space of their real estate and insurance company in Selma to host organizers from the Southern Christian Leadership Conference.

Black Americans employed by whites, including professionals like teachers, often faced dismissal if they joined the civil rights movement, whereas those who owned their own independent business had much greater freedom to resist.

Student Nonviolent Coordinating Committee founder Bernard LaFayette also set up an office in Selma because he knew that the black commercial class would provide a measure of protection for activists. Betty Boynton, the wife of Sam and Amelia's son Bruce, explained in an interview, "School administrators fired teachers and workers who were sympathetic to the movement." Indeed, one of the reasons so much of the activity of the civil rights movement was centered in Selma is that its strong community of black business owners offered critical logistical, financial, and other forms of support.

The link between civil rights and anti-monopoly policy also was a matter of tactics. In 1961, the owners of ten independent medical practices used the Sherman Antitrust Act against sixty-one local hospitals and medical organizations in Chicago that barred black Americans from the medical staff. The suit claimed that the hospitals, which provided more than 75 percent of the city's private hospital beds, discriminated against black physicians. The settlement slowly helped integrate black citizens into the medical profession.

In 1964, Reginald Johnson, secretary of the National Urban League, encouraged the use of antitrust laws to break up housing segregation in the nation's cities. Of the twenty million dwellings built since World War II, only 3 percent had been open to black families. "Widespread conspiracies in flagrant restraint of trade," Johnson said, "have confined millions of the nation's Negro citizens to lives of squalor, misery, and privation." Antitrust actions taken by the American Civil Liberties Union, the NAACP Legal Defense and Educational Fund, and other organizations helped force desegregation of neighborhoods and realty boards in cities including Trenton, St. Louis, Pittsburgh, Akron, and New York City.

Bruce Boynton even sought to join the Justice Department's Antitrust Division to combat discrimination and fight for greater equality. In a 1964 interview with *Jet* he said, "I purposely picked Antitrust instead of the Civil Rights section because we have to get involved in other areas, too. . . . Negroes have to learn how to operate stores, as well as boycott them." He never made it to the Justice Department but made history anyway. The Alabama Bar Association refused to grant him his law license because of his previous arrest for refusing to leave a "Whites Only" lunch counter. Boynton's protest led to the Supreme Court case *Boynton v. Virginia*, which helped desegregate interstate bus travel. NAACP lawyer Thurgood Marshall, who was already famous for having successfully argued *Brown v. Board of Education*, represented Boynton in that case.

As it happens, Marshall later became the nation's first black Supreme Court justice and one of the Court's last great defenders of anti-monopoly laws. Marshall grew up in the largely middle-class Druid Hill neighborhood of Baltimore, the grandson of two grocery owners, and as a young boy worked in their stores. Marshall's philosophy, his biographer Juan Williams writes, "was the result of being the child of a proud, politically active, black, middle-class family that owned suc-

cessful businesses and lived in an integrated neighborhood." His greatest defense of the anti-monopoly vision came in the majority opinion he authored in *United States v. Topco Associates*, in which he argued that "antitrust laws, in general, and the Sherman Act, in particular, are the Magna Carta of free enterprise."

After the late 1970s, both Democrats and Republicans generally retreated from the long-standing tradition of using anti-monopoly laws to foster economic and political equality. Since then, successive administrations have evaluated mergers only for their "efficiency," and by and large have resisted antitrust actions except in the most egregious instances of collusion and price fixing. The subsequent three decades of merger mania have brought steep increases in both market concentration and inequality.

Some members of the black community applauded these changes. In a 1986 interview, Dr. William Bradford, chairman of the University of Maryland Finance Department, said, "Selling out will result in gaining future expansion opportunities. . . . [Black businesses] will move up the hierarchy and control more resources." But other voices expressed worry. An editorial in the *Atlanta Daily World* noted, "Mergers don't always make for better service or lower prices to the consumer, and one certain result of weakening the antitrust laws is more and more mergers."

Indeed, the number of mergers did keep growing, and in most instances involved smaller black-owned companies being bought out by larger firms controlled by whites. In 1988, MCA and Boston Ventures bought Motown Records for $61 million. In 1995, Shorebank Corporation acquired Chicago's black-owned Drexel Bank. In 1999, the French advertising giant Publicis Groupe acquired 49 percent of the black-owned marketing firm Burrell Communications Group. In 2005, a group of white investors purchased the nation's oldest black-owned bank, Consolidated Bank & Trust Co.

The process continues today. Indeed, one of the legacies of Obama's economic policies has been a particularly sharp drop in the number of black-owned banks. This is not only the result of lessened enforcement of the anti-monopoly laws but also an unintended side effect of measures like the Dodd-Frank Act. In the process of attempting to keep big banks from failing, Dodd-Frank created regulatory burdens that small banks could not meet. These policy changes contributed to a 14 percent decrease in the number of community banks between 2010 and late 2014. Particularly hard hit were black-owned banks, which decreased by 24 percent during this period.

Black-owned financial institutions and the businesses that depend on them for credit were also deeply damaged by the misallocation of bank bailout funds. Referring to the government's Troubled Asset Relief Program (TARP), former Atlanta banker George Andrews says, "If there ever was a crime committed to our community it was in the way the government handled TARP funds." According to a 2013 study of TARP investments, black-owned banks were ten times less likely to receive bailout money than nonminority-owned banks. Black Americans suffered disproportionately from the predatory lending practices of big banks and from the reform measures put in place to contain banks that had become too big to fail.

The story of how the struggle for civil rights intertwined and intersected historically with the struggle against monopoly provides a lesson for the future. It suggests that going forward we also should consider how political independence connects with economic independence in the struggle for social justice. Without freedom from domination in one sphere, there is no freedom in the other. Allowing the powerful to corner markets erodes the democratic spirit that makes America great.

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KILLING THE COMPETITION

How the New Monopolies Are Destroying Open Markets

By Barry C. Lynn

SOME ASSEMBLY REQUIRED

Witnessing the Birth of Occupy Wall Street

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OLD MRS. J

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KILLING THE COMPETITION

How the new monopolies are destroying open markets

By Barry C. Lynn

Fear, in any real market, is a natural emotion. There is the fear of not making a sale, not landing a job, not winning a client. Such fear is healthy, even constructive. It prods us to polish our wares, to refine our skills, and to conjure up—every so often—a wonder.

But these days, we see a different kind of fear in the eyes of America's entrepreneurs and professionals. It's a fear of the arbitrary edict, of the brute exercise of power. And the origins of this fear lie precisely in the fact that many if not most Americans can no longer count on open markets for their ideas and their work. Because of the overthrow of our antimonopoly laws a generation ago, we instead find ourselves subject to the ever more autocratic whims of the individuals who run our giant business corporations.

The equation is simple. In sector after sector of our political economy, there are still many sellers: many of us. But every day, there are fewer buyers: fewer of *them*. Hence, they enjoy more and more liberty to dictate terms—or simply to dictate.



Over the past four years of financial collapse, many of us have come to view markets as a fantastical scam: a giant mechanism geared to transfer our hard-earned dollars into the hands of a few select bankers. And when it comes to the Wall Street markets we rely on to trade our equities and debt and commodities, this sentiment is not all wrong.

But as every previous generation of Americans understood, a truly open market is one of our fundamental democratic institutions. We construct such markets to achieve some of our most basic rights: to deal with whom we choose, to work with whom we choose, to govern our communities and nation as we (along with our neighbors) choose.

And so, as every previous generation of Americans also understood, monopolization of our public markets is first and foremost a political crisis, amounting to nothing less than the reestablishment of private government. What is at stake is the survival of our democratic republic.

This rush back to the feudal past is nowhere more evident than in that region of California we have so long viewed as the incubator of our future.

Until recently, few places in the world could boast of markets as open as those of Silicon Valley. Yes, large corporations thrived here for decades. But true denizens of the Valley would rarely let themselves get caught inside those walls. Why should they? Their skills were portable, venture capital was abundant, and California refused to enforce the "non-compete" agreements that tech

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Illustrations by Tim Bower

firms elsewhere often used to control their employees.

It was in Silicon Valley that America's entrepreneurs seemed to rediscovet their roots—or rather, their primal rootlessness. Serial founders staked out tech venture after tech venture, in much the way Daniel Boone once cleared homesteads as he wandered from Carolina to Kentucky to Missouri. And behind these pioneers swarmed freelance engineers and cowboy coders, hardly distinguishable from the first-generation entrepreneurs and soon in direct competition with them.

These days the Valley is once again abuzz. Headlines report bulging wallets and a smorgasbord of new perks. Venture capitalists hum down Route 101, and angel investors lurk and listen in the bars. But instead of a disruptive melee like that of the late 1990s, with its diversity of players and voices, the overwhelming tendency today is a furthet consolidation of power by the already powerful.

During the past decade, a few giants have managed to fence in market after market for hardware, software, and content. Some did so simply by buying up their competitors. Oracle CEO Larry Ellison once said that acquiring another company was "a confession that there's a failure to innovate." But Ellison himself decided to opt for the more reliable profits that come from buying one's competitors, which in Oracle's case included PeopleSoft, Siebel, BEA, Sun Microsystems, and more than sixty other firms. During the same period, Google—even while branding itself as the dreamiest of inventors—vacuumed up close to a hundred companies, including such core components as YouTube, DoubleClick, and ITA.

John D. Rockefeller, whose Standard Oil ruled the energy industry for decades, liked to present his predations as acts of altruism. "We will take your burdens," he would tell his target. "We will unite together and build a substantial structure on the basis of cooperation." But all understood perfectly the ultimatum hidden in the honeyed words: Join or be crushed.

So, too, today's lords of the Valley, who enjoy the power to choreograph competition among the latest generation of upstarts and then buy whom they please, when they please. Yet this de facto license to govern a trillion-dollar industry—and with it, entire swaths of the American economy—appears to have left these high-tech headmen unfulfilled. Or so we learned when the Justice Department complained in 2010 that senior executives at Apple, Google, Intel, Pixar, and two other corporations had "formed and actively managed" an agreement that "deprived" the engineers and scientisrs who work for them of "access to better job opportunities."

Even in those reaches of society long accustomed to the rule of the few, the fact that some of the biggest and the richest had agreed not to poach one another's workers managed to shock. In an editorial, the *New York Times* wondered "What Century Are We In?" Yet in the Valley itself, from those most directly affected, we've heard only the rarest of whimpers. The anger is there. But it's tamped down by fear.

To see how these employees react to their bosses getting busted for running a labor cartel, I recently toured Apple's hometown of Cupertino, California. I strolled the Infinite Loop, the road encircling the six edifices at the heart of the empire. I wandered the side streets lined with low-slung buildings adorned with discreet Apple logos. I ambled down North De Anza Boulevard to the center of town. All around I saw Apple employees, easily identifiable by the white badges dangling from their necks or clipped to their pants pockets. And I approached many of them to ask what it felt like to work in the company's town.

An older fellow named Steve, with scraggly white hair, told me he had read all about the settlement, and that the news had come as no surprise. "They treat us like dirt," he said before unleashing a string of curses. "Market capitalism should be a two-way street, no? If they get to make us compete against one another, then they too should have to compete." At this point Steve walked off. He'd like to talk more, he said. But his contract renewal was coming up, and someone might see him with me.

At a crossroads just south of Apple headquarters, in front of a Valero gas station, I caught up with John, who was speed-walking to the dentist. "Of course I don't like it," he told me, and proceeded to recount the facts of the settlement in detail. "But what can we do? It's not like anyone ever dares to speak about it. I mean, they actively encourage us not to talk to one another. It's all taboo."

Outside the Bagel Street Café, in the lines for the shuttle buses that carry employees north to San Francisco, at BJ's Restaurant and Brewhouse, I come upon the same urge to talk, followed by the same mumbled apologies as prudence takes hold. Sometimes the fear kicks in almost instantaneously. One employee actually spun on his heel, jumped back into his pickup truck, and sped away, though not before hissing that "even if I did know anything, I wouldn't ever be able to talk about it."

Eventually I did find one employee willing to speak up. Last spring, a San Francisco law firm announced plans to file a class-action lawsuit against Lucasfilm and the six corporations named in the DOJ settlement. Such lawsuits require at least one person to publicly represent the class, and finally a former Lucasfilm software engineer named Siddarth Hariharan stepped forward. After some back-and-forth with his lawyers, Hariharan (who also goes by the name Neil Haran) agreed to discuss how the masters of these estates treat their tenants.

Over lunch in San Francisco, Hariharan, dapper in a stylish sport coat, starts by telling me all the reasons he loved his job, especially the opportunity to take part in sprawling, complex projects. Sure, the pace was grinding, the hours crazy. One team, he recounts, worked for 110 hours per week for nine months straight. But "everyone believed they were making something important."

Hariharan says his attitude began to sour after Lucasfilm com-

pleted a particularly ambitious project. The very next day, he says, shaking his head, executives came in and "fired almost everyone." These were employees who hadn't had a day off in months. "People were running around the office," says Hariharan, whose own job was not affected. "They were running around crying. It was a bad sight."



He pauses, and looks at me. "Then, on top of that, I hear they were conspiring to lock people in a box!" It was the allegations about the labor cartel, Hariharan says, that angered him sufficiently to join the lawsuit. "It's simple," he says. "If you do something bad, you should be punished."

Many entrepreneurs and workers in Silicon Valley want to speak out, Hariharan believes. Many would love to restore the open job market of the early 1990s. But for most, "it would be career suicide." Even Hariharan might have thought twice if he hadn't already established himself as an independent entrepreneur. "I'm not rich," he says, "but I never have to work for anyone else again. So I felt I had to do something. I had to stand up for those who couldn't."

No matter how adept Silicon Valley CEOs have become at corralling the men and women who actually make what they sell, they are still relative beginners when it comes to manipulating fear for profit. To get a sense of what the future may hold for America's computer engineers—and, for that matter, our teachers, lawyers, and doctors—I recently drove through a notch in the Allegheny Mountains into West Virginia's Sweedlin Valley. There I visited with poultry farmers who supply birds to a plant in Moorefield owned by the Brazilian food giant JBS. (The largest meat processor in the world, JBS operates the plant under the name Pilgrim's.)

The broiler industry was one of the first in which the generation of monopolists unleashed by Ronald Reagan succeeded in replacing open markets with vertically integrated systems designed to be controlled by a single local buyer. The men who rule America's chicken-processing plants have therefore had decades to master the art of setting individual farmers—who still own the land, equipment, and liabilities—against one another. And the goal of this competition is not merely to extract the most work from each individual, but also the most capital.

The concept of such competitions—or "tournaments," as the industry calls them—is generally credited to the economist Edward Lazear, who served as one of George W. Bush's top advisers and now teaches at the Stanford Graduate School of Business. The idea, first laid out in a 1981 paper titled "Rank-Order Tournaments as Optimum Labor Contracts," is straightforward enough. Rather than pay all workers at the same rate for any particular task, Lazear wrote, why not set up a "labor market contest," in which those who produce more also get paid more per task or per piece? Such a system of reward (and, for those at the bottom, punishment) would, he claimed, increase the incentive to work harder.

The problem with Lazear's theory becomes clear when we recall some of the basic characteristics shared by all real markets. Most important is an equality between the seller and the buyer, achieved by ensuring that there are many buyers as well as many sellers. Second is transparency. Everyone sees the quantity and quality of the product on offer, and the price at which each deal is done. A third characteristic is a tendency to deliver egalitarian outcomes. On any given day, once the supply of a product has been hauled to market and appraised, all sellers receive roughly the same price per unit. Offer a seller less than the prevailing price, and you walk away empty-handed. Demand more from buyers, and your goods sit untouched.

Lazear repeatedly uses the term "market" to describe his tournaments. But his theory has almost nothing in common with how open markets actually function. For starters, he assumes that the sellers of goods and services must have, for all intents, nowhere else to go. A 2003 study of tournament theory by economists Tom Coupé, Valérie Smeets, and Frédéric Warzynski, which builds explicitly on Lazear's work, makes this point painfully clear. "Tournaments take place," the authors explain, "in the context of an internal labor market with no explicit role for outside options."

The political aim of tournaments, in other words, is exactly opposed to that of real markets. Citizens structure markets, first and foremost, to protect individuals from massed capital. Lazear's tournaments are designed to maximize return *to capital*. They do so precisely by setting individual citizens against each other, like cocks in a pit.

This sounds bad enough. But when I sit down with poultry grower Mike Weaver in his snug rambler to learn how such tournaments work in practice, he seems astonished at my naïveté. "That's not even the half of it," he begins.

Weaver, a former fish and game officer who can raise flocks as large as 94,000 birds on his farm, slides a "settlement sheet" across the table. It records the amounts JBS paid to seventeen farmers who delivered their flocks to the plant on one particular day. The company, he shows me, paid the top-ranked chicken grower 63 percent more *per pound* than it paid the bottom-ranked grower. "Naturally," he says, "this sort of differential will tend to make a man work harder to stay ahead of the next fella."

What makes the system truly insidious, Weaver adds, is that the whole competition takes place without any set standards. "There is no baseline," he explains. For one thing, JBS requires the farmers to procure from the company itself all the chicks they raise and all the feed they blow into the houses. Yet the quality of the chicks and the feed can differ tremendously, from day to day and from farm to farm.

What's more, the full-grown chickens are weighed after being trucked off the farm. The farmer is not allowed to see whether the figure on the scale is accurate—nor can he tell whether the chickens he's being paid for even came from his farm. He is simply expected to take the money he is given and say thank you.

As much as he resents being forced into a gladiatorial relationship with his neighbors, Weaver says an actual tournament with a level playing field would be "far better than what we have now." Under the current regimen, the processors "don't just force us to compete against each other. They rig the competition any way they like. They can be as sloppy as they wish or as manipulative as they wish. We are entirely subject to the company." After a moment, Weaver modifies his statement. "Really, we are entirely subject to the foreman at the plant, to the technician who keeps a watch on us. Those men can make us and they can break us, and they know it."

His face reddens. "The market in this valley is very simple to understand. They give preferential treatment to those who kiss their ass."

For the local community, the outcome of this arrangement can be devastating. Traditionally, farmers have tended to join politically with their neighbors. But Weaver, who heads the local poultry-growers association, says nowadays many farmers end up viewing their neighbors as rivals. Most of the 400 or so farmers who sell into the Moorefield plant "try to resist such feelings," he says. But over time, the system wears them down.

It also makes them highly reluctant to speak out in public. "Most of the farmers are afraid to say boo for fear the companies will take away their chickens," Weaver tells me. The processors "know we have our house and our land in hock to pay for the equipment. They know we are honorable people who won't walk on a promise. And they exploit this."

Weaver has learned this from bitter experience. In 2010, he spoke at two Department of Agriculture hearings on the consolidation of the packing and processing industries. Ever since, he tells me, the foremen have rated his chickens near or at the bottom, after years of ranking them near the top. This costs him thousands of dollars per flock.

"I can't prove a thing," Weaver says when I ask if there's any way to verify that the company is retaliating against him for speaking out. "That's the beauty of the system. They know everything and we know nothing. They get to decide what's real."

Like Hariharan, Weaver dares to talk openly only because he possesses a measure of financial independence. "I can speak because I don't need the company," he says. "They can cut me off tomorrow and I have enough saved up so I won't go flat-out bankrupt." But this is not true for many of the farmers who sell chickens to the Moorefield plant, he adds. "They have nowhere else to go. They have to take what they're given."

The revolutionary achievement of the American people two centuries ago was not merely to establish an independent republic. It was to prove that every citizen in that republic could be independent, economically as well as politically.

This vision was not atomistic. It was not based solely, as libertarians like to claim, on a realization of individual rights. Instead, the belief was that self-conscious, self-reliant citizens would come together as equals and use their collective power to protect their communities, their nation, and themselves.

The practical challenge was to enable citizens to exchange their goods, ideas, and labor with one another as freely as possible. And so Americans mastered the political art of making public markets, and used their new legislatures to closely restrict trading companies, industrial estates, and other forms of private corporate government.

These open markets swiftly proved to be as fundamental to our democracy as the ballot box. They buttressed our system of checks and balances, both by distributing power among many sellers and many buyers and by promoting a more equitable distribution of wealth. They helped to foster open debate and prodded citizens to speak out

against competitors who bent or broke the rules.

Right from the beginning, however, these markets proved hard to keep.

George Washington's administration was barely a year old when Alexander Hamilton, the nation's first treasury secretary, attempted to use a government bailout of speculators to concentrate power in banking estates controlled by his friends and allies. (Hamilton later touched off the Whiskey Rebellion with a tax that steered the distilling business away from yeoman farmers to local landlords.) And for more than half a century after the Civil War, we lost many of our markets entirely, as a small clique of men seized control of the new railroad and telegraph systems, then consolidated their power over many other important sectors of the economy.

By 1913, the apex of the plutocratic era, President Woodrow Wilson was decrying the rule of fear that had been imposed on the American entrepreneur and worker. "Some of the biggest men in the United States, in the field of commerce and manufacture, are afraid of somebody, are afraid of something," Wilson said. "They know that there is a power somewhere so organized, so subtle, so watchful, so interlocked, so complete, so pervasive, that they had better not speak above their breath when they speak in condemnation of it."

Yet in two great pushes—during the early years of the Wilson Administration, and then during the Second New Deal in the 1930s—the American people succeeded in restoring many of the open markets we had lost. Even as the lords of industry and the prophets of socialism joined hands to defend the "scientific" rationalization of productive activities, the people forced their representatives to enact law after law designed to disperse power.

Adapting the principles of eighteenth-century republicanism to the industrial landscape of twentieth-century America proved to be remarkably easy. Where there was no compelling reason to concentrate power—as in retail, agriculture, services, and light manufacturing—the goal now was to promote a wide distribution of both property and opportunity.

In practice, this required not merely heading off further monopolization, but unwinding many existing powers. The legislation used to achieve these ends—including the Packers and Stockyards Act and the fair-trade laws of the 1930s, which allowed manufacturers to set minimum retail prices for their goods—are seldom recalled today. However, their long-term impact was profound. In the 1920s, the five largest beef packers controlled upward of 70 percent of the U.S. market; by 1975, that figure had dropped to roughly 25 percent. In 1933, the four largest grocery chains controlled 27 percent of the market; by 1982, that figure had dropped to 16 percent.

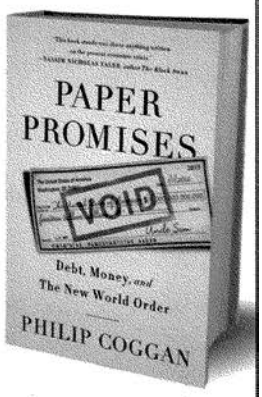
Where some concentration of capacity and control was viewed as necessary—as in heavy industry—the goal was not to break up the monopolies. Instead, markets were restructured to ensure that at least three or four companies competed to make any particular product. In 1945, for instance, the government forced Alcoa to share its aluminum monopoly with Kaiser and Reynolds. This also meant restraining the power of the capitalist over these quasi monopolies, mostly by reinforcing the rights of the worker, the engineer, the local community, and the small investor.

This bottom-up reconstruction of our economy was one of the great political achievements of the twentieth century. At a time when every other industrial nation of the world was engineering corporatist structures that tended toward authoritarianism, the United States went in the opposite direction. It was, arguably, a second American Revolution.

By the 1970s, however, our open markets were under siege once again. And this time, the assault was more subtle, and camouflaged by myth, euphemism, and outright falsehood. The generation of Rockefeller and Morgan had acknowledged its power openly and defended that power on its merits, such as they might be. Yes, they had centralized control over entire industries, and yes, they ruled their realms as despots. But they claimed to wield such power for one purpose only: to organize production and trade more *efficiently*. And

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wasn't efficiency a great benefit to the commonweal? Such honest impudence, in turn, made it easier for citizens to identify and beat back the political threat.

Today, our overlords not only refuse to defend the power they hold—they deny that it is even possible for any American to accumulate such power. And to make such an absurd claim stick, they (or the more politically sophisticated of the academic economists in their employ) have undermined our language itself. Their most impressive act of lexical legerdemain was the coinage of various misnomers, some so audacious as to be worthy of Orwell's Ministry of Truth. Corporate monopoly? Let's just call that the "free market." The political ravages of corporate power? Those could be recast as the essentially benign workings of "market forces."

Even more dangerous was the transformation of *efficiency* into the highest economic good. For centuries, dating back to the British East India Company's promise to manage our tea trade for us, Americans have used antimonopoly action and law to protect our liberties as producers. Along the way, we learned to distrust most talk of efficiency as a justification for reducing the number of buyers. It was this very sentiment that inspired Justice Louis Brandeis to celebrate the political and economic virtues of "friction" in a 1926 Supreme Court decision.

Little more than a generation ago, however, economists of the "Chicago School" began to publish studies claiming that the enforcement of our antimonopoly laws was harming the interests of that defenseless figure, the American consumer, by promoting "wasteful" competition. After Ronald Reagan took office in 1981, his new head of antitrust enforcement, William F. Baxter, swiftly abandoned efforts to promote competition and promised instead a policy "based on efficiency considerations." The goal now was to promote the "welfare" of the consumer, theoretically by increasing his or her access to cheap goods.

No gun was ever fired, no protest ever mounted, no direct attack on our antimonopoly laws was ever unleashed. Yet the most fundamental purpose of these fundamental laws—to protect the liberty of the citizen and to ensure the safe distribution of power—was flipped on its head by the innocent-sounding substitution of a few key terms. And in the three decades since, the impact of this rhetorical sleight of hand has only grown. The "consumer welfare" framework has provided its creators with exactly the cover they need to write their efficiency argument straight into the mainstream of American law and to erect their private corporate governments right in the town square of the American political economy.

To understand the true architecture of power in our America of 2012, we must set down the hymnals of the economists and speak directly to those of us who strive every day to make, to grow, to build, to serve—but who find that some immense power blocks their way.

Take the craft-beer brewer I met recently in Chicago. Worshipped by his ever-thirsty fans, he grinned proudly for a photo shoot as I watched from the sidelines. But in the privacy of the hotel hallway, he whispered about how Anheuser-Busch InBev is slowly strangling his company. The multinational colossus controls much of the beer distribution in the United States and has a huge influence over who rides those rails. "When I want to get my beer on a store shelf, I don't call the retailer," he explains. "I have to beg ABI."

The backstory in brewing is much the same as in Silicon Valley. In 1978, the production of beer in America was divided among forty-three firms, with the biggest controlling only a quarter of the market. Today, more than 1,750 companies make beer in this country. But ABI and MillerCoors have locked down more than 90 percent of the U.S. market. This gives them the power to jack up prices almost at will. More important, it gives this cadre of capitalists the ability to decide which American craft brewers thrive and which don't.

Or take the advertising executive who recently told me about her decision to ditch her career and become a teacher. Over the course of a decade, this executive steadily accumulated responsibility as she moved from Wunderman to Omnicom to Young & Rubicam, confident she was destined for a corner office. Then, a couple of years ago, she hit a wall. "Every place I wanted to work was already owned by WPP," she said, referring to the British giant that controls Y&R and many other firms. "And I realized that to move, I'd need the approval of some grand poobah."

Again we encounter the familiar story. Well into the 1980s, power on Madison Avenue was dispersed among more than a dozen large agencies and scores of vibrant smaller firms. But over the past thirty years, four sprawling holding companies—WPP, Interpublic, Omnicom, and Publicis—swallowed up almost the entire industry. WPP alone controls more than 300 ad agencies, including such once iconic shops as the Grey Group, Ogilvy & Mather, and Hill & Knowlton. And the four giants vigorously shore up this power with strict non-compete employment contracts.

You'll hear the same thing if you talk to the musicians who find themselves subject to the caprices of Live Nation. Or if you talk to the legions of doctors watching helplessly as hospital corporations begin to regulate medical services across entire regions. Where only a few short years ago these citizens controlled their own destinies, they wake today to find themselves the de facto chattel of some domestic (or increasingly, foreign) lord.

But perhaps the best way to understand the true structure of America's political economy in the twenty-first century is to talk to some of the people who publish, edit, and write books in America.

These days, most articles on the book industry focus on technology. The recent death of the retailer Borders is depicted as a victory of Internet sales over brick-and-mortar stores, the e-book market as a battle between the Kindle e-reader and the iPad. But if we look behind the glib narrative of digitization, we find that a parallel revolution has taken place, one that has resulted in a dramatic

concentration of power over the individuals who work in this essential, surprisingly fragile industry.

A generation ago, America's book market was entirely open and very vibrant. According to some estimates, the five largest publishers in the mid-1970s controlled only about 30 percent of trade book sales, and the biggest fifty publishers controlled only 75 percent. The retail business was even more dispersed, with the top four chains accounting for little more than 10 percent of sales. Today, a single company—Amazon—accounts for more than 20 percent of the domestic book market. And even this statistic fails to convey the company's enormous reach. In many key categories, it sells more than half the books purchased in the United States. And according to the company's estimates, its share of the e-book market, the fastest-growing segment of the industry, was between 70 and 80 percent in 2010. (Its share of the online sale of physical books is roughly the same.)

Not surprisingly, then, we find the same sort of fear among our book publishers as we do among the chicken farmers of the Sweedlin Valley. I recently sat down with the CEO of one of the biggest publishing houses in America. In his corner office overlooking a busy Manhattan street, he explained that Amazon was once a "wonderful customer with whom to do business." As Jeff Bezos's company became more powerful, however, it changed. "The question is, do you wear your power lightly?" My host paused for a moment, searching for the right words. "Mr. Bezos has not. He is reckless. He is dangerous."

Later that same day, I spoke with the head of one of the few remaining small publishers in America, in a tattered conference room in a squat Midtown office building. "Amazon is a bully. Jeff Bezos is a bully," he said, his voice rising, his cheeks flushing. "Anyone who gets that powerful can push people around, and Amazon pushes people around. They do not exercise their power responsibly."

Neither man allowed me to use his name. Amazon, they made clear, had long since accumulated sufficient influence over their business to ensure that even these most dedicated defenders of the book—and of the First Amendment—dare not speak openly of the company's predations.

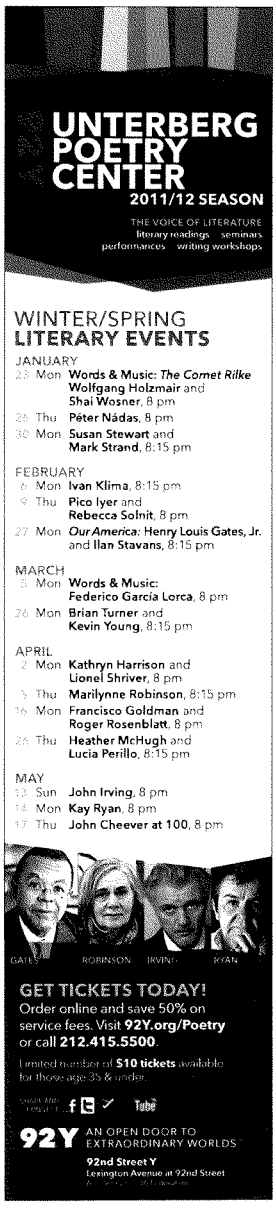
If a single event best illustrates our confusion as to what makes an open market—and the role such markets play in protecting our liberties—it was our failure to respond to Amazon's decision in early 2010 to cut off one of our biggest publishers from its readers.

At the time, Amazon and Macmillan were scrapping over which firm would set the price for Macmillan's e-books. Amazon wanted to price every Macmillan e-book, and indeed every e-book of every publisher, at $9.99 or less. This scorched-earth tactic, which guaranteed that Amazon lost money on many of the e-books it sold, was designed to cement the online retailer's dominance in the nascent market. It also had the effect of persuading customers that this deeply discounted price, which publishers considered ruinously low, was the "natural" one for an e-book.

In January 2010, Macmillan at last claimed the right to set the price for each of its own products as it alone saw fit.[1] Amazon resisted this arrangement, known in publishing as the "agency model." When the two companies deadlocked, Amazon simply turned off the buttons that allowed customers to order Macmillan titles, in both their print and their e-book versions. The reasoning was obvious: the sudden loss of sales, which could amount to a sizable fraction of Macmillan's total revenue, would soon bring the publisher to heel.

This was not the first time Amazon had used this straragem. The retailer's executives had previously cut off small firms such as Ten Speed Press and Mel-

[1] *For most of the twentieth century, manufacturers enjoyed the right to set minimum prices for their products. In 1975, however, Congress shifted this right to the retailer and the trading company, theoretically to enlist these powers in the fight against inflation. In 2007, the Supreme Court's decision in* Leegin Creative Leather Products v. PSKS, Inc. *shifted at least some of the right to price back to the producer, in an act that surely heartened Macmillan's legal team as it went head-to-head with Amazon. Many other nations, including France, Germany, Japan, and Switzerland, forbid discounting by publishers and booksellers.*



ville House Publishing for bucking their will. But the fight with Macmillan was by far the most public of these showdowns.

In the late 1970s, when a single book retailer first captured a 10 percent share of the U.S. market, Congress and the regulatory agencies were swift to react. As the head of the Federal Trade Commission put it: "The First Amendment protects us from the chilling shadow of government interference with the media. But are there comparable dangers if other powerful economic or political institutions assume control ... ?"

In the intervening years, however, we have failed time and again to protect our open market for books. We did nothing as the super chains rolled up retail. We did nothing as six enormous conglomerates—four of them foreign-owned—absorbed many of our publishers. These failures are inexcusable. Yet always we could reassure ourselves that the absolute worst had not come to pass, that there was still some competition in our market for books, that no sovereign boss had emerged.

Today, by contrast, a single private company has captured the ability to dictate terms to the people who publish our books, and hence to the people who write and read our books. It does so by employing the most blatant forms of predatory pricing to destroy its retail competitors. It does so by gathering up massive amounts of information about the most private thoughts, interests, and habits of the American citizen. And all the while, this new sovereign justifies its exercise of raw power in the same way our economic autocrats always do: it claims that the resulting "efficiencies" will serve the interests of the consumer.

Meanwhile, all these manipulations—as audacious as any ever pursued by the antique bosses of steel or oil—have raised only the rarest murmurs of concern from Congress, the Obama Administration, and the FTC. (Antitrust enforcers in Washington and Brussels did launch investigations. Blinded, however, by the Orwellian framework of "consumer welfare," they have mostly taken aim at the publishers, for daring to seek some control over the prices of their own products.)

Not that there have been no warnings at all. In his capacity as head of the Authors Guild, novelist Scott Turow has repeatedly condemned what he says is Amazon's intent to, as he put it recently, "drive paper publishers out of business." Oren Teicher, who heads the American Booksellers Association, told me that "Amazon is threatening the whole ecosystem of how ideas are created, how they are developed, how they are sold."

In the event, Amazon did turn Macmillan's buttons back on (but only after more than a week). And it did allow publishers to price their own e-books (though not their physical books). Still, there is little doubt the individuals who run Amazon got exactly what they wanted. They displayed the full extent of their dominance to the people most directly subject to it.[2] They proved to those same people that most of the American public no longer understands the nature—or the political danger—of that dominance.

In rare moments of disquiet, we like to assure ourselves that all shall turn out well. Surely some Schumpeterian upstart will emerge, as if by magic, to disrupt Amazon's reign. Or Apple or Google will choose to intervene, in some fashion that avoids the political dangers posed by Amazon's control, even though these firms wield powers at least as awesome as the online retailer's.

Then we drift back into our private utopias, there to marvel at all the wonders of modern technology and the freedoms that await us if only we are patient and trust the great corporations to deliver what they promised. And truth be told, it is an amazing world we live in. I mean, who would ever have imagined that one day we'd be able to read *Common Sense* right on our Kindles?

For years, America's upper-middle classes—of all political leanings—have tended to gaze on our political economy with a certain smug self-confidence. Even as our new masters imposed their rule over the markets once run by our farmers and small shopkeepers, and smashed the unions that empowered industrial workers and flight attendants to bargain as equals with their bosses, we turned away.

Servility, our political fabulists assured us, was for the little person. For our refined skills, competition was becoming every day only more intense. America, or at least our cozy enclave within it, was being transformed into a "free-agent nation."

Well, it's clear now that we never quite managed to slip the hold of the ancient truths. It was 150 years ago that Alexis de Tocqueville condemned top-down, long-distance control over any task that a community or individual could manage just as easily on its own. Observing the widespread sycophancy of French society under the July Monarchy, he noted how men routinely subjected to such power become accustomed "to set their own will habitually and completely aside; to submit, not only for once, or upon one point, but in every respect and at all times. Not only, therefore, does this union of power subdue them compulsorily, but it affects their ordinary habits; it isolates them, and then influences each separately."

And so our new masters administer us in America today. They use their great nation-spanning and world-spanning corporations to isolate us as individuals, and then to pit us against our neighbors. They capture and hide away the information that until recently spilled from our open markets. And so they shatter our ability to speak coherently to one another from a base of common experience, to process even the most rudimentary of economic and political facts.

To step outside the open market is to step outside the rule of law and to come under the rule of whim. To step outside the open market is to step outside the rule of reason and to enter a realm of nonsense. We have a choice in America today. We must learn how to make real markets once again—or bend our knees, perhaps forever. ■

[2] *In December, the e-commerce giant continued its assault on brick-and-mortar merchants by offering promotional discounts of up to $5 to customers who scanned the prices of products in a store and then purchased them online at Amazon. This tactic, which Amazon defended in the name of "price transparency," elicited loud protests from retailers as well as Senator Olympia Snowe (R., Maine), who called it "an attack on Main Street businesses."*

Written Statement for the Record

by Nathan Proctor of the U.S. Public Interest Research Group

for a hearing before The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law titled Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship

Rep. David Cicilline, Chair Rep. James Sensenbrenner, Ranking Member
Tuesday, July 16, 2019

Thank you, Chairman Cicline and Ranking Member Sensenbrenner, and full Committee Chair Jerry Nadler and Ranking Member Collins, for your critical leadership in launching this investigation into anti-competitive practices by tech companies. Thank you for the opportunity to provide written testimony for the record.

I direct the Right to Repair Campaign efforts for U.S. PIRG, a non-profit, non-partisan advocate for the public interest.

We have grown concerned with anticompetitive practices around repair. When consumers lack adequate choice around repairs -- when the only way to get a product repaired is to take it back to the original equipment manufacturer or one of their "authorized" affiliates -- the manufacturer can charge whatever they want to repair that product, or refuse to repair the product and push the purchase of a new item instead. We see many instances where the market is being constrained around repair in a way that increases costs, reduces convenience, and shortens product lifespans.

I would like to submit the following report, *Recharge Repair*, for the record. It is an overview of an issue with Apple iPhone batteries in 2017-2018, known as "BatteryGate" or "ThrottleGate."

In December 2017, at the height of the holiday shopping season, Apple users discovered that a software update was throttling phones' processors if the phone detected the battery was worn down. After some public blowback, Apple offered to replace those older batteries at a reduced price at Apple stores. But with such high demand, long waiting lists formed. Some customers faced an additional obstacle: They lived hours away from the nearest Apple store.

Meanwhile, Apple does not make its original replacement batteries available to anyone but their small number of authorized locations. If you didn't want to wait a few months to get a phone that wasn't slow and buggy, you would have to swap the battery out with a replacement part not made by Apple.

Until Apple reversed its policy this spring, replacing the battery with a third-party substitute would result in Apple refusing to service the phone entirely. *Recharge Repair* found that third-party shops still saw a 37 percent increase in battery replacements in the five weeks after the

scandal broke -- despite these barriers. This indicates that people want their phones fixed, and need options outside of Apple authorized locations.

Earlier this year, in a letter to shareholders, Apple CEO Tim Cook announced that iPhone sales were lagging behind projections. Among other reasons, Cook noted a contributing factor was "customers taking advantage of significantly reduced pricing for iPhone battery replacements," the first time Apple has admitted repair hurts its profits.

Repair hurts sales. Apple has an incentive to restrict repair of their devices.

Examples of the repair restrictions include the limited kinds of problems that authorized technicians are permitted to repair (they do not repair water damage, or conduct "board level" repairs); the lack of access to spare parts, repair manuals and diagnostic software; and software locks on the device which require Apple software to finalize repair.



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Testimony from:
Caleb Watney, Technology and Innovation Policy Fellow, R Street Institute

Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship
July 16, 2019

U.S. House Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law

Dear Chairman David Cicilline, Vice-Chair Joe Neguse and members of the Committee:

Thank you for considering my testimony. My name is Caleb Watney and I am a Fellow in Technology and Innovation Policy at the R Street Institute. R Street's mission is to engage in policy research and outreach to offer educational resources to stakeholders on free markets and limited, effective government in many areas, including technology policy.

As the Committee seeks to evaluate the effect of online platform companies' market power on innovation and entrepreneurship, they should keep in mind the wide array of potential policy remedies that exist and apply a risk-management framework to choose between them.

Putting aside the tangible questions of whether the proposed market power exists or whether it is being used irresponsibly, many of the suggested remedies—such as breaking up large technology companies or heavily regulating them—are very high-risk policy levers that could backfire and harm consumers over the long run. As the European experiment with the General Data Protection Regulation shows, regulation that greatly increases compliance costs risks isolating these platform companies from the competitive process that disciplines them and incentivizes innovation. Similarly, breaking up large technology firms risks destroying some of the superstar firms that are producing the lion's share of productivity gains for the American economy.

An alternative approach that requires far less risk is one I detail in a paper for R Street titled, "Reducing entry barriers in the development and application of AI."[1] While the paper focuses on barriers in artificial intelligence—or "AI"—development, the remedies it proposes would

[1] For the full paper and a deeper analysis of all these issues, see the attached policy study. Caleb Watney, "Reducing entry barriers in the development and application of AI," R Street Policy Study No. 153, Oct. 9, 2018. https://www.rstreet.org/2018/10/09/reducing-entry-barriers-in-the-development-and-application-of-ai/.



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lower entry barriers across the technology sector more broadly. Specifically, the paper outlines policies that would make it easier for startups to acquire top-end technical talent, high-quality training data sets, and specialized AI hardware.

To ensure a competitive and innovative ecosystem going forward, as our first line of defense, policymakers should prioritize reducing barriers to entry. As the paper concludes, "There are significant barriers to entry ... that have boosted the market power of incumbent firms. If new startups can successfully compete in the absence of these barriers, it will be a win for innovation, consumers and for the dynamism of the economy as a whole."

I thank the Committee for recognizing the importance of ensuring a competitive ecosystem for artificial intelligence and other emerging technologies. If I can be of assistance to members of the Committee, please feel free to contact me or any of my colleagues at the R Street Institute.

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R STREET POLICY STUDY NO. 153
October 2018

REDUCING ENTRY BARRIERS IN THE DEVELOPMENT AND APPLICATION OF AI

Caleb Watney

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INTRODUCTION

Artificial Intelligence (AI) is developing rapidly and countries from around the globe are beginning to articulate national strategies for handling the political ramifications.[1] Powering innovations like driverless cars, autonomous drones, full-sequence genetic analytics and powerful voice assistant technology, the future certainly looks full of potential.[2] However unsettled questions about who will reap these benefits and when they will be achieved leave storm clouds on the political horizon. Amid questions of industrial concentration and economic inequality on one side,[3] and concerns about lagging U.S. productivity and the slow pace of AI diffusion on the other,[4] this paper attempts to lay out a framework that can begin to address these various issues.

The first of these questions could be simplified to ask: what if only Google, Amazon, Facebook and Apple (GAFA) are able to develop the AI system that powers the economy of the future? The second considers the reasons that AI techniques have diffused through the economy at such a slow rate. However, although these appear to be two distinct questions, there is an under-examined overlap that connects these issues to the same set of policies: namely, high barriers to entry due to supply- side constraints.

There are significant barriers to entry in AI development and application, many of which stem from the direct result of government policies. These barriers have inadvertently boosted the market power of incumbent firms and thus in reducing them, we may enable new firms to better compete, while also removing some of the bottlenecks that slow down research and integration of AI systems across the entire economy.

Accordingly, the present study provides an overview of the various inputs to the production function of AI and analyzes the policies that should be reconsidered or implemented to reduce these barriers. Specifically, it will focus on the inputs of skilled AI analysts, high-quality datasets and specialized AI hardware. It will conclude with a short discussion of the relative attractiveness of focusing on entry barriers when

1. See, e.g., Tim Dutton, "An Overview of National AI Strategies," *Politics + AI*, June 28, 2018. https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd.

2. For the exciting potential of AI in speeding the rate of economic growth and innovation, see, e.g., Iain Cockburn et al., "The Impact of Artificial Intelligence on Innovation," *National Bureau of Economic Research Working Paper* No. 24449, March 2018. http://www.nber.org/papers/w24449.

3. See, e.g., Kai-Fu Lee, "The Real Threat of Artificial Intelligence," *The New York Times*, June 24, 2017. https://www.nytimes.com/2017/06/24/opinion/sunday/artificial-intelligence-economic-inequality.html.

4. Erik Brynjolfsson, "Artificial Intelligence and the Modern Productivity Paradox: A Clash of Expectations and Statistics," *National Bureau of Economic Research Working Paper* No. 24001, November 2017. http://www.nber.org/papers/w24001.

compared to the high-risk options presented by traditional antitrust enforcement. While there are certainly other potential policies or AI inputs that are beyond the scope of this paper, the policy framework presented herein will nevertheless provide a useful primer for future analysis.

A NOTE ON TERMS

At the outset, it is helpful to define a few specific terms that are applied in the following analysis. "AI" is meant to refer broadly to the set of computer algorithms being used to automate or improve aspects of human decision-making.[5] In the most current iteration, this is largely being accomplished via machine learning (ML), whereby an algorithm uses statistical techniques to progressively improve prediction ability for a given task.[6] By this definition, AI exists on a spectrum rather than as a binary, with increasing sophistication in the ability to apply various models to solve the problem at hand indicating higher levels of intelligence.

The term "AI development" refers to the research process of creating more advanced algorithms on the technological frontier. By contrast, "AI application" denotes the implementation of AI systems that have already been developed to new industries and problems. Development is vital for advancement in the field, while application is necessary for those advancements to actually affect the economy.

SUPPLY OF SKILLED AI ANALYSTS

Perhaps the single biggest bottleneck in AI development and application today is the supply of skilled data scientists and machine-learning engineers. Typical AI specialists can expect to earn between $300,000 and $500,000 at top tech firms; numbers that are significantly higher than their peers in other computer-science-related subfields.[7] In addition to these ballooning salaries, industry experts like Hal Varian have pointed to the scarcity of adequate AI talent as the largest factor behind slow application in the economy.[8]

While the number of individuals pursuing careers as skilled AI analysts has certainly been increasing, the length of time it takes to develop necessary technical skills and the surging demand for AI specialists have created an intense labor shortage that benefits large, established firms. When bidding against deep-pocketed incumbents who can afford to pay the high six-figure salaries required to be competitive, it is difficult for startups and smaller businesses to compete for limited talent.[9] Similarly, given the costs of acquiring a skilled team for AI application, even established firms in non-tech sectors that may be able to afford high compensation will face a high bar to experimentation. So long as AI talent is sufficiently limited, it seems likely that the existing supply will be funneled primarily toward development rather than application.

For this reason, if there were appropriate policy levers to increase the supply of skilled technical workers available in the United States, it would disproportionately benefit smaller companies and startups. This would make the overall ecosystem more competitive while simultaneously increasing the rate of AI diffusion in other industries. To accomplish this, the following proposals should be considered.

Reform our immigration system to allow more high-skill AI talent

The policy lever with perhaps the highest degree of leverage to begin immediately alleviating this talent shortage is our immigration system and more specifically, reform around visas for international graduate students.

In 2015, the United States had 58,000 graduate students in computer science fields, the overwhelming majority of which (79%) were international.[10] This represents a significant portion of the overall AI talent supply being cultivated each year, as students from all over the world are attracted to the nation's top education system. In particular, the United States attracts large numbers of students from China and India.[11] However, due to a limited number of visa slots, only a fraction of these students is allowed to work in the country long term.[12]

The primary pathway for these highly skilled immigrants to stay in the country is through the H-1B visa program.[13] However, for the past 16 years, the H-1B limit has been exhausted and, in more recent years, the number of applications filed has consistently been twice as high as the number of avail-

5. While definitions of AI vary, for an overview, see Peter Stone et al., "Artificial Intelligence and Life in 2030: One Hundred Year Study on Artificial Intelligence: Report of the 2015-2016 Study Panel." *Stanford University*, September 2016, p. 12. https://ai100.stanford.edu/2016-report.

6. Ibid, pp 2-4.

7. Cade Metz, "Tech Giants Are Paying Huge Salaries for Scarce A.I. Talent," *The New York Times*, Oct. 22, 2017. https://www.nytimes.com/2017/10/22/technology/artificial-intelligence-experts-salaries.html.

8. Hal Varian, *The Economics of Artificial Intelligence: An Agenda* (University of Chicago Press, Forthcoming), p. 20. http://www.nber.org/chapters/c14017.pdf.

9. See e.g., Michelle Cheng, "How Startups Are Grappling With the Artificial Intelligence Talent Hiring Frenzy," *Inc.*, May 25, 2018. https://www.inc.com/michelle-cheng/how-startups-are-grappling-with-artificial-intelligence-talent-hiring-frenzy.html.

10. "The Importance of International Students to American Science and Engineering," National Foundation for American Policy, October 2017. http://nfap.com/wp-content/uploads/2017/10/The-Importance-of-International-Students.NFAP-Policy-Brief.October-2017.pdf.

11. Ibid, p. 14.

12. "H-1B Visas by the Numbers: 2017-2018," National Foundation for American Policy, April 2018. https://nfap.com/wp-content/uploads/2018/04/H-1B-Visas-By-The-Number-FY-2017.NFAP-Policy-Brief.April-2018.pdf.

13. Ibid.

able spots.[14] And this is almost certainly understating the scope of the problem, as it does not account for the ways in which foreknowledge about the difficulty of acquiring a work visa may deter students from applying in the first place.

Although it also limits the talent pool available to large tech firms, the status quo is especially daunting for startups, as they do not have the specialized Human Resources personnel to handle the bureaucracy of the immigration visa application process. Including application and attorney fees, to sponsor a work visa typically costs around $5,000 per employee[15] and the paperwork burdens appear to be increasing.[16] Both the financial and bureaucratic costs are easier for established firms to bear, given their larger size and increased resources.[17]

In turn, this impacts the types of firms high-skill immigrants will apply to work for in the first place. Even when attracted to work at startups, foreign workers may ultimately privilege their applications to incumbents because they will likely have a better chance of obtaining work visas at established firms. Additionally, since startups face high failure rates, job loss could mean termination of work authorization as well. This would mean that the entire visa application process would have to be approached anew. Indeed, a recent longitudinal survey concluded:

> *Although foreign [STEM PhD students] are 45% more likely to be interested in working in a startup prior to graduation [when compared to US students], after graduation they are 50% less likely to do so. Controlling for ability and other characteristics, ex ante career interests are a strong predictor of startup employment among U.S. workers but not among foreign workers, suggesting that foreign workers may face constraints in choosing their preferred jobs [...] suggesting a potential pool of entrepreneurial labor that might move to startups if provided the opportunity to do so.*[18]

Accordingly, to allow more international students to live and work in the United States upon completion of their degree—either through an expansion and simplification of the H-1B visa program or through the creation of a new technical worker visa program—would be a relatively straightforward and effective method to alleviate the country's talent shortage around AI. In particular, this would benefit smaller firms and startups that are unable to access existing foreign-born talent to the same degree as established firms.

Allow companies to deduct the cost of training AI talent

In addition to reforming our immigration pathways for high-skilled AI talent, it would be wise for the United States to extend more effort toward building up domestic talent. However, given that it can take years to train new AI specialists when compared with the near-instant effect of allowing already-trained, foreign-born experts to stay in the country, this will likely require a longer timeframe for the resources spent on this approach to pay off.

As the number of newly minted machine learning PhD students continues to dwindle, some companies are looking at training employees internally to essentially create new supply.[19] However, it requires significant investment on the company's part, both in time and resources, to train new AI specialists this way, and the gains from this training are mostly captured by the newly trained worker in the form of higher wages. In light of this and since workers can jump ship from the companies that train them at any time for a higher salary at a competitor, employers have few opportunities to recoup the costs of worker training.[20] It thus seems likely that employers are generally underinvesting in worker training when compared to the amount that might otherwise be efficient. We should therefore look more closely at incentivizing this socially desirable behavior through the tax code.

Employers may currently deduct a portion of the costs of worker training as long as it is to improve productivity in a role they already occupy, but this credit is fairly small and employers may not deduct the costs if it would qualify them for a new trade or business.[21] Expanding this deduction—both in size and scope—so that the full cost of worker training for new trades could be deducted, would incentivize more investment in building the AI workforce that is needed

14. Ibid, p. 2.

15. Matt Faustman, "How Much Will Sponsoring an H1-B Visa Cost an Employer?", *Upcounsel Blog*, 2013. https://www.upcounsel.com/blog/what-is-the-costs-for-an-employer-to-sponsor-an-h1b-visa.

16. Ana Campoy, "Trump is quietly swamping visa applicants in extra paperwork," *Quartz*, Jan. 11, 2018. https://qz.com/1176576/h1b-visa-under-trump-is-already-harder-to-get.

17. Jana Kasperkevic, "Getting an H-1B visa is becoming more difficult," *Marketplace*, April 2, 2018. https://www.marketplace.org/2018/03/30/business/immigration-reform-affect-businesses-hiring-visa-workers.

18. Cited with permission from Michael Roach et al., DRAFT: "U.S. Immigration Policies and the STEM Entrepreneurial Workforce," National Bureau of Economic Research, April 2018. http://www.nber.org/chapters/c14101.pdf.

19. "So we invite folks from around Google to come and spend six months embedded with the machine learning team, sitting right next to a mentor, working on machine learning for six months, doing some project, getting it launched and learning a lot." See, Steven Levy, "How Google is Remaking itself as a 'Machine Learning First' Company," *Wired*, June 22, 2016. https://www.wired.com/2016/06/how-google-is-remaking-itself-as-a-machine-learning-first-company.

20. See e.g., Alastair Fitzpayne and Ethan Pollack, "Worker Training Tax Credit: Promoting Employer Investments in the Workforce," The Aspen Institute, May 12, 2017. https://www.aspeninstitute.org/publications/worker-training-tax-credit-promoting-greater-employer-investments-in-the-workforce.

21. Michael Farren, "Bridging the Skills Gap," Congressional Testimony before the House Small Business Committee, Subcommittee on Economic Growth, Tax, and Capital Access, Examining the Small Business Labor Market, Sept. 7, 2017. https://www.mercatus.org/system/files/farren_-_testimony_-_bridging_the_skills_gap_-_v2.pdf.

to fuel our economy.[22] Given the pre-existing level of interest by employers in this strategy, it seems likely this could become a fruitful part of our domestic AI pipeline, if given more support.

Another way to frame this issue is by comparing the incentives for investment in worker training with those in other areas. For example, unlike investments in human capital development, investment expenditures for capital goods—like factories or robots—are currently fully deductible in the tax code.[23] This creates a system that incentivizes employers to invest more in capital productivity gains rather than labor productivity gains, which should be equalized to create a fairer playing field.[24]

As a simple example of a way in which this change could increase the supply of AI talent and speed AI diffusion, consider a hypothetical owner of a manufacturing plant. This owner has information technology (IT) staff who are generally technologically competent, but possess no special training in machine learning. She might be interested in sending this staff to a six-month, ML boot camp where they could learn the basics of applying ML techniques to analyze production processes and find new efficiencies in her manufacturing plant.[25] However, currently, such an expense would not be deductible, potentially discouraging her from making such an investment in the first place.

All else equal, allowing the costs of worker training to be fully deductible will spur more worker training. In the case of companies both developing AI and companies that could benefit from AI application, this means increasing the overall supply of skilled AI analysts in the economy. These workers will likely go on to use their skillsets for future employers, helping spur productivity growth and making the overall ecosystem more competitive.

SUPPLY OF DATA

In many ways, the supply of high-quality machine-readable training data is the key enabler of machine learning. Without access to some underexplored dataset, a team of talented AI specialists can be left twiddling their thumbs. Consumer data in the United States is particularly valuable but large firms like GAFA have underlying digital services that supply them with immense reams of valuable and unique consumer data. Competitors do not easily have the same access.[26]

This is not inherently an issue, as these large technology companies have invested billions of dollars to create services that provide significant value for consumers and in return, consumers have shown a willingness to contribute their data.[27] We should aspire for other companies to create services that prove to create as much value for consumers. However, it is undoubtedly an advantage in particular domains of AI work that startups are currently unable to replicate.[28]

We should be careful to note, however, that beyond a certain threshold, increases in the sheer volume of data possessed generate decreasing returns to scale.[29] This means that while possessing high-quality data is vital for performance, simply having more data than a competitor is no guarantee of victory.[30] In fact, we are seeing that the role of sophisticated algorithmic design and ML feedback loops is only increasing.[31] Sometimes a smaller competitor with an adequate dataset and insightful algorithmic design can outperform an incumbent with a superior dataset but mediocre design.

Given all this, we can potentially create high-leverage opportunities for startups to compete against established firms if we can increase the supply of high-quality datasets available to the public. As with increasing the supply of AI talent, this will help both incumbents and startups but on the margin, it will be the smaller firms with less access to consumer data who benefit most.

22. In economic terms, an externality refers to a side effect or consequence of private sector action for which the effects are not fully reflected in the cost of the good or service. In this case, the positive effects of increased AI-talent supply for the entire economy are not fully internalized by the companies individually training workers. For this reason, many may generally be undersupplied.

23. See e.g., Gabriel Horwitz, "How The Government Perversely Encourages Machine Over Human Capital," *Forbes*, March 28, 2017. https://www.forbes.com/sites/washingtonbytes/2017/03/28/how-the-government-perversely-encourages-physical-over-human-capital/#230166623f9c6.

24. Some commenters have argued that to fully equalize the playing field between capital and labor improvement would require full-fledged, human-capital tax credits, similar to research and development tax credits. See, e.g., Rui Costa et al., "Investing in People: The Case for Human Capital Tax Credits," Centre for Economic Performance, Paper ISO1, February 2018. http://cep.lse.ac.uk/pubs/download/is01.pdf.

25. As an example of the type of programs more employers might take advantage of if the expense was tax deductible, see e.g., Austin Allred, *Twitter*, Sept. 12, 2018. https://twitter.com/AustenAllred/status/1039921578904043520

26. See e.g., Doug Aley, "It's Hard to Compete With Tech Giants Like Google and Amazon—But It Can Be Done," *Entrepreneur*, July 18, 2018. https://www.entrepreneur.com/article/316376.

27. Erik Brynjolfsson et al., "Using Massive Online Choice Experiments to Measure Changes in Well-being," *National Bureau of Economic Research Working Paper* No. 24514, April 2018. http://www.nber.org/papers/w24514.

28. See, e.g., Tom Simonite, "AI and 'Enormous Data' Could Make Tech Giants Harder to Topple," *Wired*, July 13, 2017. https://www.wired.com/story/ai-and-enormous-data-could-make-tech-giants-harder-to-topple.

29. For each piece of data accumulated, the amount of predictive power acquired decreases. See, e.g., "Stanford Dogs Dataset," Stanford University, 2011. http://vision.stanford.edu/aditya86/ImageNetDogs.

30. See, e.g., Joe Kennedy, "The Myth of Data Monopoly: Why Antitrust Concerns About Data Are Overblown," Information Technology and Innovation Foundation, March 2017. http://www2.itif.org/2017-data-competition.pdf.

31. See, e.g., Xavier Amatriain, "In Machine Learning, What is Better: More Data or better Algorithms," *KDnuggets*, June 2015. https://www.kdnuggets.com/2015/06/machine-learning-more-data-better-algorithms.html.

Encourage the creation of open datasets and data sharing

One of the easiest ways to begin this process would be a more thorough examination of existing government datasets that are not public. As an example of previous projects that were broadly successful, consider the U.S. National Oceanic and Atmospheric Administration (NOAA) and Landsat projects, both of which made weather-satellite data available to the public and, in turn, developed into a multi-billion-dollar industry, creating more accurate forecasts of extreme weather and crop patterns.[32]

There appears to be even more potential from datasets the government owns but has not made public. For example, many cities and municipalities have useful data around traffic patterns, electricity usage and business development that, if made accessible, could lead to reduced-cost service provision and better analytics.[33] And there have been a flurry of recent pushes in Congress to standardize the publication of government agency datasets in a machine-readable format.[34]

It is frequently difficult to know beforehand how new data will be leveraged by startups and what new industries might form around it. After all, when the U.S. Government first made GPS-satellite data available to the public, they had no idea it would eventually become the backbone for location-tracking services used in smartphones around the world.[35] This should lead to a general presumption in favor of releasing government data, even if the consumer applications do not appear immediately obvious.

While there has been some concern around the privacy implications of making more government data public, especially data that might become personally identifiable, recent advances in data anonymization techniques like differential privacy should lessen these concerns.[36] While there may still be data that would be inappropriate to release to the public for national security or privacy reasons, it appears there is still significant progress to be made at current margins.[37]

There is also the matter of industries in which open data might become the norm if existing regulations are relaxed or streamlined. The healthcare industry seems a particularly promising target in this respect, as HIPAA has long been considered a barrier to the development of data sharing between medical professionals and companies.[38] Allowing consumer health data to be more easily shared with the proper privacy safeguards could enable a renaissance in drug development and personalized medicine, as recent ML advances have proven quite promising when appropriate data have been available.[39]

Each new dataset that can be easily shared or, when appropriate, made public, increases the odds both that a new startup will be able to leverage it for success, and also that a new industry can thrive around the increased predictive analysis the released data has enabled. For recent advances in AI to diffuse throughout the economy, we must make sure the underlying data is accessible.[40]

Clarify the fair-use exemption for training data

In addition to making more government datasets open source, we should also take a second look at some of the intellectual property laws that intersect and interact with the ML process, specifically copyright law.

Imagine a hypothetical startup focused on the creation of a natural-language-processing application. One readily available source of human dialogue the company might consider learning from would be the last 50 years of Hollywood scripts, many of which are scrapable from various online databases. However, such an endeavor would stand on legally dubious grounds, as these scripts remain copyrighted works and there have not been clear legal guidelines established to delineate what is allowable as fair use in ML training data. Given this, it is more likely that such a startup would avoid

32. See, e.g., Christina Rogawski et al., "NOAA Open Data Portal: Creating a New Industry Through Access to Weather Data," *Open Data's Impact*, January 2016, http://odimpact.org/files/case-studies-noaa.pdf; and Tom Lee, "Closing Landsat data is (still) a bad idea," *Medium*, Aug. 9, 2018, https://medium.com/@thomas.j.lee/closing-landsat-data-is-still-a-bad-idea-8ef0ccfcc7dc.

33. See, e.g., Michael Chui et al., "Innovation in Local Government: Open Data and Information Technology," McKinsey Global Institute, 2014, https://goo.gl/wfSsro.

34. See, e.g., S.2852, "OPEN Government Data Act," 114th Congress, April 26, 2016, https://www.congress.gov/bill/114th-congress/senate-bill/2852.

35. Andrew Young et al., "United States GPS System: Creating a Global Public Utility," *Open Data's Impact*, January 2016, http://odimpact.org/files/case-studies-gps.pdf.

36. See, e.g., Kobbi Nissim et al., "Differential Privacy: A Primer for a Non-technical Audience (Preliminary Version)," *Vanderbilt Journal of Entertainment and Technology Law*, April 13, 2018, https://privacytools.seas.harvard.edu/publications/differential-privacy-primer-non-technical-audience-preliminary-version.

37. For more case studies of successful open-data initiatives and lessons learned, see Stefaan Verhulst and Andrew Young, "When Demand and Supply Meet: Key Findings of the Open Data Impact Case Studies," *Open Data's Impact*, March 2016, http://odimpact.org/files/open-data-impact-key-findings.pdf.

38. Niam Yaraghi, "To Foster Information Exchange, Revise HIPAA and HITECH," *Health Affairs*, Sept. 19, 2017, https://www.healthaffairs.org/do/10.1377/hblog20170919.062032/full.

39. See, e.g., Rob Matheson, "Artificial intelligence model 'learns' from patient data to make cancer treatment less toxic," *MIT News Office*, Aug. 9, 2018, http://news.mit.edu/2018/artificial-intelligence-model-learns-patient-data-cancer-treatment-less-toxic-0810; and Dave Gershgorn, "If AI is going to be the world's doctor, it needs better textbooks," *Quartz*, Sept. 6, 2018, https://qz.com/1367177/if-ai-is-going-to-be-the-worlds-doctor-it-needs-better-textbooks.

40. Note that this would also imply that new overly restrictive privacy laws could have the effect of raising barriers to entry and slowing innovation. Indeed, empirical evidence to date would appear to confirm this. See, e.g., Ajay Agrawal et al., "Economic Policy for Artificial Intelligence," *National Bureau of Economic Research Working Paper* No. 24690, June 2018, pp. 9-10, http://www.nber.org/papers/w24690.

this potential legal minefield and consider what other datasets might be available with less risk.

This is the ambiguous state of copyright enforcement in ML today. Legal scholar Amanda Levendowski has argued that this de facto privileging of frequently low-quality data that exists in the public domain (like the Enron emails) has inadvertently biased the many AI applications that are built upon them.[41]

However, this may also have important and underexplored applications for the state of competition. There are an enormous number of copyrighted works that are scrapable from the Internet, the data of which is currently underexploited in part because of its legally dubious standing if used as training data. This could represent, then, a significant lever to create new arbitrage opportunities for scrappy startups willing to find and leverage interesting datasets. The full scope of what this might entail or lead to is admittedly difficult to fully grasp, considering the massive amount of data that might be included.

Google has already showcased one use case for which this type of data might be leveraged. In 2016, a research division within Google used a collection of 11,000 free e-books to show the potential improvements that could be made to a conversational AI program.[42] This sparked considerable controversy with groups like the Authors Guild who considered it a violation of the author's intended purpose and argued it was a copyright violation.[43] Because this was a research paper and not publicly used for later commercial purposes, no suit was pursued. Notably, however, the original "BookCorpus" dataset is no longer publicly hosted.[44]

Given the existing ambiguity around the issue and the large potential benefits to be reaped, further study and clarification of the legal status of training data in copyright law should be a top priority when considering new ways to boost the prospects of competition and innovation in the AI space.[45]

41. Amanda Levendowski, "How Copyright Law Can Fix Artificial Intelligence's Implicit Bias Problem," *Washington Law Review* 93 (July 19, 2018), pp. 579-631. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3024938.

42. Samuel R. Bowman et al., "Generating Sentences from a Continuous Space," Google Brain, May 12, 2016. https://arxiv.org/pdf/1511.06349v4.pdf.

43. See, e.g., Richard Lea, "Google swallows 11,000 novels to improve AI's conversation," *The Guardian*, Sept. 28, 2016. https://www.theguardian.com/books/2016/sep/28/google-swallows-11000-novels-to-improve-ais-conversation.

44. See, for example, this GitHub forum discussion about the missing 'BookCorpus' dataset and the encouragement to scrape the data again oneself. https://github.com/ryankiros/neural-storyteller/issues/17.

45. For a more critical examination of the potential problems with expanding the scope of fair use in machine-learning training data, see Benjamin Sobel, "Artificial Intelligence's Fair Use Crisis," *Columbia Journal of Law & the Arts*, Forthcoming. https://ssrn.com/abstract=3032076.

ACCESS TO SPECIALIZED HARDWARE

Underlying the data being used to train ML models and the data scientists who are building them is the physical infrastructure of the AI world. This primarily takes the form of the computer servers and chipsets that ML models are trained and operated on. In recent years, this hardware has become increasingly specialized to keep up with the pace of AI development. As the tasks asked of various ML systems continue to diverge, the type of computational power enabled by specific chip architectures has become just as important as the sheer magnitude.

As AI scholar Tim Hwang has noted, there are two dynamics that are shaping the marketplace for ML hardware today.[46] The first is the inverse relationship between performance and flexibility or in other words, that general purpose hardware that tends to be less expensive and is used for a wide variety of computing tasks is being outpaced in performance by chipsets built for a specific task.[47] The second dynamic pertains to the differing types of hardware used for initial training of an ML model and for making inferences with an already-trained model.[48] For example, energy consumption for a computer-vision system may matter a great deal when operating on a mobile phone, but not when the model is originally being trained in a data center. As Hwang concludes: "These considerations influence what kinds of hardware are used at which points in the lifecycle of a machine learning system. They can be viewed as separate though overlapping markets, with hardware platforms being offered either for training or inference, and some offering support for both."[49]

While a natural and necessary part of the AI development process, such a trend toward specialized hardware does increase the fixed costs required to be competitive. This manifests not only in the expense of these systems, but in the elaborate supply chains that have been built up to support them. While the policy recommendations that flow out of this insight are less clear cut than those for the supply of AI analysts or datasets, maintaining access to valuable AI hardware is a key policy consideration.

Avoid causing political instability to international supply chains

As AI hardware becomes more specialized, the supply chains for very specific chips become a critical ingredient for cutting-edge ML research. While the United States maintains advanced manufacturing facilities that are vital to the sup-

46. Tim Hwang, "Computational Power and the Social Impact of Artificial Intelligence," *MIT Media Lab*, March 23, 2018. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3147971.

47. Ibid., p. 8.

48. Ibid., p. 9.

49. Ibid.

ply chain, much of the production for particular parts (like semiconductor fabrication) have been outsourced. Given the importance of chip foundries in Taiwan and China in particular, the perceived stability of trade in the region will alter investment patterns and domestic access to these sophisticated chips.[50]

To ensure access in spite of political tensions, large companies like Apple, Google and Nvidia are beginning re-shore production of especially valuable chips.[51] However, smaller competitors and startups are much more limited in this capacity and thus are more reliant on existing international supply chains.

Insofar as recent U.S. trade tensions with China have increased the perceived instability of regional trade, the disparate impact this will have on smaller firms should be recognized.[52] Ultimately, new foundries and semiconductor manufacturing plants will shift wherever it is most profitable. Accordingly, in the event of a long-term trade war, production could eventually shift elsewhere. However, it will certainly shape short- and medium-term access to specialized hardware.

While this analysis has focused on the effects to domestic competition, the pros and cons of a coordinated national security push to on-shore semiconductor manufacturing are beyond the scope of this paper, but the effects of that decision could impact the degree to which this continues to be a meaningful issue.[53]

Maintain a healthy ecosystem around distributed platforms

The other significant trend in AI hardware utilization is the growth of cloud-computing platforms like Amazon Web Services (AWS) and the Google Cloud platform. Cloud computing has notable pro-competitive effects in that it transforms what is normally a fixed cost in server capacity into a variable one.[54] Allowing a startup to buy only the discrete server space they will need for that month significantly reduces the amount of venture capital needed to get a company off the ground.

This becomes even more important as AI hardware becomes more specialized. Requiring a startup to buy different chips for the various life cycles of training and operating an ML algorithm would be a significant financial outlay and almost certainly hurt the ability of startups to compete. Fortunately, both AWS and Google Cloud have been competing with one another by adding specialized AI hardware as a part of their platform offerings.[55] This essentially allows startups to spread out the increased fixed costs of specialized hardware over a longer time horizon, which makes it more manageable.

In addition to the physical servers themselves, cloud computing companies are increasingly offering ML services like voice recognition, translation and image recognition to save startups the hassle of building their own software tools for each discrete task.[56] Again, it is difficult to understate how much easier this makes the process of launching a startup and it is a very positive development for the overall health of the AI ecosystem.[57]

This is closely related to the trend we have seen in the usage of distributed and open-software platforms like TensorFlow and GitHub, which provide ML platforms for startups to build, train and publish their software. While not hardware in the traditional sense, all of these can be thought of as a type of toolkit that exists around and supports the creation and development of AI. It is also noteworthy that many of these tools and platforms are effectively being developed and maintained for free by current incumbents.[58]

As this portion of the ecosystem largely seems to be developing in a healthy manner, the United States should be careful to avoid data-localization laws, excessive privacy laws, and other legislative efforts that might disrupt the careful balance.[59] On the whole, recommendations for this area should largely follow the Hippocratic Oath and "First, do no harm."

50. Ibid., pp. 18-21.

51. See, e.g., Reinhardt Krause, "In AI Technology Race, U.S. Chips May Be Ace-In-The-Hole Vs. China," *Investor's Business Daily*, Nov. 27, 2017. https://www.investors.com/news/technology/ai-technology-u-s-chip-stocks-vs-china; and Andy Patrizo, "The AI revolution has spawned a new chips arms race," *Ars Technica*, July 9, 2018. https://arstechnica.com/gadgets/2018/07/the-ai-revolution-has-spawned-a-new-chips-arms-race.

52. See, e.g., Ben Blan, "US-China trade war prompts rethink on supply chains," *Financial Times*, Sept. 3, 2018. https://www.ft.com/content/03e4f016-aa9a-11e8-94bd-cba20d67390c.

53. Hwang, pp. 29-32. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3147971.

54. Varian, p. 5. http://www.nber.org/chapters/c14017.pdf.

55. See, e.g., Cade Metz, "Google Makes Its Special A.I. Chips Available to Others," *The New York Times*, Feb. 12, 2018. https://www.nytimes.com/2018/02/12/technology/google-artificial-intelligence-chips.html.

56. Varian, p. 5. http://www.nber.org/chapters/c14017.pdf.

57. See, e.g., Kenji Kushida et al., "Diffusing the Cloud: Cloud Computing and Implications for Public Policy," *Journal of Industry, Competition and Trade* 11:3 (September 2011), pp 209-37. http://brie.berkeley.edu/publications/WP_197%20update%206.13.11.pdf.

58. While Google and Microsoft obviously benefit from the close developer relationships they maintain by offering TensorFlow and GitHub, it would be very difficult to argue the net effect of their existence is not pro-competitive.

59. See, e.g., Nigel Cory, "Cross-Border Data Flows: Where Are the Barriers, and What Do They Cost?", Information Technology and Innovation Foundation, May 1, 2017. https://itif.org/publications/2017/05/01/cross-border-data-flows-where-are-barriers-and-what-do-they-cost.

ANTITRUST CONSIDERATIONS

It is worth contrasting this general approach of reducing barriers to entry with another commonly cited remedy: stronger antitrust enforcement.[60] While concern over the level of domestic competition faced by GAFA is, of course, not unique to AI, it has certainly raised the stakes given how central the technology is to their current and future business models.

However, traditional antitrust measures may prove to be fairly difficult to implement and high risk for dealing with this perceived problem. After all, there are many plausible arguments supporting the current consolidated structure of the AI industry, particularly those that emphasize the importance of cross-cutting technical expertise, and the ability to leverage data and services from one business application to another.[61] While a full analysis of the antitrust implications of the AI industry is outside the scope of this paper, it is helpful to foreground the risks associated with such an approach.

If critics are right, breaking up or actively restricting the merger activities of large tech firms could lead to more innovation in the long run.[62] If these companies are indeed leveraging their significant market power to make it harder for startups to compete with them, breaking them up or constraining them could be a remedy.[63]

However, if critics are wrong about the optimal market structure of AI development and strong antitrust action is pursued, the consequences could be dire.[64] An increasing amount of evidence suggests that a small sliver of firms on the technological frontier have been responsible for the lion's share of productivity gains in the economy.[65] For this reason, breaking them up potentially risks killing the goose that lays the golden egg.[66]

By contrast, focusing on lower barriers to entry is a fairly low-risk strategy for injecting more competition into the AI landscape. If the United States can make it easier for startups to compete against large, established incumbents, it increases the likelihood of achieving the boosts to dynamism and innovation that antitrust advocates champion. Further, it would do so without risking the destruction of the current market equilibrium that is producing significant gains for consumers and for the broader economy. If GAFA can withstand the Schumpeterian winds[67] of increased competition from startups, it is all the better for them.

However, as this paper has documented, there are significant barriers to entry in AI development that have boosted the market power of incumbent firms. If, in the absence of these barriers, new startups can successfully compete, it will be a win for innovation, consumers and for the dynamism of the economy as a whole.

One reason this strategy is lower risk than traditional antitrust remedies is because it does not impose a specific vision of market efficiency from the top down. Rather, it increases the level of competition from the bottom up in the hopes of displacing incumbent firms, if—and only if—the new firms are indeed more productive.

Furthermore, even if the current market structure is the most efficient, reducing the identified barriers to entry will increase the overall rate of innovation in the market by allowing AI to he developed more quickly. This will also aid in the diffusion of AI application across the rest of the economy, spreading the significant productivity gains that can result. Finally, it will make the United States more competitive on the international stage, as we compete with other nations to establish ourselves as the best place to develop and deploy AI systems.[68]

Considering the stakes involved and the relatively low risk associated with reducing barriers to entry, policymakers would be wise to focus on this agenda before moving on to more heavy-handed and higher-risk alternatives. Even in the

60. See, e.g., Robert Wright, "Google Must Be Stopped Before It Becomes An AI Monopoly," *Wired*, Feb. 23, 2018. https://www.wired.com/story/google-artificial-intelligence-monopoly.

61. See, e.g., Will Rinehart, "Breaking Up Tech Companies Means Breaking Up Teams And The Underlying Technology," American Action Forum, July 23, 2018. https://www.americanactionforum.org/insight/breaking-up-tech-means-breaking-up-tech-nology-and-teams.

62. Editorial Board, "Break Up Google," *The Boston Globe*, June 14, 2018. https://apps.bostonglobe.com/opinion/graphics/2018/06/break-google.

63. Lina Khan, "Amazon's Antitrust Paradox," *Yale Law Journal* 26:3 (2016), pp. 710-805. http://digitalcommons.law.yale.edu/yli/vol126/iss3/3.

64. Will Rinehart, "Breaking Up Big Tech Is Hard to Do," *The Wall Street Journal*, July 22, 2018. https://www.wsj.com/articles/breaking-up-big-tech-is-hard-to-do-1532290123.

65. See, e.g., Dan Andrews et al., "Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence From OECD Countries," Organization for Economic Co-operation and Development, 2015. https://www.oecd.org/eco/growth/Frontier-Firms-Technology-Diffusion-and-Public-Policy-Micro-Evidence-from-OECD-Countries.pdf. Also, note that these large tech companies are by far the largest spenders on research and development in the United States. See, e.g., Rani Molla, "Tech companies spend more on R&D than any other companies in the U.S.," *Recode*, Sept. 1, 2017. https://www.recode.net/2017/9/1/16236506/tech-amazon-apple-gdp-spending-productivity.

66. For more on the high-risk nature of traditional antitrust enforcement in this sector, see Geoffrey Manne and Joshua Wright, "Innovation and the Limits of Antitrust," *Journal of Competition Law and Economics* 6:1 (2010), pp. 153-202. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1578762.

67. The economist Joseph Schumpeter popularized the term "creative destruction" and describes the effect of competition as feeling like a "gale" that "incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." Joseph Schumpeter, *Capitalism, Socialism and Democracy* (Routledge, 1942), pp. 82-83.

68. For more on the importance of international competition in AI, see, e.g., Michael Horowitz et al., "Strategic Competition in an Era of Artificial Intelligence," Center for New American Security, July 25, 2018. https://www.cnas.org/publications/reports/strategic-competition-in-an-era-of-artificial-intelligence.

event that strong antitrust enforcement is eventually called upon, enabling a more competitive ecosystem beforehand could help reduce the scope of the problem.

CONCLUSION

Artificial intelligence holds tremendous opportunity for our economy and for consumer benefit. However, the current barriers to entry in acquiring skilled talent and high-quality datasets may be impacting the number of startups that are able to compete successfully. And while the market for AI hardware appears to be developing in a healthy manner so far, policymakers should be careful not to implement policies that could backfire. To ensure a competitive and innovative ecosystem going forward, then, policymakers should prioritize reducing the barriers to entry as our first line of defense.

ABOUT THE AUTHOR

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GENIUS

July 16, 2019

The Honorable David N. Cicilline
Chairman
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

Written Statement for the Record

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

When Google went public in 2004, it included the following quote from its co-founder Larry Page in its public offering filings: "We want you to come to Google and quickly find what you want. Then we're happy to send you to the other sites. . . . We want to get you out of Google and to the right place as fast as possible."

Since 2004, something has changed. In 2019, according to data gathered by SparkToro, Google directs less than half of its search traffic to other sites, keeping the rest within the Google universe. This shift has profound consequences for competition and innovation. Google was built to help users explore a diverse and open internet, and now its behavior poses a unique threat to that ecosystem.

Google swallows so much of its own search traffic in large part due to a feature it calls "information boxes" — panels highlighting Google's own products that the company places in search results above links out to the wider web. The presence of these information boxes on Google's search result pages significantly impacts the traffic to the sites that appear below the boxes.

Genius is a company dedicated to music knowledge, specializing in producing accurate transcriptions of song lyrics. For nearly 10 years, millions of people have come to Genius to find the lyrics to the songs they love.

Music fans are often surprised to learn that there is no canonical database of song lyrics. Instead, the lyrics you find online are almost always the product of individual transcription efforts. Genius gets lyrics in two ways: 1) fans transcribe them by listening to songs and post them to our website, and 2) artists provide them directly to Genius. Our company has invested a decade and millions of dollars developing a platform that allows fans to collaboratively transcribe and annotate lyrics, as well as building relationships with songwriters and artists who send us lyrics directly.

GENIUS

More than two years ago we provided Google with evidence that it was displaying lyrics copied from our website in the information boxes that it places above all other links in its search results.

We showed Google that a number of lyrics in their lyrics information boxes contained a unique pattern of curly and straight apostrophes that we had embedded. When the two types of apostrophes were converted to Morse code dots and dashes, they spelled out the phrase "red handed" (see Attachment A). We embedded this "watermark" in a sample of lyrics on Genius, and we analyzed how frequently our watermark appeared in Google's lyrics information boxes. Our analysis showed that the copying is both widespread and systematic.

We repeatedly presented this evidence to Google executives over the last two years, most recently in a letter dated April 22, 2019, and Google did nothing to address the issue. It was only when the Wall Street Journal published our evidence last month that Google sprung into action.

Almost immediately after Google was contacted by the Wall Street Journal, our watermark disappeared from the lyrics information boxes. However, the lyrics displayed by Google remain exactly the same as those found on Genius — the only change was to remove the evidence that they were copied.

Google said in a statement that they "take data quality and creator rights very seriously" and that they were "investigating this issue with our data partners and if we find that partners are not upholding good practices we will end our agreements."

Shortly thereafter Google announced that lyrics information boxes would now include an attribution to the data partners that provided it with the lyrics. This would be encouraging, except for the fact that all of the lyrics we flagged for Google as featuring our watermark — and thus clearly copied from Genius — are currently attributed to another company.

Google's behavior over the last two years and its recent responses raise a number of questions:

- If Google "takes data quality and creator rights very seriously" and if it was repeatedly notified by Genius about this issue over the last two years, why was it only once the Wall Street Journal published an article in June that Google decided to investigate?

- What has Google's investigation found? Does it believe that its partners are "upholding good practices" in light of the evidence they have seen that they

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are displaying lyrics systematically copied from Genius? If their investigation is still ongoing, when does Google anticipate it will be complete?

- Why did Google remove the Genius watermark from all lyrics information boxes that featured it, but leave the lyrics themselves exactly the same? In other words, why did Google remove the evidence that it was displaying copied content, but leave the copied content itself in place?

- Did Google itself remove the Genius watermark from their lyrics information boxes? If not, did Google direct any of its partners to remove the Genius watermark?

- At Google's request, Genius provided it with 20 examples of lyrics displayed in their information boxes that featured Genius's watermark. Why does Google attribute those lyrics to another company instead of Genius?

- Google publishes a set of guidelines for their Search Quality Raters (see Attachment C). Search Quality Raters are people Google contracts to assess the quality of their search results. Google uses data drawn from the raters to inform adjustments to their search ranking algorithm.

  On page 108 of the most recent set of guidelines (published in May 2019) Google instructs raters to score results from lyrics websites (such as Genius) as "MM" or "Moderately Meeting" a lyrics-searching user's intent, writing that "many pages [on lyrics websites] are not 100% accurate."

  However, on page 93 of the guidelines, Google instructs raters to score the Google's own lyrics information boxes as "FullyM" or "Fully Meet[ing]" a lyrics-searching user's intent — the highest possible score.

  How does Google explain this rating disparity given that it is displaying lyrics copied from Genius in their lyrics information boxes?

- On page 38 of the guidelines document Google writes:

  "Important: The Lowest rating is appropriate if all or almost all of the [content] on the page is copied with little or no time, effort, expertise, manual curation, or added value for users. Such pages should be rated Lowest, even if the page assigns credit for the content to another source."

  How does Google reconcile this stated policy with the fact that it is preferencing content in its lyrics information boxes that it knows was copied from another source?

GENIUS

- Google's lyrics information boxes frequently appear in search results as a part of larger search features that include links to revenue-generating Google products, such as YouTube and Google Play (see Attachment B). How much revenue does Google derive from these links on an annual basis?

Getting answers to these questions would greatly help Genius—as well as the wider ecosystem of small, innovative technology companies—better understand Google's effect on competition and the open internet.

As it stands, we have serious concerns. When Google uses its market power to ensure their own lyrics information boxes always rank first — and populates those boxes with content copied from Genius — it deprives Genius of the traffic and revenue we need to be able to create great products for consumers and to compete with Google.

We thank the Subcommittee for the opportunity to tell our story and for its efforts to address this important issue.



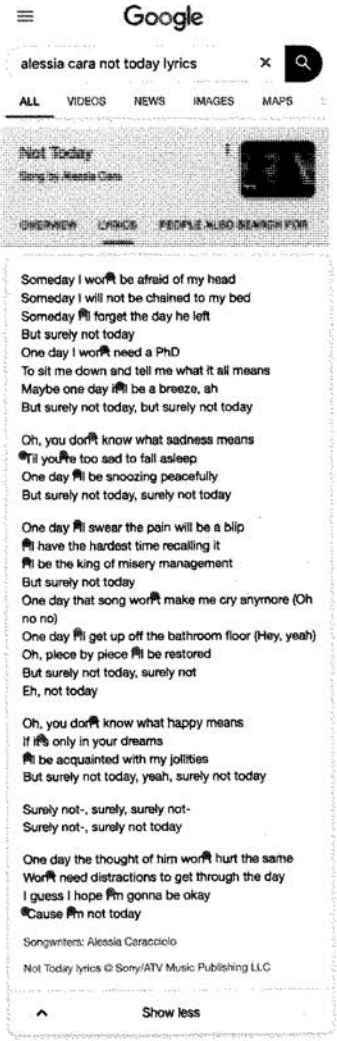
Ben Gross
Chief Strategy Officer
Genius Media Group, Inc.

902

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GENIUS

Attachment A: Genius Watermark example



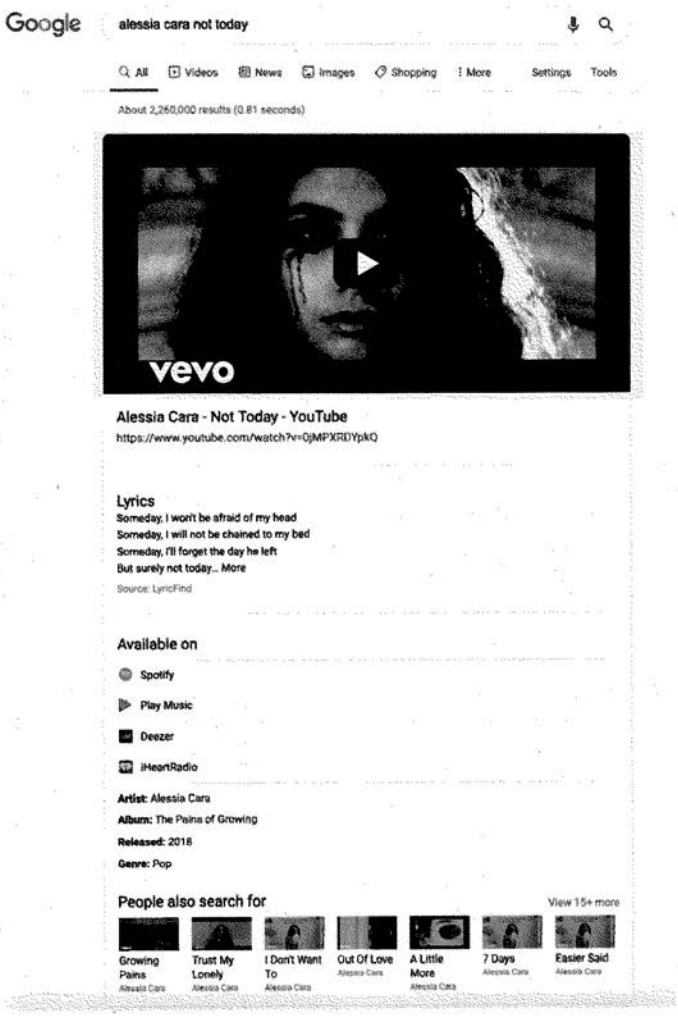
No.	Apostrophe Style	Morse Code	English
1	Straight	Dot	R
2	Curly	Dash	
3	Straight	Dot	
4	Straight	Dot	E
5	Curly	Dash	D
6	Straight	Dot	
7	Straight	Dot	
8	Straight	Dot	H
9	Straight	Dot	
10	Straight	Dot	
11	Straight	Dot	
12	Straight	Dot	A
13	Curly	Dash	
14	Curly	Dash	N
15	Straight	Dot	
16	Curly	Dash	D
17	Straight	Dot	
18	Straight	Dot	
19	Straight	Dot	E
20	Curly	Dash	D
21	Straight	Dot	
22	Straight	Dot	

903

311

GENIUS

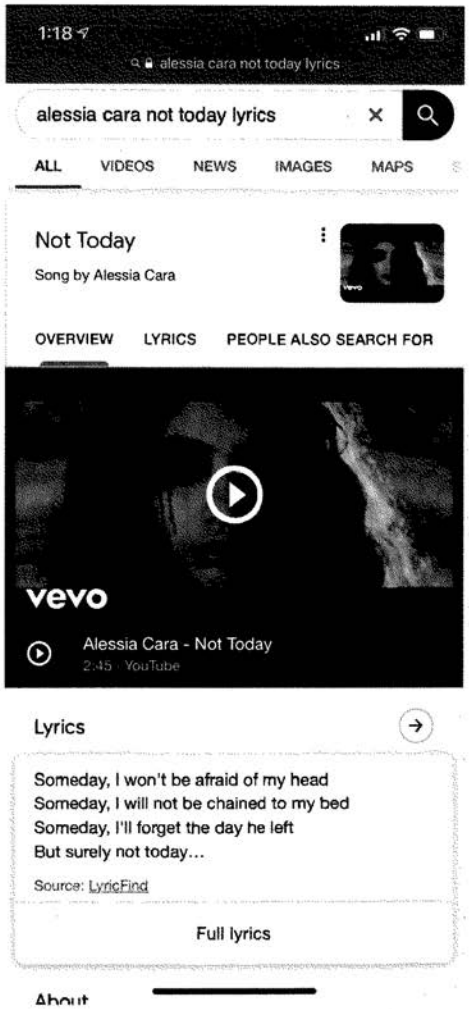
Attachment B: Examples of monetized Google search products featuring lyrics



Google desktop search result page featuring prominent YouTube player and link out to Google Play subscription service

GENIUS

Attachment B: Examples of monetized Google search products featuring lyrics



Google mobile search result page featuring prominent YouTube player



July 16, 2019

The Honorable David N. Cicilline
Chairman
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

The Electronic Frontier Foundation (EFF) is the leading nonprofit organization defending civil liberties in the digital world. Founded in 1990, EFF champions user privacy, free expression, and innovation. With over 30,000 dues-paying members and well over 1 million followers on social networks, we focus on promoting policies that benefit both creators and users of technology. We support the Subcommittee's efforts to analyze the competitive landscape when it comes to the Internet marketplace and wish to submit the following EFF publications to aid those efforts.

Historically, the power of the Internet arose from its edges: innovation, growth, and freedom came from its users and their contributions, rather than from some centrally controlled core of overseers. But today, for an increasing number of users, there is a powerful center to the net—and a potentially uncompetitive and unrepresentative center at that.

As a whole, the Internet is still vast and complex, enabling billions of users to communicate regardless of their physical location. Billions of websites, apps, and nearly costless communications channels remain open to all. Yet too many widely relied-upon functions are now controlled by a few giant companies. Worse, unlike previous technology cycles, the dominance of these companies has proven to be sticky. It's still easy and cheap to put up a website, build an app, start a business, or organize a group of people online—***but a few large corporations dominate key resources needed to do those things.*** That, in turn, gives those companies extraordinary power over speech, privacy, and innovation. Congress's investigation into why this has happened is critical and we support your efforts.

Sincerely,

Electronic Frontier Foundation



Interoperability: Fix the Internet, Not the Tech Companies

By Cory Doctorow

Everyone in the tech world claims to love interoperability—the technical ability to plug one product or service into another product or service—but interoperability covers a lot of territory, and depending on what's meant by interoperability, it can do a lot, a little, or nothing at all to protect users, innovation and fairness.

Let's start with a taxonomy of interoperability:

Indifferent Interoperability

This is the most common form of interoperability. Company A makes a product and Company B makes a thing that works with that product, but doesn't talk to Company A about it. Company A doesn't know or care to know about Company B's add-on.

Think of a car's cigarette lighter: these started in the 1920s as aftermarket accessories that car owners could have installed at a garage; over time they became popular enough that they came standard in every car. Eventually, third-party companies began to manufacture DC power adapters that plugged into the lighter receptacle, drawing power from the car engine's alternator. This became widespread enough that it was eventually standardized as ANSI/SAE J563.

Standardization paved the way for a variety of innovative new products that could be made by third-party manufacturers who did not have to coordinate with (or seek permission from) automotive companies before bringing them to market. These are now ubiquitous, and you can find fishbowls full of USB chargers that fit your car-lighter receptacle at most gas stations for $0.50-$1.00. Some cars now come with standard USB ports (though for complicated reasons, these tend not to be very good chargers), but your auto manufacturer doesn't care if you buy one of those $0.50 chargers and use it with your phone. It's your car, it's your car-lighter, it's your business.

Cooperative Interoperability

Sometimes, companies are eager to have others create add-ons for their products and services. One of the easiest ways to do this is to adopt a standard: a car manufacturer that installs an ANSI/SAE J563-compliant car-lighter receptacle in its cars enables its customers to use any compatible accessory with their cars; any phone manufacturer that installs a 3.5mm headphone jack allows anyone who buys that phone to plug in anything that has a matching plug, even exotic devices like Stripe's card-readers, which convert your credit-card number to a set of tones that are played into a vendor's phone's headphone jack, to be recognized and re-encoded as numbers by Stripe's app.



Digital standards also allow for a high degree of interoperability: a phone vendor or car-maker who installs a Bluetooth chip in your device lets you connect any Bluetooth accessory with it—provided that they support that device, or at least that they make no steps to prevent that device from being connected.

This is where things get tricky: manufacturers and service providers who adopt digital standards can use computer programs to discriminate against accessories, even those that comply with the standard. This can be extremely beneficial to customers: you might get a Bluetooth "firewall" that warns you when you're connecting to a Bluetooth device that's known to have security defects, or that appears on a blacklist of malicious devices that siphon away your data and send it to identity thieves.

But as with all technological questions, the relevant question isn't merely "What does this technology do?" It's "Who does this technology do it *to* and who does it do it *for*?"

Because the same tool that lets a manufacturer help you discriminate against Bluetooth accessories that harm your well-being allows the manufacturer to discriminate against devices that harm *its* well-being (say, a rival's lower-cost headphones or keyboard) even if these accessories enhance *your* well-being.

In the digital era, cooperative interoperability is always subject to corporate boundaries. Even if a manufacturer is bound by law to adhere to a certain standard—say, to provide a certain electronic interface, or to allow access via a software interface like an API—those interfaces are still subject to limits that can be embodied in software.

A digitally enabled car-lighter receptacle could be made to support only a limited range of applications—charging via USB but not USB-C or Lightning, or only charging phones but not tablets—and software could be written to enforce those limits. Even a very permissive "smart lighter-receptacle" that accepted every known device as of today could be designed to reject any devices invented later on, unless the manufacturer chose to permit their use. A manufacturer of such a device could truthfully claim to support "every device you can currently plug into your car lighter," but still maintain a pocket veto over future devices as a hedge against new developments that it decides are bad for the manufacturer and its interests.

What's more, connected devices and services can adjust the degree of interoperability their digital interfaces permit from moment to moment, without notice or appeal, meaning that the browser plugin or social media tool you rely on might just stop working.

Which brings us to...

Adversarial Interoperability

Sometimes an add-on comes along that connects to a product whose manufacturer is outright hostile to it: third-party ink for your inkjet printer, or an unauthorized app for your iPhone, or a



homebrew game for your console, or a DVR that lets you record anything available through your cable package, and that lets you store your recordings indefinitely.

Many products actually have countermeasures to resist this kind of interoperability: checks to ensure that you're not buying car parts from third parties, or fixing your own tractor.

When a manufacturer builds a new product that plugs into an existing one despite the latter's manufacturer's hostility, that's called "adversarial interoperability" and it has been around for about as long as the tech industry itself, from the mainframe days to the PC revolution to the operating system wars to the browser wars.

But as technology markets have grown more concentrated and less competitive, what was once business-as-usual has become almost unthinkable, not to mention legally dangerous, thanks to abuses of cybersecurity law, copyright law, and patent law.

Taking adversarial interoperability off the table breaks the tech cycle in which a new company enters the market, rudely shoulders aside its rivals, grows to dominance, and is dethroned in turn by a new upstart. Instead, today's tech giants show every sign of establishing a permanent, dominant position over the internet.

"Punishing" Big Tech by Granting It Perpetual Dominance

As states grapple with the worst aspects of the Internet—harassment, identity theft, authoritarian and racist organizing, disinformation—there is a real temptation to "solve" these problems by making Big Tech companies legally responsible for their users' conduct. This is a cure that's worse than the disease: the big platforms can't subject every user's every post to human review, so they use filters, with catastrophic results. At the same time, these filters are so expensive to operate that they make it impossible for would-be competitors to enter the market. YouTube has its $100 million Content ID copyright filter now, but if it had been forced to find an extra $100,000,000 to get started in 2005, it would have died a-borning.

But assigning these expensive, state-like duties to tech companies also has the perverse effect of making it much harder to spark competition through careful regulation or break-ups. Once we decide that providing a forum for online activity is something that only giant companies with enough money to pay for filters can do, we also commit to keeping the big companies big enough to perform those duties.

Interoperability to the Rescue?

It's possible to create regulation that enhances competition. For example, we could introduce laws that force companies to follow interoperability standards and oversee the companies to make sure that they're not sneakily limiting their rivals behind the scenes. This is already a feature of good telecommunications laws, and there's lots to like about it.



But a mandate to let users take their data from one company to another—or to send messages from one service to another—should be the opener, not the end-game. Any kind of interoperability mandate has the risk of becoming the ceiling on innovation, not the floor.

For example, as countries around the world broke up their national phone company monopolies, they made rules forcing them to allow new companies to use their lines, connect to their users and share their facilities, and this enabled competition in things like long distance service.

But these interoperability rules were not the last word: the telcos weren't just barred from discriminating against competitors who wanted to use their long-haul lines; thanks to earlier precedent, they were also not able to control who could make devices that plugged into those lines. This allowed companies to make modems that could connect to phone lines. As the Internet crept (and then raced) into Americans' households, the carriers had ample incentive to control how their customers made use of the net, especially as messaging and voice-over-IP eroded the massive profits from long-distance and SMS tariffs. But they couldn't, and that helplessness to steer the market let new companies and their customers create a networked revolution.

The communications revolution owes at least as much to the ability of third parties to do things that the carriers hated—but couldn't prevent—as it does to the rules that forced them to interconnect with their rivals.

Fix the Internet, Not the Tech Companies

The problems of Big Tech are undeniable: using the dominant services can be terrible, and now that they've broken the cycle of dominance and dethroning, the Big Tech companies have fortified their summits such that others dare not besiege them.

Today, much of the emphasis is on making Big Tech better by charging the companies to filter and monitor their users.

The biggest Internet companies need more legal limits on their use and handling of personal data. That's why we support smart, thorough new Internet privacy laws. But laws that require filtering and monitoring user content make the Internet worse: more hostile to new market entrants (who can't afford the costs of compliance) and worse for Internet users' technological self-determination.

If we're worried that shadowy influence brokers are using Facebook to launch sneaky persuasion campaigns, we can either force Facebook to make it harder for *anyone* to access your data without Facebook's explicit approval (this assumes that you trust Facebook to be the guardian of your best interests)—or we can bar Facebook from using technical and legal countermeasures to shut out new companies, co-ops, and projects that offer to let you talk to your Facebook friends without using Facebook's tools, so you can configure your access to minimize Facebook's surveillance and maximize your own freedom.



The second way is the better way. Instead of enshrining Google, Facebook, Amazon, Apple, and Microsoft as the Internet's permanent overlords and then striving to make them as benign as possible, we can fix the Internet by making Big Tech less central to its future.

It's possible that people will connect tools to their Big Tech accounts that do ill-advised things they come to regret. That's kind of the point, really. After all, people can plug weird things into their car's lighter receptacles, but the world is a better place when *you* get to decide how to use that useful, versatile ANSI/SAE J56-compliant plug—not GM or Toyota.



Fines Aren't Enough: Here's How the FTC Can Make Facebook Better
By Bennett Cyphers

The Federal Trade Commission is likely to announce that Facebook's many violations of users' privacy in recent years also violated its consent decree with the commission. In its financial filings, Facebook has indicated that it expects to be fined between $3 and $5 billion by the FTC. But punitive fines alone, no matter the size, are unlikely to change the overlapping privacy and competition harms at the center of Facebook's business model. Whether or not it levies fines, the FTC should use its power to make Facebook better in meaningful ways. A new settlement with the company could compel it to change its behavior. We have some suggestions.

A $3 billion fine would be, by far, the largest privacy-related fine in the FTC's history. The biggest to date was $22.5 million, levied against Google in 2012. But even after setting aside $3 billion to cover a potential fine, Facebook still managed to rake in $3.3 billion in profit during the first quarter of 2019. It's rumored that Facebook will agree to create a "privacy committee" as part of this settlement. But the company needs to change its actions, not just its org chart. That's why the settlement the FTC is negotiating now also needs to include limits on Facebook's behavior.

Stop Third-Party Tracking

Facebook uses "Like" buttons, invisible Pixel conversion trackers, and ad code in mobile apps to track its users nearly any time they use the Internet—even when they're off Facebook products. This program allows Facebook to build nauseatingly detailed profiles of users'—and non-users'—personal activity. Facebook's unique ability to match third-party website activity to real-world identities also gives it a competitive advantage in both the social media and third-party ad markets. The FTC should order Facebook to stop linking data it collects outside of Facebook with user profiles inside the social network.

Don't Merge WhatsApp, Instagram, and Facebook Data

Facebook has announced plans to build a unified chat platform so that users can send messages between WhatsApp, Messenger, and Instagram accounts seamlessly. Letting users of different services talk to each other is reasonable, and Facebook's commitment to end-to-end encryption for the unified service is great (if it's for real). But in order to link the services together, Facebook will likely need to merge account data from its disparate properties. This may help Facebook enrich its user profiles for ad targeting and make it harder for users to fully extricate their data from the Facebook empire should they decide to leave. Furthermore, there's a risk that people with one set of expectations for a service like Instagram, which allows pseudonyms and does not require a phone number, will be blindsided when Facebook links their accounts to real identities. This could expose sensitive information about vulnerable people to friends, family, ex-



partners, or law enforcement. In short, there are dozens of ways the great messenger union could go wrong.

Facebook promises that messaging "interoperability" will be opt-in. But corporations are fickle, and Facebook and other tech giants have repeatedly walked back privacy commitments they've made in the past. The FTC should make sure Facebook stays true to its word by ordering it not to merge user data from its different properties without express opt-in consent. Furthermore, if users do decide to opt-in to merging their Instagram or WhatsApp accounts with Facebook data, the FTC should make sure they reserve the right to opt back out.

Stop Data Broker-Powered Ad Targeting

Last March, Facebook shut down its "Partner Categories" program, in which it purchased data from data brokers like Acxiom and Oracle in order to boost its own ad-targeting system. But over a year later, advertisers are still using data broker-provided information to target users on Facebook, and both Facebook and data brokers are still raking in profit. That's because Facebook allows data brokers to upload "custom audience data files"—lists of contact information, drawn from the brokers' vast tranches of personal data—where they can charge advertisers to access those lists. As a result, though the interface has changed, data broker-powered targeting on Facebook is alive and well.

Data brokers are some of the shadiest actors in the digital marketplace. They make money by buying and selling detailed information about billions of people. And most of the people they profile don't know they exist. The FTC should order Facebook to stop allowing data brokers to upload and share custom audiences with advertisers, and to explicitly disallow advertisers from using data broker-provided information on Facebook. This will make Facebook a safer, less creepy place for users, and it will put a serious dent in the dirty business of buying and selling private information.

A Good Start, But Not the End

We can't fix all of the problems with Facebook in one fell swoop. Facebook's content moderation policies need serious work. The platform should be more interoperable and more open. We need to remove barriers to competition so that more privacy-respecting social networks can emerge. And users around the world deserve to have baseline privacy protections enshrined in law. But the FTC has a rare opportunity to tell one of the most powerful companies in the world how to make its business more privacy-protective and less exploitative for everyone. These changes would be a serious step in the right direction.



Protecting the Life Cycle of Competition

By Ernesto Falcon

The power of the Internet historically arose from its edges: innovation, growth, and freedom came from users and their contributions, rather than from some centrally controlled core of overseers. But today, for an increasing number of users, there is a powerful center to the net. The expected new entrants that will displace the giants only to be displaced by successor entrants may not come. The lack of competition and choice impacts nearly every facet of Internet users' privacy and speech rights as a small handful of giants control our access to the network and run the platforms we use there. It is time to take a hard look at whether our laws can cope with the power of dominant players and protect the ability of new entrants to emerge and displace the giants.

Antitrust

Antitrust enforcement has become strangled in an outmoded economic doctrine that fails to recognize the realities of today's Internet. Increasingly, consumers "pay" for services not in dollars, but with their personal data. In this new reality, it makes no sense to evaluate consumer welfare solely on the basis of price. Federal antitrust regulators should consider the very real costs to consumers, such as privacy practices and corporate platform censorship, and explore other levers within antitrust law such as the essential facilities doctrine. Antitrust enforcers must increase scrutiny of mergers and acquisitions by massive vertically integrated Internet companies to ensure future competition is not being snuffed out.

Competition Policy

Broadband access is quickly devolving into a national monopoly as cable companies deploy gigabit networks without facing competition. The United States lags behind the EU and advanced Asian markets on deployment of fiber to the home infrastructure, with no clear plan to reach universal competitive high-speed access. In the platform and application markets, promotion of data portability and interoperability will allow for "follow-on innovators" that can interact with and analyze existing Internet platforms as well as build on them in ways that benefit users. Decentralized, federated services gave us telephony, email, and the World Wide Web. A focus on interoperability and data portability could bring the same benefits to today's Internet users.

Consumer Privacy

Much of today's consumer frustration stems from a series of data privacy scandals that have involved big Silicon Valley companies and major Internet service providers. However, regulation that treats the giants as the same as startups and smaller companies seeking to displace them will only cement the dominant companies. EFF strongly discourages a one-size-fits-all approach to privacy rules that do not take into account the differences in ability to comply. One way to distinguish between startups and established entities is the creation of an information fiduciary rule that does not apply to new entrants but rather is triggered at a certain size and scale.



Copyright

Innovative startups are dependent on copyright's safe harbors for intermediary liability, and careful stewardship of the fair use doctrine by the judicial branch. Without clarity on liability, it would be impossible to create applications and services and manage the risk of ruinous damages. This issue arises not only for startups seeking to host user-generated content or interact with media, but for any platform that interoperates with existing technologies and formats. Copyright law currently allows copyright holders who sue for infringement to seek "statutory damages" as high as $150,000 per work. Statutory damages drive much of the distortion in copyright liability, and is in desperate need of reform so that the damage claims leveraged by litigious rights holders reflect reality and present manageable risks.

Computer Fraud and Abuse Act (CFAA)

The CFAA is a serious criminal law meant to target malicious computer break-ins. But some corporate litigants have abused the law's notoriously vague language against would-be competitors. Under the threat of civil enforcement and criminal prosecution, cease and desist letters citing the CFAA are a proven tool for scaring new entrants away. For example, industry giants currently relying on the Ninth Circuit's *Facebook v Power Ventures* decision are attempting to use the CFAA to block access to *publicly available* information on the open Internet through cease and desist letters. This fundamentally changes the open access norms that have governed the Internet since its inception and has protected their status as market leaders. They have also relied on the CFAA to block products that would have allowed consumers to manage their social media networks in one place, view information from multiple classified ads websites in one useful interface, and rely on a single messaging app to connect with all of their various messaging tools.

Intermediary Liability

Section 230 of the Communications Decency Act protects Internet platforms of all sizes from liability based on the speech of their users. Major incumbents support eroding this protection by creating new, complex obligations. Doing so would cement their dominance by reducing competition from new entrants. Congress must not further erode the safe harbor that today's platforms relied on to become the current Internet giants. Efforts to place greater liability on Internet intermediaries for the speech of their users, even in the most narrow of instances, drive up the costs of deploying an open platform. Companies must find the technology and the people power to moderate their users and the content they post, a challenge given the rapid pace at which Internet products grow if they are successful. In fact, the most recent erosion of open platform immunity, in an effort to combat sex trafficking (FOSTA/SESTA), has done nothing to alleviate the problem. Sex workers have been forced to return to the streets and into the hands of sex traffickers, while existing platforms have contracted and the cost of market entry has increased for others.



July 15, 2019

Congressman David Cicilline
Chairman
Subcommittee on Antitrust, Commercial,
and Administrative Law
2233 Rayburn House Office Building
Washington, DC 20515

Congressman Jim Sensenbrenner
Ranking Member
Subcommittee on Antitrust, Commercial,
and Administrative Law
2449 Rayburn House Office Building
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Chairman Cicilline and Ranking Member Sensenbrenner,

We commend you on committing to this investigation into Online Platforms and Market Power. Online platforms play an incredibly important role in our economy, our access to information, and economic opportunity. Yet, they have no dedicated regulatory authority as so many other important industries do. We urge you to identify through this investigation what types of antitrust enhancements and regulatory tools are needed to jump-start competition in these important industries.

Incumbent online platforms benefit from natural economic characteristics that protect their market dominance, causing a slew of competition policy concerns. Companies like Amazon and Facebook benefit from "network effects," meaning that as the number of users goes up, so do the benefits to users of being on the platform. In other words, all else equal, you benefit more by joining the social media platform your friends are on than you do by joining a newer or smaller social network without your friends. Many digital platforms benefit from economies of scale because their software has almost no marginal cost for adding users. Many digital platforms also benefit from economies of scope because data is much more valuable when aggregated and analyzed as a group instead of viewed as single pieces of information. If Google provides my email and my maps, including traffic data, then Google can tell me when to leave for my flight so I arrive on time. By contrast, a competitor's maps app that doesn't have access to my email doesn't even know that I have a flight to catch. Incumbent online platforms also benefit from behavioral ticks like "bounded rationality," where consumers use shortcuts rather than carefully choosing the best option each time. Most of us don't check multiple online stores every time we buy oven mitts—we just go to the same store we usually go to. Similarly, we don't use Bing every few months to see if it's finally caught up to Google's search engine—we just assume that it hasn't and keep returning to Google Search.

The combination of these characteristics makes it incredibly difficult for small companies to grow and new companies to compete against incumbent dominant platforms. Without dynamic competition, where new competitors actually pose a threat to the market position of incumbents, economists expect less innovation, higher prices, and lower product quality. Some harms are more obvious: less consumer choice and limited opportunity for entrepreneurship.

To address a problem this large, we believe Congress must evaluate all the tools that could prevent our digital marketplace from tipping toward monopoly. Congress should stay engaged in oversight of the Federal Trade Commission (FTC) and Department of Justice (DOJ) to ensure these agencies are enforcing the law to the best of their ability and that they have the resources they need to take on and win difficult cases. Antitrust law also needs improvement to address the narrowing it has suffered from decades of judicial pushback and inconsistent enforcement. Third and most important, we need a new regulator to address the competition problems that antitrust cannot solve.

The New Digital Authority

A new expert regulator equipped by Congress with the tools to promote entry and expansion in these markets could actually expand competition to benefit consumers, entrepreneurship, and innovation. The regulatory authority could be housed within an existing agency, such as the FTC, or it could be a new expert body, focused on digital markets.

Interoperability: First, the agency should be authorized to require dominant platforms to be interoperable with other services, so competitors can offer their customers access to the dominant network. Allowing interconnection to the dominant network was a crucial component of the breakup of AT&T, and it can create competition against Facebook, with or without a break up. Online platforms that benefit from network effects and control an important market bottleneck[1] may be appropriate targets for an interoperability rule. A regulator is especially useful for a tool like this because it will require technical detail, frequent updates, and complaint resolution to make sure the interoperability requirement is working as intended.

Non-Discrimination & Un-Bundling: Online platforms know that companies that use their platform can "disintermediate" them by connecting directly with the consumer, effectively cutting out the platform middleman. This means their customers, the companies that use the platform, are also potential competitors. In some cases those companies are actual direct

[1] Here we adopt the definition from the Stigler Competition Report on Digital Platforms and Market Power, "'Bottleneck power' describes a situation where consumers primarily single-home and rely upon a single service provider, which makes obtaining access to those consumers for the relevant activity by other service providers prohibitively costly." Stigler Competition Report on Digital Platforms and Market Power, 2019, 9, available at https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure-report.pdf?la=en&hash=E08C7C9AA7367F2D612DE24F814074BA43CAED8C.

competitors, like when the same company owns a platform and one of the competitors on the platform. (This is the example of the Amazon Marketplace where many retailers, including Amazon, compete for customers.) As a result of this competitive dynamic, platforms might discriminate against companies that pose a competitive threat, or use data to disadvantage them. Congress should authorize the new regulator to monitor and ban discrimination by digital platforms with bottleneck power in favor of their own services and against their competitors who rely on their platform to reach customers. Similarly, the agency should be authorized to ban certain "take it or leave it" contract terms that require any company doing business with a dominant digital platform to turn over its customer data for the dominant platform to use however it pleases. This effectively bundles the service the companies need with data sharing they may not want to participate in. By prohibiting these practices, we can give potential competitors a fighting chance.

Mergers: The regulator could also have the power to review and block mergers, concurrently with the existing antitrust agencies. The new regulator would have a different standard that is more appropriate to the economics of online platforms. It should block mergers involving platforms with bottleneck power that do nothing to actually expand competition in markets. It should place a higher burden on dominant platforms than is used for antitrust. This would prevent increased concentration of power when the company being purchased is too small or the competitive consequences are too uncertain.

Effective Enforcement of Current Antitrust Law

Under current law, our antitrust agencies can and must do more. Antitrust enforcement agencies should develop a better understanding of zero-price markets. Many online platforms offer their services to consumers "for free," in other words without a monetary price. But these services are not really free: consumers barter for these services with their attention and their data. The platforms use that attention and data to generate revenue from advertisers. A market with barter transactions is subject to the antitrust laws just like any other market. However, since money prices are more common and easier to quantify, antitrust economists have developed sophisticated tools to analyze money prices. We lack equally sophisticated tools for analyzing changes in barter markets. Enforcers can and should develop and employ better measures of barter transactions such as quality-based pricing for use under current law. They simply need the resources and a leadership interested in doing so.

Antitrust enforcement agencies should prioritize merger enforcement against acquisitions of potential and nascent competitors, as well as vertical mergers and acquisitions. They must think broadly about market trends to identify anticompetitive acquisitions. Online platforms pose unusual challenges for antitrust merger enforcement. To the extent that platforms are in winner-take-all or winner-take-most markets, mergers will take place largely between dominant incumbents and very small, nascent, or potential competitors, and between dominant incumbents

and firms with complementary rather than competing products. It makes sense that the types of mergers easiest to challenge under antitrust law, horizontal mergers among large direct competitors, are rare here.

The agencies should closely scrutinize the conduct of dominant online platforms, and bring Sherman Act Section 2 cases where appropriate. They must recognize the special economics of platforms and the ways that competition happens and does not happen in those types of markets in order to identify the importance of and anticompetitive impact of their conduct. Of course, in order to be successful an online platform needs to create an ecosystem that is valuable by attracting not only individual users but also businesses, for example to buy ads or sell products on the platform. This may apply some pressure to the platform to offer businesses a system that works well for them. Once a platform achieves some dominance though, it may no longer be subject to those same dynamics. The businesses that used to rely on the platform may become competitors to the platform as they seek to disintermediate them with direct connections to customers. Shifts in business practices to limit opportunities for these businesses may harm competitors, and thereby be subject to antitrust law.

Changes to Antitrust Law

Antitrust law must recalibrate the balance it strikes between the risks of overenforcement and underenforcement. Underenforcement has been the far more pernicious failing in recent decades. Certain types of business conduct that were previously thought to be benign are now understood to be anticompetitive.[2] Knowing this, Congress should revise aspects of antitrust doctrine that were adopted explicitly in order to minimize the risk of overenforcement, and change presumptions to offer less demanding proof requirements on antitrust plaintiffs, especially where facts are difficult to observe or prove directly and indirect proof is available.

Current antitrust precedent in a number of areas needs to be updated to reflect market realities of today. These include unilateral refusals to deal, predatory pricing, two-sided markets, and anticompetitive product design.[3] Perhaps most importantly, antitrust law should be revised to relax, in appropriate cases, the proof requirements imposed upon plaintiffs or to reverse burdens of proof. Burdens of proof might be switched by adopting rules that will presume anticompetitive harm when the plaintiff makes a preliminary showing, then shifting the burden to the defendant. The law could also state when plaintiffs should have a lower burden of proof in matters to which the defendants have greater knowledge and better access to relevant information. In particular, mergers between dominant firms and substantial competitors or likely future competitors should be presumed to be unlawful, with an opportunity for rebuttal by defendants. Also, courts should not be permitted to presume efficiencies when a company purchases a business with a vertical, complementary role, but rather require strong supporting

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[2] See Stigler Report for more information on these types of conduct.
[3] *Id.* at 74-78.

evidence showing that the claimed efficiencies are merger-specific and verifiable. These proof requirements are likely to be important in the application of antitrust standards to online platforms.

Even with these changes, online platforms will continue to present some particular challenges for antitrust enforcement. These markets are prone to tipping and the resulting market power is durable, so even effective antitrust enforcement is unlikely to acheive truly competitive markets. These markets move quickly. Antitrust litigation does not. Innovation is particularly important in online platforms, as this industry and its complements were sources of significant disruptive innovation in the past. But innovation effects of anticompetitive conduct or mergers are particularly difficult for economists to model, making it difficult to base a merger challenge or conduct case largely on innovation effects.

This is why Public Knowledge advocates for a new expert regulator with additional regulatory tools beyond antitrust to create real competition on and against online platforms. We urge you to consider these ideas as you proceed with your consideration of policies to address problems in the digital marketplace. Thank you again for your attention to this important issue.

Sincerely,

/s/ Charlotte Slaiman
Charlotte Slaiman
Competition Policy Counsel
Public Knowledge

CC: Chairman Nadler and Ranking Member Collins

RETAIL INDUSTRY LEADERS ASSOCIATION

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Suite 700
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July 16, 2019

The Honorable David N. Cicilline
Chairman
U.S. House Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
2233 Rayburn House Office Bldg
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
U.S. House Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
2449 Rayburn House Office Bldg
Washington, DC 20515

Re: **Hearing on Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship**

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

RILA commends the Subcommittee for its careful review of existing approaches to antitrust law and enforcement. As we explain in the attached comment filed with the Federal Trade Commission, we believe that new approaches are necessary to capture what matters most about competition policy in the modern, data- and technology-driven economy, but that there is much that can be done using existing powers to remedy current conduct that is harmful to competition and consumers.

RILA is the U.S. trade association for leading retailers. We convene decision-makers, advocate for the industry, and promote operational excellence and innovation. Our aim is to elevate a dynamic industry by transforming the environment in which retailers operate. RILA members include more than 200 retailers, product manufacturers, and service suppliers, which together account for more than $1.5 trillion in annual sales, millions of American jobs, and more than 100,000 stores, manufacturing facilities, and distribution centers domestically and abroad.

RILA stands ready to work with the Subcommittee as it completes its investigation into online platforms and market power and to provide any other assistance the Subcommittee may deem appropriate and useful. Please direct questions or requests for further information about this letter and the attached comment to Nicholas Ahrens, vice president, innovation, nicholas.ahrens@rila.org.

Sincerely,

Brian Dodge
Chief Operating Officer

[redacted]



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June 30, 2019

Federal Trade Commission
Office of the Secretary
600 Pennsylvania Avenue, NW
Suite CC-5610 (Annex C)
Washington, DC 20580

Re: **Competition and Consumer Protection in the 21st Century Hearings (Project Number P181201)**

RILA commends the Federal Trade Commission's efforts to create a comprehensive factual record through this series of hearings and its willingness to scrutinize its existing approach to antitrust enforcement and consumer protection in the rapidly transforming, 21st century economy. As we explain below, we believe that new approaches may well be necessary to capture what matters most about competition policy in the modern, data- and technology-driven economy, but that there is also a lot the Commission can do with its existing powers to remedy current conduct that is harmful to competition and consumers.

RILA is the U.S. trade association for leading retailers. We convene decision-makers, advocate for the industry, and promote operational excellence and innovation. Our aim is to elevate a dynamic industry by transforming the environment in which retailers operate. RILA members include more than 200 retailers, product manufacturers, and service suppliers, which together account for more than $1.5 trillion in annual sales, millions of American jobs, and more than 100,000 stores, manufacturing facilities, and distribution centers domestically and abroad.

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Retail Today

U.S. and global consumers are driving change in retail like never before. Ubiquitous internet access, coupled with changing consumer preferences, has led to significant disruption in the industry. This digital revolution continues to transform the way customers interact with retailers and buy products and services. And the pace and depth of these changes are both unprecedented and accelerating. Retailers are adapting to this new consumer landscape through the pursuit of transformative innovation. The convergence of retail and technology means that the retail business model has fundamentally changed, resulting in a business imperative to meet the desires of highly empowered consumers who have many choices for how and where to shop.

Customers can still reach retailers in physical stores and can now connect directly through digital media (like websites and apps) and indirectly (through Internet search and other digital platforms like social media platforms). Competition in retail is now a click or voice command away, which means that retailers operate within the most competitive industry in the world. This competitive environment has empowered

[redacted]

consumers and driven traditional retailers to focus on more than the transaction. They must focus on building and maintaining long-term relationships with customers through positive interactions and experiences, both in store and digitally. Retailers face a daily referendum on the state of their relationships with customers. Unlike some tech or telecom companies whose services or platforms tend to dominate their sectors, if a customer loses trust in one brand, they can easily shop with another.

Retail Leaders Embrace And Thrive In Competitive Markets

Intense competition is the hallmark of America's core retail industry. Competition drives innovation and brings consumers both lower prices and new products and services. However, the absence of competition elsewhere in the retail ecosystem stifles the benefits that have historically resulted from this intense competition. RILA members believe the Commission has a responsibility to protect consumers by ensuring that competition exists throughout the retail ecosystem. That requires pursuing policies and enforcement actions that curtail anticompetitive business practices, remove roadblocks to innovation, and ensure the ability of all retailers to improve the customer experience, unconstrained by the market power of other actors who can shape that experience to their own benefit. We believe the Commission must focus on ensuring that competition among retailers actually benefits consumers, rather than seeing those benefits stifled by dominant players and persistent oligopolies in other parts of the retail ecosystem like digital marketplaces, technology platforms, payment networks, or telecommunications platforms.

RILA does not file this comment to complain about competition from Facebook, Google, Amazon, Visa, or any other technology or payments platform. Indeed, retail leaders comment to ask for *more* competition, not less. But all competition must be on a fair and level playing field. As Commissioner Slaughter noted in hearing remarks, "Technology is no longer simply an industry. It is a part of every industry."[1] RILA members believe FTC actions now and in the future are essential to ensuring that new and legacy anticompetitive business practices driven by technology receive the scrutiny demanded by existing antitrust laws – and swift action where they do not comply.

In RILA's August comment to the Commission at the outset of these hearings, we set out four broad topics along with several questions that we asked the Commission to consider and investigate.[2] RILA believes the robust record developed by the Commission begins to answer these questions and demonstrates a clear need for additional investigation and action by the Commission, the US Department of Justice Antitrust Division, the Federal Communications Commission, and Congress.

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[1] FTC Commissioner Rebecca Slaughter, *FTC Hearing #2: Monopsony and the State of U.S. Antitrust Law*, opening remarks from *Hearings on Competition and Consumer Protection in the 21st Century*, Federal Trade Commission, September 21, 2018. Audio, 5:56, https://www.ftc.gov/news-events/audio-video/video/ftc-hearing-2-welcome-ftc-commissioner-rebecca-kelly-slaughter-opening.

[2] Retail Industry Leaders Association, *Re: Competition and Consumer Protection in the 21st Century Hearings (Project Number P181201)*, (Comment to the Federal Trade Commission, August 20, 2018). (incorporated by reference).



How Should Competition And Consumer Protection Law Respond To Concerns About Market Power In The "Information Infrastructure"?

RILA's initial comment raised several questions about market power in the "information infrastructure." Leading retailers remain concerned about firms with significant market power within these highly concentrated industries. For example, retail leaders are particularly dependent on telecommunications platforms (ISPs) to connect with consumers through explicitly digital means like websites and apps, but also through digital tools in stores such as Internet-enabled technologies to improve backend operations and customer-facing experiences. This deeper reliance creates opportunities for beneficial partnership with ISPs. But, as retailers have experienced with the payments industry and its ever-increasing interchange fees, retailers are also concerned about becoming the target of rent-seeking by ISPs who control the flow of indispensable information to and from consumers. As digital commerce and digital tools become increasingly interwoven within the retail industry fabric, leading retailers encourage federal regulators to remain vigilant in policing the abuse by ISPs of information bottlenecks in ways that either impose excessive fees on users, or seek to skew the flow of information in potentially self-serving ways.

Relatedly, it is important that antitrust enforcement policy recognize how central information flows are to the competitive process—particularly in the digital age. While classical antitrust analysis assumes that consumer behavior is driven by prices, the reality is that consumers can only make price-driven decisions if they have accurate, trustworthy, and timely access to *information about* prices. The same is true for information about product quality, availability, and the like.

It should thus be quite concerning to the Commission that Amazon and Google control the majority of all of Internet product search[3], and can very easily affect whether and how price and product information actually reaches consumers. Moreover, these firms are extraordinarily adept at determining how small changes in the way in which information is conveyed affect consumer behavior—given that nearly everything they do is driven by big-data science and machine learning models. The Commission's approach to retail markets must thus be driven by a recognition that control over an information bottleneck by such a company has the power to skew markets and shape consumer behavior in ways that circumvent the traditional power of price competition. To put the matter as simply as possible, a firm does not need to have the power to control prices if it has the power to control effective access to price information.

To be clear, digital technology platforms and online marketplaces can provide significant benefits to consumers and sellers alike. They offer a wide range of opportunities for fast and efficient access to consumer markets while providing millions of consumers with products and services at a scale that vastly exceeds what is available in a purely physical realm. Concerns arise, however, when these platforms achieve a level of dominance that enables them to disregard those interests. Thankfully, the Commission

[3] Who is winning the shopping search race — Amazon or Google?, Retail Wire (2019), https://www.retailwire.com/discussion/who-is-winning-the-shopping-search-race-amazon-or-google/.



can respond to issues like those above, created by such dominant platforms, by using not only its antitrust powers, but its more flexible powers to control unfair or deceptive practices as well. The Commission should consider rules or enforcement actions requiring such bottleneck technology platforms to convey information to consumers in ways that are transparent and do not mislead consumers about where products come from, whether they are new or used, whether their sale by a given retailer is authorized, and how the total price from one seller compares to the prices charged by others. In this context, the Commission should be particularly focused on the possibility of self-serving behavior when a firm both controls information access on an essential platform (like Amazon's marketplace) and competes on that platform itself. Such rules need to be robust, and must recognize the capacity for very small changes in the display of advertising to have major effects on consumer perception given the feedback immediately available to data-driven companies about how users respond to experimental changes.

More generally, our view is that modern antitrust enforcement needs to be driven by a greater recognition that control over *information* can drive anticompetitive effects just as much as market power and price control. Indeed, scholars have noted that it is the *combination* of information control and market power that should worry antitrust regulators most[4]. That unhealthy combination exists at the level of the Internet's pipelines, at the level of product search, in webhosting, on social media platforms, and elsewhere. It is thus of paramount importance that the Commission focus on addressing abuses in those areas going forward.

What Competitive Concerns Are Raised By "Platform" Businesses? How Do The Antitrust Laws Apply To Data? What Avenues Exist For Detecting And Remedying Anticompetitive Data Utilization?

Platform businesses have revolutionized retail, and that disruption stems in no small part from genuine innovation that should be celebrated and incentivized. But dominant platform businesses also can pose competitive concerns that merit close scrutiny and swift action when they both control access to information and influence price. Leading retailers believe that conduct by platform providers merits not only competitive concern, but investigation and action where warranted. This is true in large part because platform businesses tend to quickly accumulate durable market power, and antitrust enforcement has thus far failed to adequately appreciate the consumer harm that market power is causing.

As RILA previously commented, platform businesses can exhibit strong network effects, and the dominant platform companies themselves appear to understand that their ideal competitive strategy thus involves building out the largest network possible by offering consumers low prices or free services, sometimes cross-subsidizing the platform business with other profit streams. Current antitrust thinking views this as mostly unproblematic—a price-war tactic that tends to benefit consumers through lowered prices and

[4] Khan, Lina and Pozen, David E., A Skeptical View of Information Fiduciaries (May 25, 2019). Harvard Law Review, Vol. 133, 2019, Forthcoming; Columbia Public Law Research Paper No. 14-622. Available at SSRN: https://ssrn.com/abstract=3341661.



because current theory views it as unlikely that these companies will be able to raise their prices later.[5] The companies that engage in these tactics are not foolish, however, and it is therefore likely that traditional antitrust analysis and its focus on consumer prices is missing something important about how users on both sides of these platforms are harmed as these businesses transition from competitive environments to dominant platforms.

Accordingly, retailers believe antitrust regulators' traditional reliance on price is ripe for reevaluation and are encouraged by recent statements by policymakers indicating a renewed commitment to evaluating non-price competition harms. In a recent speech, Assistant Attorney General Makan Delrahim discussed his perspective in the context of several foundational antitrust cases including Standard Oil[6] saying:

> Another important parallel for modern observers is that consumers actually enjoyed lower prices during the height of Standard Oil's dominance. This was likely due to, among other things, a combination of economies of scale, superior bargaining power, and overall declining input prices. It nonetheless demonstrates that price effects are not the sole measure of harm to competition under the U.S. antitrust laws.[7]

Retailers agree with this view and agree with the recommendation of 43 State Attorneys General that consideration of non-price effects should be given greater priority in technology platform market mergers.[8]

Non-price Anticompetitive Effects

Antitrust law is full of examples of innovators subsequently turning into "lazy" monopolists to the detriment of consumers and competition. And in the retail space—when it comes to both merger policy and enforcement against anticompetitive conduct—it is important that the Commission recognize this kind of development as both important proof of market power and evidence of anticompetitive effects. Two versions of this effect with particular salience to retail are the erosion in the quality of a platform's consumer experience after competition has been eliminated, and the surreptitious collection and use of consumer data by firms that do not face competition from rivals.

Start with product quality—a traditional antitrust concern that is frequently overlooked in favor of a focus on price. The pro-consumer story for platforms like Google, Facebook, and Amazon is that, while the

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[5] Retail Industry Leaders Association, *Re: Competition*, 3.
[6] *Standard Oil Co. of N.J. v. United States, 22 U.S. 1 (1911).*
[7] Assistant Attorney General Makan Delrahim, *"...And Justice for All": Antitrust Enforcement and Digital Gatekeepers*, remarks from the *Antitrust New Frontiers Conference*, June 11, 2019. https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-antitrust-new-frontiers?.
[8] National Association of Attorneys General, *Public Comments of 43 State Attorneys General* (Comment to the Federal Trade Commission, June 11, 2019), 19. https://www.regulations.gov/document?D=FTC-2019-0031-0003.



companies wield enormous power on the "seller" or "advertising" side of their platforms, consumers benefit with free or very low-cost products or services on the other. But, it is worth observing how the quality of those products and services have degraded as these companies shifted from fierce competitors to dominant monopolists. Google search used to be elegant and free from advertising; today, any search vaguely related to a product returns a page awash in different advertisements and sponsored posts, which may or may not disclose their sponsored characteristics in understandable ways. Similarly, Facebook co-founder Chris Hughes recently observed that Facebook's initial innovations—including its "simple, beautiful interfaces"—were forged by the pressure of competition.[9] Facebook's eventual dominance, however, has meant that much of that simplicity has given way to advertising and interfaces that make it difficult for users to avoid content they do not wish to see. Also, retailers may be disincentivized to innovate as more and more consumers are funneled through these platforms. The key point is hardly surprising: Even on the supposedly "free" side of these platform businesses, monopoly is making consumers worse off.

The collection of consumer data by dominant platforms holding significant market power—and its use in ways that consumers may not realize or appreciate—represents another consequence of monopoly that is masked by an excessive focus on prices. Some panelists suggested that the anticompetitive effects of technology-platform monopolists might be better seen if we put a price on the consumer data they collected.[10] Nothing so complicated is necessary to appreciate the key point.

The ever-increasing tide of revelations about the ways in which these dominant platform companies fail to protect users' privacy or manipulate their attention in unfriendly ways represents an ever-increasing trade-off for using these services. For example, because nearly two-thirds of consumers search directly on Amazon when looking for a consumer product, it has a massive amount of data on consumer shopping needs and behaviors. According to its Privacy Notice, Amazon can and has shared consumer data with many unaffiliated companies, including the largest wireless carriers. Moreover, Amazon does not offer the consumer a choice to opt-out of this data sharing. As a result, consumers are asked to make tradeoffs that they could not anticipate or understand – provide their personal data to Amazon (and potentially any other company) or not be allowed to shop on the most widely used platform in the world. Though these are non-price harms, they should easily suffice to place further acquisitions, exclusionary conduct, or deceptive interfaces and advertisements created by these dominant companies under the heaviest possible

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[9] Chris Hughes, *It's Time to Break Up Facebook*, New York Times, 2019, https://www.nytimes.com/2019/05/09/opinion/sunday/chris-hughes-facebook-zuckerberg.html.

[10] Roger McNamee *FTC Hearing #3: Multi-Sided Platforms, Labor Markets, and Potential Competition*, panel remarks from *Hearings on Competition and Consumer Protection in the 21st Century*, Federal Trade Commission, (October 15, 2018), 179-180, https://www.ftc.gov/system/files/documents/public_events/1413712/ftc_hearings_session_3_transcript_day_1_10-15-18.pdf.



scrutiny—especially where this conduct tends to increase the amount of potentially sensitive data they control.

Platform Control of Digital Marketplaces Creates Anticompetitive Effects

The ways in which Amazon has begun to degrade the consumer experience on its own platform are particularly relevant for retailers, and they are particularly pernicious, because Amazon's platform frequently masks Amazon's own responsibility for problems with that experience. Dominant digital shopping platforms present a strong information asymmetry related to the sale of goods as between the marketplace on the one hand (which has complete visibility into the transaction and its fulfillment) and consumers, brands, and third-party sellers on the other (who know little about how Amazon fulfills transactions into which they have only limited visibility). The Chicago Booth Sigler Center Report outlines this platform dilemma:

> In and of itself, a platform setting the terms of trade, quality levels, services, and so on may not be problematic if the purpose of the change is to "grow the pie" in a way that complementors view as fair (i.e., not involving expropriation). For example, Amazon, Facebook, or Google know in real time which products are sold to whom, at what price, and which packaging or incentives work, which may drive their rules. However, if these rules become opaque and uncertain or the insights gleaned from an app or vendor are biased or used against it in an asymmetrical manner, then the rule changes may not be about increasing everyone's revenue, but about moving a larger share to the platform.[11]

This asymmetry can cause harm on both sides of the platform. Small sellers who presently feel that they have no choice but to operate on Amazon, because Amazon represents nearly half of the e-commerce market,[12] risk giving Amazon information that allows it to capture their business if the data shows it to be profitable or growing. Meanwhile, if the digital interface masks or obfuscates the true identity of the seller, or leaves the misimpression that an item is new and from the manufacturer, or falsely implies that a knock-off item is just like the option from a well-known brand, consumers (as well as regulators and enforcers) have no ability to uncover the truth until after their purchase. That harms consumers who do not get what

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[11] Fiona Scott Morton et al., *Committee for the Study of Digital Platforms, Market Structure and Antitrust Subcommittee*, report, Stigler Center for the Study of the Economy and the State, The University of Chicago Booth School of Business, July 01, 2019, 53. https://research.chicagobooth.edu/-[illegible]-structure---report-as-of-15-may-2019.pdf?la=en&hash=B2F11FB118904F2AD701B78FA24F08CFF1C0F58F.

[12] Ingrid Lunden, *Amazon's share of the US e-commerce market is now 49%, or 5% of all retail spend*, July 13, 2018, https://techcrunch.com/2018/07/13/amazons-share-of-the-us-e-commerce-market-is-now-49-or-5-of-all-retail-spend/



they were looking for, and may not even realize it because the provenance or nature of their item has been obscured by the very information source through which they sought out the item in the first place.

This information asymmetry is a feature of such dominant digital platforms created by design both to steer consumers to particular products and to create the illusion of having a product even if the desired brand is not sold on the platform. To put the point directly, it is now part of Amazon's business model to create the impression that every brand is sold new and can be found there—even though that is not true and tends to deceive consumers. Doing so serves Amazon's interests in two ways. First, it allows Amazon to immediately capture sales from other branded retailers with pages and product-search results that incorrectly suggest that Amazon is an authorized source of products "by" well-known retailers who prefer to remain off Amazon. And, second, it allows Amazon to erode the brand loyalty through which these retailers compete with Amazon's different business model, because when consumers do not get the quality they wanted, their lack of information causes them to blame the brand they think they have purchased from, rather than Amazon.

Relationships that venerated retailers have with their customers—the "crown jewels" for these retailers—are thus being systematically undermined by dominant digital platforms such as Amazon that blur the lines between the brand and the platform. In the absence of strong antitrust scrutiny and enforcement, market actors must avail themselves of other means to address these non-price harms to their businesses and the quality of their consumers' experiences online. For example, Williams-Sonoma filed a trademark infringement lawsuit against Amazon[13] to stop Amazon from displaying Williams-Sonoma products in ways that lead consumers to believe that the products were new, or authorized, or coming directly from Williams-Sonoma.

Counterfeit goods represent another serious example of this problem. Where a platform both obfuscates origin or source and provides fulfillment services, a seller of counterfeits is harder for consumers to uncover because the item appears to have the backing of the platform in much the same way that a traditional store backs the products that are on its shelves. Moreover, a platform profiting twice from a sale through purchase and fulfillment (and potentially three times through advertising) has little incentive to protect another brand's product. Instead, the platform may try to coerce retailers and brands onto the platform with a promise to protect their valuable brands if the companies agree to sell directly through the platform. The flipside of this agreement is that Amazon will accumulate data about the competitor's business (as the Chicago Report suggests), and will now hold the customer data that is the lifeblood of the brand, eroding the brand's ability to connect with its own, most-valued customers. And that should be particularly disconcerting to antitrust regulators, because maintaining a strong, independent brand that is separate

[13] *Williams-Sonoma Inc. v. Amazon.com Inc., 3:18-cv-07548, U.S. District Court, Northern District of California (San Francisco).*



from Amazon appears to be one of the only ways that retailers can effectively compete with the platform. This perverse outcome underscores the dilemma for retailers interacting with platforms.

Anticompetitive Uses of Data

Information asymmetry and the use of data also contribute to anticompetitive conduct such as the potential misuse by dominant platforms of retailers' data to create, and then favor, their own private label products in terms of pricing and placement in ways that are possible only because of the nature of digital product placement and consumer attention spans. A report from antitrust scholars at the University of Chicago recently outlined the challenge for retailers and brands selling on Amazon:

> Likewise, by selling logistics services to many of its sellers, Amazon gains an advantage when it wishes to launch a store brand. It can analyze the data from its rivals to develop an entry plan against those sellers. It is important to measure whether, and how much, quality increases with these strategies.[14]

The ability for a super-dominant digital platform to operate a marketplace, determine demand, control placement to an extent unparalleled in the physical world, provide fulfillment, and then produce a similar product that it also has the data to target directly to specific consumers raises clear antitrust concerns because of the unique characteristics of such a platform. This has the potential to short cut innovation and the value that brings to consumers. As previously discussed, the challenge associated with digital search and the inability for consumers to differentiate create an anticompetitive outcome that does not exist for [redacted] online retailers, or in physical stores. In addition, the ability for such a platform to hold data not only about its competitors and their customers but also competitors' upstream suppliers through fulfillment data creates even greater anticompetitive risk.

Has Technological Change Obviated The Justification For Competitor Collaboration?

Retailers believe that technological progress has completely eliminated any justification for competitor collaboration in the credit card market. While the technological challenges associated with processing credit transactions may have justified the collaboration among bank competitors that led to the Visa and Mastercard networks a half century ago, those challenges have been drastically reduced, if not eliminated. Today, there is no reason why merchants should be required to accept every credit or debit card issued under a network brand, no matter the price imposed by the network, and no reason why merchants should not be enabled to negotiate pricing as they do with any other service provider. Banks that participate in the Visa and Mastercard networks can and should compete with each other to distinguish their products --

[14] Morton et al., *Committee for the Study*, 52.



such as by negotiating acceptance terms with merchants – and thereby develop their own direct relationships with merchants.

Innovation is held back, however, by the Visa and Mastercard model, which became entrenched during the Mad Men era, and the supracompetitive prices that have been generated for banks via the joint fixing of interchange fees that is achieved through this model. While Visa and Mastercard are no longer owned by their member banks, the fundamental proposition remains the same: banks do not compete for merchant acceptance of their credit cards and banks all agree to accept the same interchange fees as their competitors are receiving. There is no competition among the banks in this market, and there is no regulation of the joint fees that are fixed for all issuing banks by the two dominant credit card companies. Nor is there any constraint on the exercise of market power that Visa and Mastercard wield. Technology has obviated the need there may once have been for this type of competitor collaboration; it should not be allowed to continue in this age of sophisticated technology simply because it was necessary decades ago. Leading retailers call on the Department of Justice to draw on the robust record created by this FTC process and begin a new review of this arrangement and take action to end this antiquated and anticompetitive business model.

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RILA stands ready to work with the Commission as it completes its ambitious review of all comments and testimony and to provide any other assistance the Commission may deem appropriate and useful. Please direct questions or requests for further information about this comment letter to Nicholas Ahrens, vice president, innovation, nicholas.ahrens@rila.org.

Sincerely,

Brian Dodge
Chief Operating Officer



Duck Duck Go, Inc.
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Written Statement for the Record

by Megan Gray, General Counsel and Policy Advocate
for DuckDuckGo

for a hearing entitled "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship"

before The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law
Rep. David Cicilline, Chair
Rep. James Sensenbrenner, Ranking Member

Tuesday, July 16, 2019

DuckDuckGo is a privacy technology company that helps consumers stay more private online. DuckDuckGo has been competing in the U.S. search market for over a decade, and it is currently the 4th largest search engine in this market (see market share section below). From the vantage point of a company vigorously trying to compete, DuckDuckGo can hopefully provide useful background on the U.S. search market.

Features of Competitive General Search Engines

A competitive U.S. general search engine in 2019 must have a set of high-quality search features, and ensure none are substandard or shown at the wrong times. This set of mandatory high-quality search features includes:

- An up-to-date index of most all of the English web pages on the Internet (referred to as "organic links")
- Maps
- Local business answers (e.g., restaurant addresses and phone numbers)
- News
- Images
- Videos
- Products/shopping
- Definitions
- Wikipedia reference
- Quick answers (calculator, conversions, etc.)

Additional niche features may also be necessary to be competitive with particular consumer segments, such as:

- Up-to-date indexes of web pages in other languages
- Sports scores



- Airplane flight information
- Question/Answer reference (e.g., for computer programming)
- Lyrics

When DuckDuckGo launched in 2008, this list was much smaller, and arguably just one item was a required feature: organic links (sometimes referred to as "the ten blue links"). Over time, online search innovated, and consumers came to expect the other features (often referred to collectively as "instant answers," "one boxes," or "info boxes"). The trend toward instant answers is likely to continue because they more quickly get answers to consumers.[1]

Another reason for the increasing use of instant answers is the rise of smartphones, which now generate the majority of online searches.[2] On non-desktop/laptop devices, consumer website navigation is more difficult, making instant answers intrinsically more useful.

Nonetheless, organic links continue to be a required feature. Perhaps counterintuitively, the financial outlay necessary to create and maintain those organic links has increased many-fold since 2008. The additional expense is because the web itself has grown substantially.

One barrier for a start-up search engine trying to generate useful organic links (in addition to cost), is that many sites outright block a fundamental tool used to find organic links: the link "crawler." When search engine Findx shut down its crawler, it explained: "Many large websites like…Facebook and others only allow certain specific crawlers like Google and Bing to include their webpages in a search engine index…That meant that the Findx search index was incomplete and was not able to return results that were likely both relevant and good quality. When you compare any independent search engine's results to Google for example, they have no chance to be as relevant or complete because many large websites refuse to allow any other search engine to include their pages."[3]

Small as well as large websites regularly include this blocking code.[4] Some sites incorporate it because they have legitimate reasons to reduce the bandwidth costs that would result from too many automated bots crawling their websites.

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[1] SparkToro adds perspective on these trends: https://sparktoro.com/blog/how-much-of-googles-search-traffic-is-left-for-anyone-but-themselves/ and https://sparktoro.com/blog/google-ctr-in-2018-paid-organic-no-click-searches/

[2] https://searchengineland.com/its-official-google-says-more-searches-now-on-mobile-than-on-desktop-220369

[3] https://privacore.github.io/

[4] https://facebook.com/robots.txt



Another barrier facing a start-up search engine is that it needs data, such as the most commonly clicked links for a particular query, in order to produce a useful ranking of organic links, i.e., what organic link is first, second, etc. For any given search query (e.g., "how to make cold brew coffee"), data specific to that query helps inform ranking decisions,[5] although once a search engine has enough users consistently searching that specific query, having even more users do so provides little benefit. That is, network effects exist for search result ranking, but that network effect quickly dissipates once a critical mass of searches regularly occurs for that query. However, many of the queries that a search engine receives each day will be ones that the search engine has never previously seen, and those queries by definition will not have reached needed critical mass.[6] As a search engine's market share grows, the percentage of new searches on that search engine will diminish.

Ten years ago, many search engines crawled the web, producing organic links, including many search engine startups[7] and the by-then well-established search engines. Now all of those web-crawling search engine startups are defunct. Today, only Google and Microsoft still produce competitive organic links for the U.S. search market. Outside the U.S., some companies produce regionally competitive organic links (e.g., Baidu in China and Yandex in Russia). As a result, other competitive general search engines including #3 Yahoo and #4 DuckDuckGo must license the Google or Microsoft organic links.

Yahoo and DuckDuckGo (and any other search engines hoping to be competitive in the general U.S. search market) sign search syndication contracts with Google and/or Microsoft to purchase their organic links. In exchange, the purchasing company agrees to show search ads next to the organic links. The parties split the revenue generated by the search ads (according to percentages stated in the contract). In these syndication arrangements, the company providing the organic links/search ads is called the "upstream provider" and the company receiving them is called the "downstream provider."

While only Google and Microsoft produce the organic links, their syndication contracts can authorize sub-syndication, which entails a second revenue-sharing contract. Yahoo (now owned by Verizon) historically had its own organic links. But since 2009, Yahoo has purchased its organic links from Microsoft.[8] Yahoo (Verizon) has thousands of its own search syndication partners, including

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[5] https://searchengineland.com/8-major-google-ranking-signals-2017-278450

[6] Even at Google's scale, approximately 15% of Google searches each day are ones that Google has never before encountered. https://searchengineland.com/google-reaffirms-15-searches-new-never-searched-273786

[7] https://money.cnn.com/2009/07/29/technology/microsoft_yahoo/

[8] https://money.cnn.com/2009/07/29/technology/microsoft_yahoo/

DuckDuckGo.

DuckDuckGo.[9] Excluding Google, Microsoft is currently the primary source of organic links (and search ads) for most search engines trying to compete in the general search engine market in the U.S. (e.g., Bing, Yahoo, DuckDuckGo, AOL, Ecosia, Qwant, etc.).

Although Google, Bing, Yahoo, and DuckDuckGo are currently considered to be the only notable competitors in the U.S. search engine market, many other syndication and sub-syndication "search engines" exist. Most are not generally considered part of the U.S. search market, however, because they lack the required set of features described above. Examples include Internet Service Providers (which display search results on a customer start page and when the customer misspells domain names; see for example search.xfinity.com), arbitrage players (which buy clicks or app installs and then send traffic to search results pages with ads; see for example ask.com), and vertical sites (which only provide niche search responses, e.g., reference.com).

Without a syndication contract with either Google or Microsoft or a sub-syndication contract with Verizon or another sub-syndicator, a company can only obtain organic links suitable for U.S. consumers by purchasing them from Microsoft, which sells them in a self-serve model via its Azure platform.[10] However, without associated access to the search ads, this arrangement is not financially sustainable (see next section). Therefore, to stay in business, a company must have a syndication or sub-syndication contract and abide by the implementation terms and restrictions dictated in those contracts.[11]

Monetization of Competitive Search Engines

To compete in the U.S. search market, a general search engine, when it displays search results, also tries to show ads that are relevant to that search query. (If the ads are not relevant, consumers will not click on them, and those clicks generate the advertising revenue on which the company relies.) Only two companies (again, Google and Microsoft) have an online advertising business that currently provides search ads of any significant scale (over half a million advertisers).[12] Similar to the organic links, operating a search ads service at this scale is extremely costly, requiring massive resources for the sales network, support staff, and technology platform.

Also similar to organic links, search ads benefit from network effects because ad pricing is based on an auction model. That is, search ads sell for a higher price when more advertisers are bidding for a given keyword, e.g., multiple bidders for the keyword "coffee." To maximize bidders and therefore revenue,

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[9] https://www.oath.com/partners/search/. Until recently, Yahoo's corporate name was Oath.

[10] https://azure.microsoft.com/en-us/pricing/details/cognitive-services/search-api/

[11] https://help.yahoo.com/kb/SLN27299.html

[12] https://about.ads.microsoft.com/en-us/blog/post/april-2019/bing-ads-is-now-microsoft-advertising



search ad suppliers are driven to merge, which happened gradually over time with #3 Yahoo/Verizon and #2 Bing/Microsoft, culminating in the 2019 announcement that Bing would thereafter operate all of Yahoo's search ads.[13] Of the two remaining competitive search ad services (Google and Microsoft), Google's has a larger advertiser base, and so is able to generate greater advertising revenue per search.

An aspiring search engine start-up could attempt to earn money without the Google or Microsoft search ads, such as only showing product ads from companies like Amazon, travel ads from companies like Booking.com, etc. However, these alternatives are not sufficiently lucrative to cover the costs of purchasing organic links. In short, an aspiring search engine start-up today (and in the foreseeable future) cannot avoid the need to sign a search syndication contract.

Getting Consumers to Use a Particular Search Engine

To get consumers to use a particular search engine, three options exist.

Option One: The first option is to be the default search engine on web browsers. In this situation, when a consumer starts using a web browser (either when setting up a new device or after installing the browser), that browser is already configured for the particular search engine.

Unfortunately for startup search engines, default search placement is not a practical option because the primary browsers are either already owned by a major search engine parent company (Chrome/Google, Edge/Microsoft, InternetExplorer/Microsoft) or charge hundreds of millions to billions of dollars for such placement (Safari,[14] Firefox,[15] Samsung[16]). Browser market share in the U.S. is 51% Chrome (owned by Google), 31% Safari (owned by Apple), 5% InternetExplorer (owned by Microsoft), 5% Firefox (owned by Mozilla), 4% Edge (owned by Microsoft), 2% Samsung, and approximately 2% by many smaller players.[17]

Option Two: The second option is for the search engine company to develop its own browser and gain market share via that browser's adoption. For example, DuckDuckGo developed its own browser for Android and iOS. However, the same default placement challenges exist in the browser market, just one

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[13] https://about.ads.microsoft.com/en-us/blog/post/january-2019/microsoft-and-verizon-media-strengthen-search-partnership

[14] http://fortune.com/2018/09/29/google-apple-safari-search-engine/

[15] https://www.cnet.com/news/google-firefox-search-deal-gives-mozilla-more-money-to-push-privacy/

[16] http://www.theinvestor.co.kr/view.php?ud=20170816000718

[17] http://gs.statcounter.com/browser-market-share/all/united-states-of-america#monthly-201805-201905



level up – with the device makers requiring millions or billions of dollars to become a default browser on a device.

Related, a device or browser maker could present the user with a choice for selecting a search engine when setting up the device or browser. The Russian government required Android devices to give users this choice 2017.[18] Subsequently, Russian search engine Yandex reported a 10% increase in market share on Android devices.[19] This implementation significantly moved market share because it automatically and easily changed the user's default search setting, as opposed to an implementation in which the user merely downloaded a search engine app that the user would then need to locate on the device and manually configure (assuming the device's default search engine could even be replaced).

Option Three: The third option is to convince consumers to change their default settings, either manually or by downloading software that helps them to do that. Consumers must be highly motivated to take these steps, which vary in complexity from device to device and browser to browser. Even with a competitive differentiator like privacy, consumers are extremely reluctant to take such action because it can be technically challenging and time-consuming. Moreover, even when the consumer is convinced to take that action, it can be only a temporary change – the consumer's device and browser are often configured to roll back the search engine selection (e.g., with software updates).[20]

U.S. Search Market Share

Confusion exists around U.S. search market share because quoted data sources vary significantly in their market share numbers. As explained in detail below, the oft-cited sources of NetMarketShare, comScore, and Jumpshot all have significant methodological deficiencies, as compared to StatCounter, which is a more accurate reference source.

NetMarketShare's data comes from a web analytic platform for publishers with "approximately 100 million valid sessions per month, widely distributed over thousands of websites" globally.[21] That is a tiny sample size relative to the scale of the Internet. By contrast, StatCounter, which uses a similar methodology, has data from a sample over 100 times as large. StatCounter is "installed on more than 2

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[18] https://www.reuters.com/article/us-tmt-conference-yandex/yandex-aims-for-50-percent-mobile-search-share-in-russia-cfo-idUSKBN1DG379 and https://russiansearchmarketing.com/yandex-catches-google-on-android-in-russia

[19] https://russiansearchmarketing.com/yandex-search-market-share-increase-during-q3 and https://www.fool.com/investing/2018/09/07/yandex-overtakes-google-as-russias-top-search-engi.aspx

[20] https://betanews.com/2019/05/04/mozilla-fixes-firefox-add-ons-problem/

[21] https://www.netmarketshare.com/methodology



million sites," collecting data on over "10 billion page views per month."[22] StatCounter's data set includes more than 400 million U.S. search engine referrals.[23]

comScore has even deeper problems. comScore does not include mobile searches, ignoring the largest increase in search traffic since the 2007 introduction of the iPhone.[24] comScore also hasn't added any new search engines to its list in over a decade, failing to capture market entrants like #4 DuckDuckGo.[25] Additionally, the comScore data panel is approximately 2 million devices vs. 100 million devices in the Jumpshot panel, which uses a similar methodology.[26] Indeed, the Jumpshot panel has over 10 million devices in the U.S. and includes mobile devices.[27]

While Jumpshot is more accurate than comScore, both of their data sets suffer from a fundamental methodological issue: selection bias. The people who enroll in the panel are not representative of the whole population. For example, DuckDuckGo users, who almost by definition value their privacy, are not likely to participate in a panel that surveils their online activity.[28] Additionally, the proportion of devices in the panel does not match the proportion used by the general population. comScore's mobile devices' vacuum is an egregious example. Similarly, Jumpshot is oversampled on mobile vs. desktop, and also has a sample skew on mobile because Jumpshot does not include iOS, which is the majority of mobile operating systems in the U.S.[29]

For these reasons, publisher data, like that compiled by StatCounter, produces a far more accurate picture of the U.S. search market. Publisher data measures who visits publisher sites across all devices. No one needs to opt in except for the publisher. With enough publishers, the research will accurately determine search market share.

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[22] http://gs.statcounter.com/faq

[23] http://gs.statcounter.com/faq

[24] https://www.conductor.com/blog/2014/05/shouldnt-trust-comscores-numbers-search-engine-market-share-data/

[25] https://www.comscore.com/Insights/Rankings

[26] https://www.comscore.com/Media/Files/Misc/comScore-Unified-Digital-Measurement-Methodology-PDF?cs_edgescape_cc=US and https://www.jumpshot.com/about/

[27] https://sparktoro.com/blog/as-the-antitrust-case-against-google-kicks-off-heres-where-the-doj-should-start/

[28] The Jumpshot panel is derived largely from users who download AVAST software, https://press.avast.com/avast-software-acquires-jumpshot-to-work-magic-against-slow-pc-performance

[29] http://gs.statcounter.com/os-market-share/mobile-tablet/united-states-of-america/#monthly-201806-201906



DuckDuckGo.

StatCounter reports U.S. June 2019 search market share as follows: 88% Google, 6% Bing, 4% Yahoo, and 1% DuckDuckGo.[30]

The largest sample by far, and therefore likely the most accurate sample, of publisher data flows through Google via its Google Analytics service, which is embedded on approximately 65% of the top million sites.[31] While Google does not provide public reports of the Google Analytics data, its actions are instructive. For example, Google recently updated its list of default search engine options in Chrome in the U.S. based on "on new usage statistics" from "recently collected data," adding DuckDuckGo in the number-four slot.[32]

While not general search engines, consumers do conduct searches on sites like Wikipedia, Amazon, Twitter, and Pinterest. As alternatives to general search engines in certain circumstances, knowledge of their market share can be revealing. Jumpshot has examined this issue, and while Jumpshot's absolute market share numbers may be significantly less accurate than StatCounter's for the reasons stated above, they nevertheless provide helpful big-picture relative insights.[33] Jumpshot data from Jan-Mar 2019 shows searches, including these other listed sites, at 94% Google (adding Google Maps and YouTube to the mix), 2% Yahoo, 1% Bing, 0.85% Amazon, 0.46% DuckDuckGo, 0.23% Pinterest, 0.2% Twitter, 0.09% AOL, 0.03% Ask, and 0.03% Wikipedia. Thus, even when one considers a larger search universe (i.e., beyond general search engines), the dominant market players are largely the same.[34]

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[30] http://gs.statcounter.com/search-engine-market-share/all/united-states-of-america/#monthly-201906-201906-bar

[31] http://randomwalker.info/publications/OpenWPM_1_million_site_tracking_measurement.pdf

[32] https://techcrunch.com/2019/03/13/google-has-quietly-added-duckduckgo-as-a-search-engine-option-for-chrome-users-in-60-markets/

[33] https://sparktoro.com/blog/as-the-antitrust-case-against-google-kicks-off-heres-where-the-doj-should-start/

[34] https://sparktoro.com/blog/new-jumpshot-2018-data-where-searches-happen-on-the-web-google-amazon-facebook-beyond/

Written Statement for the Record

by

Six4Three, LLC

for a hearing before

The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law

titled

Online Platforms and Market Power, Part II: Innovation and Entrepreneurship

Rep. David Cicilline, Chair
Rep. James Sensenbrenner, Ranking Member

Tuesday, July 16, 2019

Thank you, Chairman Cicilline and Ranking Member Sensenbrenner, and full Committee Chair Nadler and Ranking Member Collins, for your leadership in launching this investigation into anticompetitive practices in the technology industry. We appreciate your acceptance of written testimony from Six4Three, LLC, a small software startup that has been engaged in a lawsuit against Facebook since 2015 alleging violations of California's Unfair Competition Law, among other laws.

On May 24th, 2007, Mark Zuckerberg held Facebook's inaugural f8 event in San Francisco to launch Facebook Platform. Zuckerberg crowed to the world, "With this evolution of Facebook Platform, any developer worldwide can build full social applications on top of the social graph, inside of Facebook. This is good for us because if developers build great applications, then they're providing a service to our users and strengthening the social graph. This is a big opportunity. We provide the integration and distribution and developers provide the applications."

To promote Facebook's new application economy, the company represented to the entire software industry that with "this evolution of Facebook Platform, we've made it so that any developer can build the same applications that we can." The next week Facebook released an FAQ promising to respect privacy and to operate its Platform in a reasonable, non-discriminatory and fair manner, noting that "[w]e welcome developers with competing applications, including developers whose applications might compete with Facebook-built applications." Facebook represented that users would decide which products ultimately succeed based on the quality of those products. At the time of this announcement, Facebook had 20 million users.

For more than a decade now, Facebook has re-affirmed these representations regarding its Platform in thousands of public statements, conferences, hackathons, training videos, blog posts and the like. As a result, many tens of thousands of businesses have invested their capital and labor into building more than 10 million applications on top of Facebook Platform, making it one of the biggest economies in the world, larger than the GDP of many nations.

With more than 10 million tentacles reaching out to consumers as a result of the hard work of the entire consumer software industry, including countless startups and small businesses, Facebook's user growth skyrocketed. Before the launch of Platform, Facebook had been growing at a rate of 100,000 users per day. Shortly after the launch, that rate increased to more than 250,000 users per day – and kept climbing astronomically. Facebook was building its entire business on the back of the hard work of the rest of the software industry, all of whom relied on Facebook's explicit, unambiguous representations about its Platform, just like software developers rely on the statements Apple and Google make regarding the App Store and Play Store, respectively.

Little did we all know, Zuckerberg never intended to keep those promises. Worse still, the developer community that was so instrumental to Facebook's success would soon become the patsy for Zuckerberg's own illegal acts as governments and media confronted the fallout from what we believe is the most devastating privacy-violating, anticompetitive scheme in the history of the software industry – a scheme that Zuckerberg and his top lieutenants continue to conceal to this very day.

The truth is Zuckerberg deliberately designed his Platform from the very beginning in a manner that overrode our privacy settings. In other words, Facebook built its entire business by intentionally and illegally violating our trust. Let's restate that to avoid any confusion: Facebook deliberately ignores your privacy settings when it shares your data with many tens of thousands of partners across the software, advertising, small business, and political landscapes. For instance, when you share a photo with Facebook and say you want only you or only your friends to see it, that choice is respected on Facebook.com and in the Facebook mobile app. But when Facebook sends that photo to partners through its public APIs, the company overrides that privacy setting and tells its partners that photo is public and can be shared with anyone so long as certain default settings are in place. (The situation is even worse with Facebook's private APIs.)

We developed custom software in 2013 that demonstrated this fact beyond any shadow of doubt. Our software compared the data we were able to access via the APIs against the data that was uploaded as "public" by the same users. The result shocked us to our core: more than 90% of the data Facebook told partners was public had in fact been uploaded to Facebook with a privacy setting more restrictive than "public". We documented this in a Medium post titled "Deceit by Design: Zuck's Dirty Secret He Doesn't Want You to Know". This flawed design is the root cause behind Facebook's enabling of Cambridge Analytica, as well as many other privacy issues over the years.

Zuckerberg personally and maliciously designed Facebook Platform to work this way. It wasn't a bug or an accident. And because Facebook tells all its partners that it maintains proper privacy controls, Zuckerberg has remarkably made every single company relying on Facebook data unwittingly complicit in his own privacy-violating scheme. Zuckerberg did this to make a range of industries – like the software, advertising, marketing, and election industries – completely dependent upon Facebook.

His deliberately flawed platform design has fostered a dependency on harvesting consumer data at a level of breadth across industries, a level of scale across people, and a level of intimacy into our deepest desires and prejudices that is simply unprecedented in human history. It has given Zuckerberg the leverage to do whatever he pleases – to wipe out competition almost overnight across an entire software category, to curry favor with politicians who then enact favorable laws, to frame our debates in the media and civil society (including those that criticize Facebook!), and even to decide the fate of national elections.

For Facebook, becoming the handmaiden to authoritarianism was a modest price to pay for global domination. Zuckerberg didn't step into those shoes naively or accidentally. He didn't wake up one morning and say: "Aw shucks, look at how my idealistic platform can be abused! Whatever am I going to do?!" He not only designed it to be abused; he was the chief abuser. Thanks to the courageous efforts of journalists like Carole Cadwalladr, the most prominent political casualties of Facebook's path to domination are well-known – the Brexit vote and the 2016 U.S. Presidential election. But there are other casualties, just as insidious and devastating to the stability of our society, that remain hidden from view, like the anticompetitive effects that have reverberated across the entire software industry.

The casualty at the heart of Six4Three's case is the death of over 40,000 companies worldwide and the associated destruction of free and competitive software markets. Put simply, Zuckerberg intentionally and maliciously destroyed more than 40,000 businesses in 2014 and 2015 for reasons that had nothing to do with privacy, even though he has lied to the U.S. government for years, including during testimony to Congress in the spring of 2018, regarding his motivations and justifications for those decisions.

We have recounted in a Medium post titled "U.S. v. Facebook: A Playbook for SEC, DOJ and EDNY" the sequence of events that we allege lies at the crux of Facebook's monopolization of a wide range of software markets. It begins with the collapse of Facebook's desktop advertising business right around its IPO as a result of the ascendance of the smartphone. As of early 2012, Facebook had built its entire business for desktop computers and was generating exactly zero revenues from phones. Zuckerberg's failure to anticipate how rapidly the smartphone would become the dominant computing platform had sent Facebook's advertising business into a fatal tailspin.

Zuckerberg and Sandberg felt they had no choice but to weaponize the trust of 2 billion users and the reliance of tens of thousands of businesses to begin extorting companies in a pay-to-play scheme that forced them to buy mobile ads upon threat of Facebook breaking their products.

This is how Facebook transitioned its advertising business away from desktop computers and into phones, which now makes up well over 90% of the company's revenues.

In 2012, Facebook decided to wipe out roughly 85% of its potential competition and to pick its own winners in virtually every consumer software category. It is in the context of this scheme that Facebook identified Instagram and later WhatsApp as acquisition targets. Facebook needed to own and monetize your experience on your phone without having to actually build its own phone. The data of two billion people and the reliance of 40,000 businesses were the assets it weaponized to achieve that goal.

Zuckerberg began testing a way to force companies to buy mobile ads they otherwise would not have bought by threatening to break their products if they didn't do so. Once these tests began to work, he directed his team to identify more than 40,000 companies that relied on Facebook Platform. He then requested that his team use Facebook's power as judge, jury and executioner of the Platform to make them an offer they literally couldn't refuse: "If you don't purchase mobile ads or funnel all your user data to us, we'll label you a bad actor, shut you down and destroy your business! But, if you do, we'll funnel you highly valuable user data without any user consent or privacy controls, and we'll destroy most of your competition. How much are our mobile ads worth now?".

The businesses who got this message, either implicitly or explicitly, were in fact the lucky ones. Most of the more than 40,000 businesses who relied on Facebook's most popular APIs never even had this chance to be extorted. They were simply excluded from the market and all their hard work went to zero overnight. We outlined for the FTC how it could get to the bottom of this scheme in a Medium post titled "Response to FTC Task Force on Anti-Competition: 3 Investigative Tactics to Ferret Out Facebook's Fraud".

Most of these 40,000 businesses still have no idea their demise was simply collateral damage in Zuckerberg's extortion scheme to grow his mobile ads business faster than any other business in history. Virtually all of those 40,000 businesses were playing by Facebook's rules and abiding by all laws. Those 40,000 businesses had hundreds of thousands, if not millions, of employees, investors, and families who depended on them for their livelihood.

As far as we can tell, no one has stood up for these businesses. Not even the businesses themselves. This is perhaps the most powerful evidence of Facebook's monopoly power. Everyone in the consumer software industry knows they are playing a game only Facebook can win, but they still have no other choice but to play – and to pray that next time things will be different. But as long as Zuckerberg and Sandberg are in charge of Facebook, things will never be different. Zuckerberg and Sandberg have caused an irreversible systemic dwarfing of the entire consumer software industry, and any venture capitalist who says otherwise is delusional, in denial, or lying.

Facebook's decade-long string of apologies, excuses, delays and deflections stem from its deliberately flawed privacy design, and the associated horse-trading and covert selling of user

data, that made virtually every major industry dependent on Facebook. Over this time, Facebook has gone from excuses and apologies to intentional lies and malicious deceits. It evades government reviews. It fosters crimes and frauds by repeatedly violating our rights.

These violations fuel its dominant position over the world's personal information and the many industries and governments that rely on it. Facebook has facilitated and encouraged nefarious actors to masterfully exploit the dependency Zuckerberg fostered in order to destabilize the European Union, the United Kingdom and the United States governments – and thereby the entire global political and economic order.

Meanwhile, Facebook's denials and deflections have tied policymakers into knots, confusing the debate around competition and privacy to the point where governments are demanding entirely contradictory actions in the same breath. Most policymakers don't even realize they are contradicting themselves when they require Facebook to lock down its data, on the one hand, but also to enable users to switch to competitive services, on the other. We have outlined how Facebook has framed the choices of policymakers to its advantage in a Medium post titled "Last Week's Federal Privacy Hearings: A Debate Framed by Facebook's False Choice".

This is why we have risked it all to hold Facebook accountable. Someone *must* get to the bottom of how Zuckerberg set fire to the entire consumer software industry – and how we all let him get away with it. Someone has to do this not just to correct the historical record, but to help ensure our collective future. Only by understanding exactly how Facebook got away with all this for so long can we legislate and enforce policies that appreciate the fundamental interplay between privacy and competition.

Only by getting to the bottom of Zuckerberg and Sandberg's crimes and frauds can we pierce through their obfuscations and deflections. We will never legislate a more equitable, free and competitive future until we do so, because their playbook is always one step ahead. They are smarter than all of us. They are better resourced than all of us. They know how to steer policy outcomes with an invisible hand. They've done it time and time again. The old rules of engagement and investigation have already failed – the question is simply whether investigators adapt too late to a set of rules worthy of the opponent being investigated.

Six4Three is now beginning the fifth year of its litigation against Facebook but, thanks to the obstructionist tactics of Facebook's army of lawyers, we still don't have a trial date, even though California law requires a case to go to trial by its fifth year. Not a single case concerning this sprawling illegal conduct has ever gone to trial. Zuckerberg has never had to face a jury or answer questions under penalty of perjury regarding the conduct at the heart of our case. Neither has a single one of his current executives or board members, most of whom we allege were aware of and complicit in this devastating anticompetitive scheme.

According to Facebook, the 2014 and 2015 changes to its Platform were all about giving users "more control". But the changes actually prevented users from porting their networks to competitive services, thus giving people less control to replace Facebook with a competitive

product or to have a say in how their data is used. Instead, Facebook's 2014/15 changes took that control away from all of us and gave it to Facebook.

The media reports relying on the evidence from our case seized by the government of the United Kingdom make clear that Facebook's narrative around why it made those 2014/15 changes is hogwash. We allege they made these changes in order to cover up their secretive selling and horse-trading of the data of two billion people without privacy controls and to wipe out roughly 85% of their potential competition.

The most remarkable part of this story is not even that Facebook has managed its Platform in a way that deliberately violates privacy for so many years. It's that when the inevitable reports and investigations ensued, Zuckerberg and Sandberg successfully blamed the very people responsible for their success for their own privacy violations in order to wipe out virtually all of Facebook's competition across the entire consumer software industry – all while buying or building their own replacement products in photo, video, messaging, contact management, dating, e-commerce, local news and numerous other software markets. In other words, Zuckerberg and Sandberg brilliantly positioned Facebook to benefit immensely from the fallout of their own illegal scheme, and policymakers applauded them for it!

Until we all get to the bottom of exactly how Facebook's two most senior executives abused our trust, broke our laws, and managed to get away with it for so long, we will never be able to move forward as a society. The United Kingdom engaged in extraordinary measures to obtain just a small portion of the evidence in our case. The United Kingdom Parliament served multiple subpoenas on Six4Three and cited us with contempt and potential imprisonment, invoking authority we were later told has not been used in hundreds of years, in order to hold Facebook accountable for its crimes and frauds. The United Kingdom did this because Zuckerberg has refused to answer its questions or comply with its lawful orders for well over a year.

Now Zuckerberg is unable even to travel to the United Kingdom or Canada as both nations have stated they will hold him in contempt and compel him to answer questions about the very conduct at the heart of Six4Three's case. Can this contempt of legal process by the people entrusted with the entire world's personal information continue? What does it say about our society when those who control humanity's most sensitive information cannot even step foot on the soil of two leading Western democracies? How have we let this become the new normal? What are Zuckerberg and Sandberg hiding?

We pray the Subcommittee has the courage and tenacity to pursue the truth no matter the cost. Uncovering exactly how Zuckerberg and Sandberg defrauded us all is the only way to prevent their ongoing efforts to implement the same illegal playbook across other areas of Facebook's business, like its messaging and cryptocurrency platforms.

Getting to the bottom of all this is the only way we can live in a world where technology can actually coexist with democracy; where billions of people can exercise real control over their data while also feeling confident in its security; where a business can grow on a level playing field

without a large platform interfering the moment that business actually competes successfully; where elections can proceed with integrity, accountability and transparency; and where the stability of the entire global political and economic order doesn't rest on the unethical schemes and malicious profit motives of a handful of the wealthiest people in world history.

That future for our children and grandchildren is certainly worthy of our sacrifice. That is why we wake up every morning continuing this fight, even though Facebook will stop at nothing to silence us and quash our First Amendment rights by threatening us with trumped up criminal contempt charges simply for complying with the lawful orders of the United Kingdom. Will the United States government permit Facebook to retaliate against businesses and employees who come forward or will the government offer them protection against Facebook's intimidation, harassment and threats? We urge the Subcommittee to take all steps necessary to foster an environment where individuals are required to speak freely and truthfully, and further to follow the lead of Canada and the United Kingdom so as to make abundantly clear that no half-trillion-dollar public company and no billionaire CEO or COO is above the law and beyond the reach of the United States of America.

Written Statement for the Record

by

Brian Warner

for a hearing before

The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law

titled

Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship

Rep. David Cicilline, Chair

Rep. James Sensenbrenner, Ranking Member

Tuesday, July 16, 2019

Thank you, Chairman Cicilline, Ranking Member Sensenbrenner, Committee Chair Nadler and Ranking Member Collins, for your critical leadership in launching this investigation into the monopolistic power of the tech giants and for convening this hearing on the crucial subject of the impact the tech giants have had on Innovation and Entrepreneurship. And thank you for accepting my written testimony on the devastating effects Google in particular has had on web-based businesses, consumers and the internet at large through its monopoly on online search.

There is no question that Google has a monopoly on online search. Any reasonable person knows this is a fact. The three vital questions I hope to help you answer today are: 1) whether Google has used its overwhelming market power as a monopoly to benefit itself while crushing competition, 2) whether these actions have had negative impacts on the open internet as a public good and 3) whether these actions have created harm for everyday internet consumers. The answer to all three questions is an emphatic YES.

My name is Brian Warner and I'm writing this testimony today to share my experiences as the founder of a website called CelebrityNetWorth.com. CelebrityNetWorth (CNW) aims to provide accurate and informative content about the finances of notable people to an audience of dedicated users and curious individuals.

I had the idea for CNW in 2008. I was curious about the net worth of Larry David, so I decided to type it into Google. In response to my query, there wasn't any helpful information. Upon doing some research, I realized this was a common thing people searched for, so I decided to build a company that attempted to make educated guesses based on the sourcing of a full-time research team. My hunch was correct: celebrity net worth queries are among the most popular searches performed on Google. As our site grew, and because we had worked to satisfy the high level of user demand in the marketplace, the practice of searching for this type information only became more frequent

From the standpoint of innovation of entrepreneurship, the internet was an open and inviting landscape when I initially founded CNW as a side project. While working a full-time day job, I would come home at night and write articles for CNW. Slowly, I built a small but growing business. We generated content that could not be found anywhere else on the web and that had never existed previously in response to demand in the marketplace. The information we produce to this day is unique. It is not commodity information like the height of a famous building or the time of day.

In those early days Google was my most-crucial business partner. CNW was built to specifications that Google promised would allow anyone with a high quality site and unique content to rank well on its results pages. Google benefited not only by having a way to satisfy the curiosities of people looking to find the information we assembled through its search portal, but it also earned a cut of ad revenue generated off its Google Adsense ad units which were displayed to our users.

In a transcribed interview Google included in its S-1 documents it filed with the SEC when going public in 2004, Google co-founder Larry Page was asked if his company would ever consider becoming a portal or walled garden like AOL or MSN that created its own content to keep users as long as possible. Here is how he responded:

"*We want you to come to Google and quickly find what you want. Then we're happy to send you to the other sites. In fact, that's the point. The portal strategy tries to own all of the information… Most portals show their own content above content elsewhere on the web. We feel that's a conflict of interest, analogous to taking money for search results…* ***We want to get you out of Google and to the right place as fast as possible.*** *It's a very different model."* [Emphasis added.]

For many years, the public representations Google made to the marketplace about how its business would operate were followed by a wave innovators and entrepreneurs creating unique non-commodity content businesses because Google was promising to provide an open and free platform off which anyone could launch a new idea and reach consumers. Thousands of unique and innovative web businesses that we love today were born in

these fertile conditions. It was a symbiotic relationship that helped cement Google's search dominance. People came to Google because they knew it was not a walled garden, but a turnstile utility akin to what Page described for finding the content they were looking for on the world wide web. To this day, a good portion of our organic search traffic comes from "navigational queries" -- people typing our domain name into google as opposed to simply visiting the site directly.

CNW experienced incredible growth in its first three years of operation. We had created an untapped content niche for which there was high demand in the marketplace. By May 2012 the site was large enough to allow me to quit my day job. Entrepreneurial innovation, plus hard work and a little luck, enabled me to build a prosperous independent business. I was living the American dream.

Unfortunately, within a few months of me quitting my day job, some cracks started to show in Google's benevolent model. In July 2012, when users performed "net worth" searches for a handful of our most famous entries, Google began displaying the numeric answer from our site directly at the top of the search result page. Imagine a large bold number taking up one-third of the result page. No attribution was given to any source, even though the numbers were clearly unique and original to CNW. Our information had simply been scraped and presented as if it was Google's own intellectual property.

The good news was that Google seemed to only be interested in presenting non-attributed scraped information for a tiny handful of celebrities from our database. We moved on with our lives, hoping this would be the worst of their encroachments. We were wrong. This optimism was short-lived.

By 2014 we had a staff of 12 writers, developers and designers. We were thriving and even entertaining acquisition offers. At the time, I thought of our site as one of Google's best partners and that we had limitless potential. I could never have imagined that within three very painful years CelebrityNetWorth would be brought to the brink of insolvency. And the culprit wouldn't be shifting user tastes or a technological change. The culprit was Google.

On April 23, 2014, I received an email from a Data Researcher at Google. In subsequent calls and emails the Data Researcher explained that net worth queries were one of Google's most consistently popular categories of search. As such, she was tasked with finding an API or dataset from our site that would help "enhance user experience at Google Search". If we granted Google access to an API, any user who searched for a celebrity's net worth would be shown a large box with our answer at the top of the search result page.

I asked the Data Researcher why we would ever allow this. What benefit could giving away our most valuable asset possibly create for CNW? Clearly this would cause a catastrophic drop in traffic since users would no longer need to visit our site and therefore would no longer generate ad revenue. When pressed, the Google team said it would be good exposure for our brand. What they left unsaid was that the implementation of such a scheme would have accelerated our demise. Google's diminutive (and sometimes non-existent) attribution to original content creators means fewer clicks and eyeballs to the web. The nebulous suggestion that "exposure" would make up for this somehow demonstrates how starkly different Google's motives are today.

On this same call I asked if we could be paid a flat fee or a royalty for providing an API. I was told they would not pay a fee and if we did not agree to give them an API they would either make one on their own or **scrape one together from other sources**.

I declined Google's request to provide an API to our data.

The Google Data Researcher's line about scraping together their own API left a bad taste in my mouth. So, soon after the call, as a precaution, I added five completely conjured celebrities to the site. I used stock photos with entirely made up names, biographies and net worth numbers. I published the pages backdated several years so they were nearly invisible to the world. The purpose of creating these pages was to enable CNW to detect illegal scraping by Google.

By mid-2015, Google began displaying "Featured Snippet" net worth answer boxes for roughly 1,000 of the most popular celebrities in the world. The Snippets often did not provide attribution, or were attributed to aggregator sites like Wikipedia or Google's own YouTube where someone happened to have included "celebrity's name + "net worth" in their video's title or description.

CNW's traffic dropped 20% from this release. But the worst was yet to come.

February 19, 2016 was one of the worst days of my life and absolutely the worst day in the history of my business. February 19, 2016 is the day Google began displaying net worth results – copied whole cloth - *for every single celebrity in our database*.

From this day forward, any internet user who searched google for one of the 25,000+ celebrities listed in our database was shown a large Featured Snippet answer at the top of

the page. The Featured Snippet also incorporated images of the celebrity scraped from the web to create a widget that took up 40% of a desktop result page and 80% of a mobile result page. This is still how Google displays most net worth results today.

Google's net worth widgets make it nearly impossible for a user to click through to a website. Not only does the user already have the content, but the Featured Snippet combined with various other Google widgets have buried the ten blue organic links so far down the page that users couldn't click to a site even if they tried.

But it got worse. On this same day in February 2016, our pages were no longer the top organic result in Google for these same searches. Beyond scraping our content to populate its competing boxes and creating user interfaces which pushed the ten blue links to less relevant sections of the page, Google made changes to its organic algorithm such that our appearance in the "below-the-fold" organic ten blue links went from the top of page one to the middle of page two.

As a general rule of search engine user behavior (which these days just means Google), fewer than 5% of users click beyond page 1 of results.

Our traffic plummeted by 50% overnight.

And what about those conjured celebrities I added as a precaution? All five were all scraped right into Google's search result pages. It provided undeniable proof that after being turned down, Google simply went ahead and stole the entire database of content CNW took eight years and over a million dollars to build.

At this point Google had clearly crossed the line from benevolent pass-through platform to competition-killing monopolistic leech. With the flip of a switch, Google turned our original content into its own content. And with that move, Google would keep the searcher within its walled garden indefinitely. That is far more valuable to Google than taking a small cut of our Adsense ad revenue.

Today our traffic is 80% lower than it was in 2014. Our revenue and profits have dropped accordingly, which has forced me to cut our staff down to a bare bones team that operates at minimum hours to keep the site moving on life support. Perhaps not surprisingly, the quality of our content and product have dropped. We simply do not have the money to employ full-time researchers and build new products that might enable us to grow again. It feels like we are treading water with cement blocks around our feet.

Why Does This Matter Beyond CelebrityNetWorth?

Perhaps the loss of one website that estimates the net worths of celebrities isn't the most obvious harbinger of a dying web. However, I implore you to see the larger picture for both the internet at large and consumers. Thousands of websites that the American people love and rely on every day require the oxygen that Google formerly provided to stay alive.

Think of your favorite website. That site will either not exist or will be significantly worse in the near future. And think about the websites that will never exist because they are never created. The open internet is what allowed sites like Wikipedia, WebMD, TheOnion, and yes, CelebrityNetWorth to exist.

It is my view that Google has removed essentially all of the oxygen from the open internet ecosystem. There is no longer any incentive or even basic opportunity to innovate as I did back in 2008. If someone came to me with an idea for a website or a web service today, I would tell them to run. Run as far away from the web as possible. Launch a lawn care business or a dog grooming business - something Google can't take away as soon as he or she is thriving.

In June 2019, search engine analyst Rand Fishkin put together a report about Google using data from web analytics firm Jumpshot. The data show that today an estimated 48.96% of all Google searches end with the searcher NOT clicking through to a website. The same report estimates that 7% of all search clicks go to a paid ad result and 12% go to properties owned by Google's parent company Alphabet. Moreover, those stats do not even show the full extent of the problem because the data largely relied upon desktop devices and could not track searches that took users to a Google-owned app like the YouTube or Google Maps.

Google's dominance today is vast, extending beyond online search into mobile operating systems, advertising, browsers, mapping, email and video. These business lines work in tandem to establish unchecked power in virtually every facet of the consumer internet. For example, when a YouTube video is shown in a Featured Snippet for a net worth search, not only is the original source choked off the page, but Google's sister property YouTube directly benefits from the traffic.

Every time Google commits a flagrantly anticompetitive act, it always points to a flimsy pro-consumer pretense for doing so. Google Product managers convince themselves that it's a

better ***user experience*** to simply provide the answer, but fail to consider the negative externalities of destroying a small business.

WHY DON'T YOU SUE GOOGLE??!!"

That's the first question everyone asks when they hear my story. It's a valid question that I struggled with for years. First of all, I do not have the financial resources to go to war with an $800 billion company that employs an army of lawyers, lobbyists, think tanks and talking heads. (Google's CFO once bragged on an earnings call that they were proud to have spent $100 million in legal bills on a single case![1]) However, more importantly, Google has proven over and over to be a company that does not hesitate to dispense retribution against enemies and competitors. Because it controls essentially the entire internet, Google has endless levers at its disposal to significantly harm or snuff out a rival.

I don't think it's a coincidence that our organic rankings have continued to suffer since I've become a vocal critic of their practices. Earlier this year, within weeks of the publication of a Wired magazine article that included quotes from me and a recap of our story, the CNW mobile app was banned from the Google Play store without explanation or recourse. As a result we were also banned from using the Google's dominant Ad Mob mobile ad platform.

Whenever I speak out against Google publicly, I incur significant business risk. Giving on the record testimony to your Subcommittee is by far the largest risk I've ever taken.

Every online business feels this threat constantly. As a result, there is a mafia-like "omerta" in the web community when it comes to Google. It's why I'm guessing your Subcommittee may have struggled to find people willing to speak out publicly on the record about Google.

Thank you for your time and for giving me the opportunity to share my story. I hope my experiences have helped illustrate the consequences of Google's innovation killing anticompetitive monopoly.

Does Google use its overwhelming market power to benefit itself while crushing competition? **YES**. Do these actions have negative impacts on the open internet? **YES**. Are everyday consumers harmed by Google's practices **YES**.

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[1] [1] "Look, we were very passionate about this issue at Google and so much so that we have made significant investment of approximately $100 million to win this case. And once again, it just was the right thing to do and we did it." (Source: Google CFO Patrick Pachette, Google Inc. Q2 2010 Earnings Call Transcript; July 15, 2010)

July 15, 2019

The Honorable David Cicilline
Chairman
House Judiciary Subcommittee on Antitrust, Commercial, and Administrative Law
United States House of Representatives
2233 Rayburn House Office Building
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
House Judiciary Subcommittee on Antitrust, Commercial, and Administrative Law
United States House of Representatives
2233 Rayburn House Office Building
Washington, DC 20515

The Honorable Jerrold Nadler
Chairman
House Judiciary Committee
United States House of Representatives
2131 Rayburn House Office Building
Washington, DC 20515

The Honorable Doug Collins
Ranking Member
House Judiciary Committee on
United States House of Representatives
1504 Longworth House Office Building
Washington, DC 20515

Dear Chairman Cicilline, Ranking Member Sensenbrenner, Chairman Nadler, and Ranking Member Collins:

Thank you for your continuing attention to digital platforms and competition. The Subcommittee's July 16 hearing on "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship," presents an important opportunity to examine how platforms impose onerous, anticompetitive terms on companies that provide goods and services to consumers and use other practices that reduce price competition and quality. AHLA appreciates that the Committee is taking a close look at these practices.

The hotel industry and millions of U.S. consumers have gained first-hand experience with platforms' anticompetitive practices through their dealings with online travel agencies ("OTAs"), which allow consumers to search for hotel rooms, compare rates, and make reservations.

The OTA marketplace is highly consolidated. Approximately half of all online hotel bookings in the United States occur through OTAs. In 2018, two companies (Booking Holdings and Expedia) accounted for 92% of all OTA bookings – the result of past consolidations. The large proportion of bookings handled by OTAs means that hotels of all sizes – from small, independent owners to large chains – have no choice but to do business with OTAs.

OTAs' high commissions are a clear sign of their ability to exclude competition. OTAs earn revenue primarily by charging hotels a commission on each room booked through their platforms, which are typically around 25 percent or higher. Despite these high commissions, there has been no serious, sustained effort by a new entrant in the OTA marketplace.

One way that OTAs exclude competition and maintain their ability to charge high prices is by imposing so-called "most-favored nation" (MFN) clauses on hotels. These terms prohibit hotels (and

other companies that offer hotel room booking services) from offering to consumers room rates that are lower than the OTAs offer. OTA-imposed MFNs make it too costly for hotels to allow a new rival to offer a lower rate, because hotels would have to offer the same rate to incumbent OTAs.

OTAs have developed other measures to stifle competition and charge high commissions to hotels. For instance, as one recent study documented, OTAs have punished hotels that sought lower commissions by demoting the hotels' position in search results – a practice known as "search bias."[1] In addition, OTAs have degraded the quality of such hotels' search listings by making the listings more difficult to read and removing photos.

Ultimately, consumers pay for OTAs' exclusionary practices. They pay higher prices for hotel room because MFNs soften competition between established OTAs and discourage new entrants. They pay as users of online booking services that have seen little evidence of innovation, quality, or efficiency improvements in recent years. And they pay as some hotels are forced to cut back on investments in their properties to cover the high costs of OTA-based distribution.

OTAs' practices clearly illustrate how platforms in a highly concentrated market can harm competition and consumers. As the Committee continues its inquiry, AHLA encourages you to examine closely how platforms that purport to expand consumer choice and convenience may use their market position to prevent price competition and reduce the quality of services offered to consumers.

We respectfully request that you include this letter in the July 16 hearing record. AHLA thanks you for your attention to these issues.

Sincerely,

Brian Crawford
Executive Vice President
American Hotel & Lodging Association

cc: Members of the House Judiciary Committee

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[1] *See* Benjamin Edelman, *Impact of OTA Bias and Consolidation on Consumers* 4 (July 12, 2017), *available at* http://www.benedelman.org/publications/ota-bias-12jul2017.pdf.

repair.org

DOJ Anti-Trust Subcommittee Testimony

Written Statement for the Record by the Repair Association for a hearing before The House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law

Online Platforms and Market Power, Part II : Innovation and Entrepreneurship

July 15, 2019

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Rep. David Cicilline, Chair
Rep. James Sensenbrenner, Ranking Member

Dear Chairman Cicilline, Representative Sensenbrenner and Members of the Committee

My name is Gay Gordon-Byrne and I am writing in my capacity as the Executive Director of the Digitial Right to Repair Coaltion, commonly known as The Repair Association at Repair.Org.

Our organization was founded in 2013 with the purpose of reversing manufacturer monopolies on technology equipment repair. Repair is being monopolized by big tech which is killing small business, preventing new business formation and discouraging innovation and interoperability.

Technology repair is being thwarted across many industries in the same way as it had been thwarted for automotive repair. Monopolized repair is common because it is easy to do, highly lucrative, and until recently, has gone unchallenged.

Having approached legislation in states to broadly unlock repair monopolies, we have faced opposition from dozens of industries ranging from toys to tractors, home appliances to mainframes. Original Equipment Manufacturers ("OEMS") always watch each other for how to

generate more revenue. Monopolization of repair has been widely copied as a huge profit opportunity. Manufacturers have no reasons for blocking repair other than money.

Repair as a business is separate from that of manufacturing, retailing or software development.. Tying repair to the sale shouldn't be allowed, but has become the norm. Manufacturers consistently assert that they alone should be allowed to make repairs. They conflate repair of hardware with access to licensed software patches and fixes. Consumers are told only the manufacturer has the information and expertise to correctly repair equipment, which manufacturers then refuse to sell or share.

We are excited to see the Congress, the DOJ and FTC investigate how to restore the normal and necessary opportunity for repair.

Right to Repair History with Anti-Trust

Our members are alert to anti-trust law and its potential to protect consumers from OEM repair monopolies. Several of our members have been engaged directly in anti-trust litigation often as a defense against OEM claims of copyright infringement. We have solicited expert legal advice from anti-trust specialists in advance of meetings with the US DOJ held in 2012.

Several cases in court have involved our members notably Red Lion Medical v GE in Texas and Continuant/TLI v. AVAYA in New Jersey. We can see from these actions that anti-trust litigation is hideously costly and time consuming and that our members will be best served through legislation. In July of 2012 Massachusetts passed their Automotive Right to Repair law providing a nearly perfect legislative template.

How Repair Monopolies are Created and Enforced

Repair monopolies are easily created. It takes less effort to monopolize repair than to support it. Manufacturers don't have to print and ship repair manuals to anyone, including libraries. They don't have to support a retail parts distribution capability. Its also cheaper to manufacturer products using adhesives instead of mechanical fasteners, leading to less repair overall.

Blocking competition for repair not only allows for inflated prices for repair, but when prices are too high and availability too limited, consumers are easily pushed it a new product purchase. Their monopoly pricing power over repair is used to create a new sale.

Manufacturers also engage in deceptive marketing to dissuade customers from asking for repairs. Consumers are often told a repair will void their warranty (well documented by the FTC

in April of 2018[1] and by the October 2018 study from US PIRG on warranty policies for 50 home appliance manufacturers. [2]

Purchase, warranty and End User License Agreements (EULA) also dissuade consumers from knowing or understanding their legal rights. I conducted a brief study for Repair.Org on this topic to submit to the FTC for empirical research on matters of repair. In this study I reviewed the documentation packages for 50 different manufacturers across 5 different industries. There is a consistent pattern of unfair and deceptive documentation.[3]

- documentation is extremely difficult to find prior to purchase
- consumers are nearly always unable to review all the relevant docs with all embedded links and references
- documentation consistently removes existing legal rights to repair as intended by Congress in the DMCA and in Patent Law.
- Nearly all required documents are then "deemed to be accepted" by turning on the device without any positive acknowledgement at all on the part of the buyer.

Impact on Small Business and Entrepreneurship

Tech repair employment has been in steady decline for over a decade. [4] In the computer repair sector alone we've lost roughly 2% per year in employment and gone from 160,000 small repair businesses to 140,000. Repair is nearly all small business because its a hands-on business very much like auto repair. These jobs are local, feed families, and are part of the fabric of a community.

The appearance of small cell-phone repair shops in kiosks betrays the ephemeral nature of these businesses. Most are limited to replacing batteries and glass and only for a tiny segment of available products. New models with different designs are a constant threat. Apple just announced that their parts are now cryptographically tied to the motherboard which is the death-knell for these entrepreneurs.

Small repair businesses are mostly gone in our towns. Where we used to see an appliance repair shop, a camera repair shop, a TV repair shop and a Radio Shack to buy parts these businesses are long gone. The need for repair continues to grow, and once the means to consistently acquire the materials and information to repair more than one product line, entrepreneurs will rapidly respond to the opportunity.

We've surveyed our members to get a sense of the jobs impact of passage of right to repair laws. The consensus is that employment will immediately increase by 14%, as access to OEM

[1] https://www.ftc.gov/system/files/documents/foia_requests/Warning-Letters.pdf
[2] Warranties in the VOID - https://uspirg.org/reports/usp/warranties-void
[3] https://www.regulations.gov/document?D=FTC-2019-0013-0030
[4] Data from IBIS World.

original parts and diagnostics for products that are brought in for repair can now be repaired. Much wider growth is logical if only to keep up with the growth of the tech sector in general. Some products sets set as IOT devices are growing at a rate of 40% per year. These things break and will need repairs.

Scope of Repair Monopolies

Every OEM that inserts a digital electronic part within their product can monopolize repair. The industry doesn't matter - tech parts are all cousins and are all repaired the same way. Most people accept there are only minor differences between a cell phone, tablet, laptop, desktop and server. It is less widely understood these same parts and designs are also inside of major and minor appliances, motorized cars, trucks, boats, tractors, lawn mowers and snow plows.

In our evaluation of common contracts for the FTC, we documented that roughly 90% of OEMS are already engaging in some form of repair monopolization. A few industries remain somewhat open to repair, notably the windows/linux based computing platforms, but even the contracts for these products insert loopholes for future mischief. Because repair limitations are marketing policies and not technological imperatives, any OEM can become a repair monopolist overnight and without any consequences.

Consumers therefore do not have a choice of repairable products at the outset and no opportunity to negotiate for themselves against powerful corporations. The scale of these abuses is so vast that only government has the clout to restore the rights of equipment owners to control their property.

Repair and Impaired Ownership

Repair is the canary in the coal mine for complete or impaired ownership. If a consumer has access to competition for repair services, then they are in control of their purchase as the owner. They can modify, customize, damage, enjoy, ignore and resell without permission from the prior owner. If repairs are limited -- then something is wrong in the contracts or marketing or both. The USCO Study in Embedded Software makes this exact point. [5] Yet the majority of tech purchases today come with similar strings that are completely inappropriate for purchases.

Only government can fix these problems. Consumers and small business are helpless to use the courts to protect them. We know -- we've tried and so have many of our network of member businesses. Consumers cannot negotiate unfair and deceptive contracts against corporations. If we could -- End User License Agreements would be widely rejected.

It is impossible for consumers to work around these monopolies as is possible with analog or mechanical products. Consumers cannot (yet) build their own replacement electronics parts in

[5] https://www.copyright.gov/policy/software/software-full-report.pdf

their garage or barn. If the manufacturer will not sell parts -- repair is impossible. Similarly, diagnosis of problems within a complex product is technically possible with multimeters, oscilloscopes and other tools, but without a schematic diagram is extraordinarily tedious. When manufacturers refuse to sell their diagnostic tools, they are intentionally blocking repair.

Manufacturers have made repair impossible in other insidious ways that are themselves tying agreements. Software patches and fixes to known defects used to be provided at no charge and freely to all equipment owners as basic defect support. These are the recalls of the digital world. Famous OEMS such as IBM, CISCO, HPE and Oracle all require a post-warranty service contract in order to download patches and fixes. Lack of access to patches is a powerful marketing tool for sales of manufacturer only services contracts for businesses large and small.

Consumers see similar tactics deployed to block their own choice of repair with passwords and locked ("cryptographic") settings that activate replacement parts. The manufacturer is the holder of the activation password and will not provide it unless they perform the repair. While manufacturers tell consumers this is for their security benefit -- that is demonstrably not the case. The US Copyright Office has exempted such locks from being copyright violations[6] -- but their permission to break locks is not the same thing as not having the locks in the first place. The idea that a consumer would need to hack a lock in order to replace a part in their owned device should raise everyone's blood pressure.

For example, a friend of mine was able to buy a replacement OEM original digital thermostat in his refrigerator. Once installed, the part requested a password. He called the manufacturer who insisted he must schedule a service call with their authorized technician to insert the password. This wasn't even a "smart" refrigerator so there wasn't any security to protect. The manufacturer was using their control over repair to extort service revenue. Another insidious tying agreement.

Recommendations:

We urge the DOJ to demand all manufacturers document transactions honestly, succinctly and in plain language. Consumers should know how they will repair, reuse or resell their equipment before they purchase products. Consumers (and business) should not have to agree to private law requiring additional purchases in order to enjoy their legal rights as owners, to continue to enjoy their purchases as they see fit, and should never have to beg permission or approval from the manufacturer in order to transfer their property to another entity.

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6 https://www.federalregister.gov/documents/2018/10/26/2018-23241/exemption-to-prohibition-on-circumvention-of-copyright-protection-systems-for-access-control

A good step would be to ban the use of End User License Agreements for physical purchases. There may be some utility for EULA on media. The DOJ and FTC should be investigating hardware manufacturers for monopoly policies regardless of the size of their market share. Modern Monopolies are no longer monopolies on production but also of information.

Thank you for your interest. Please let me know if you have any questions or if I can be of service.

Sincerely,

Gay Gordon-Byrne

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Recharge Repair

A survey looking at the rise in battery replacement requests and self-repair interest in response to news breaking that Apple was slowing down older phones to preserve battery life.

U.S. PIRG
Standing Up
To Powerful Interests

Recharge Repair

A survey looking at the rise in battery replacement requests and self-repair interest in response to news breaking that Apple was slowing down older phones to preserve battery life.

Feb. 1, 2018

By Nathan Proctor, Director of the Right to Repair Campaign for U.S. PIRG and the Public Interest Network.

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Introduction

#ThrottleGate and the Barriers to Repair

Consumers should be able to repair what they own. Fixing what you own rather than buying something new can be a more affordable and more ecological choice. But for many products today, repair is made needlessly difficult, and sometimes impossible. As we consider how best to make sure technology benefits our quality of life and avoids needless harm to our environment, we should reduce barriers to repair.

The battery on your phone is one of the few parts of the phone that is guaranteed to wear out. You can carefully keep your screen, headphone and charging ports pristine, but your battery will lose a bit of life on every change. According to Apple, their batteries are designed to retain 80% of their charge after 500 recharges, or about a year and 4 months of daily charging.[i]

Even though after a few years of regular use phones need a new battery to last the day, Apple does not sell their replacement batteries to customers or third parties. Only Apple authorized technicians are permitted to replace your iPhone's battery with the original part, which they offer for $79 plus shipping.[ii]

In December of 2017, users began to complain about how a new software update to Apple iPhones appeared to slow down their device, while others noted it appeared to happen to those devices with older batteries, and was fixed by swapping the battery out.[iii] This was confirmed by tests run by Primate Labs founder John Poole, reported on Dec. 18.[iv] On Dec. 20, Apple issued a statement to TechCrunch[v] addressing the issues identified by users:

> *Our goal is to deliver the best experience for customers, which includes overall performance and prolonging the life of their devices. Lithium-ion batteries become less capable of supplying peak current demands when in cold conditions, have a low battery charge … as they age over time, which can result in the device unexpectedly shutting down to protect its electronic components.*
>
> *Last year we released a feature for iPhone 6, iPhone 6s and iPhone SE to smooth out the instantaneous peaks only when needed to prevent the device from unexpectedly shutting down during these conditions. We've now extended that feature to iPhone 7 with iOS 11.2, and plan to add support for other products in the future.*

After continued customer dissatisfaction and critical media coverage, Apple offered to replace batteries for the discounted rate $29, a week later, on Dec. 28.[vi]

Soon after this discount was offered, however, Apple began to struggle with the high demand for replaced batteries. Long waitlists formed within a few days and have continued to grow.[vii] Apple recently informed some customers battery replacements won't be available until March or April.[viii]

Given the option between waiting until April to have Apple perform repairs or getting a new phone, it seems reasonable to guess that many users will choose the latter. Ultimately, that means we produce more phones than we would otherwise need.

There are, of course, thousands of other service providers besides the relatively limited number of Apple authorized repair technicians, and many people would be willing to do the repairs themselves.

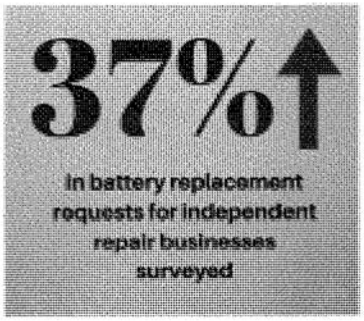
Through our survey and review of web traffic for self-repair instructions, we assessed the additional interest in repair alternatives as news of the battery issues with Apple phones surfaced.

Findings

Interest in expanded options for repairing batteries spiked

Working with Repair.org and customers of iFixit, we surveyed businesses across the country to calculate increased battery replacement service requests. 164 businesses responded to our survey.

Collectively, these businesses reported a 37% increase in weekly battery replacement service requests since Dec. 20, when Apple confirmed they were throttling phones with older batteries.



Taken together, these businesses reported servicing nearly 6,000 devices per week,[ix] of which battery service requests represent a significant percentage, roughly a fifth for participating survey respondents. Battery replacements went from 1,242 repairs per week in October and November to 1,706 repairs per week after Dec. 20.

In addition to this survey, we examined web traffic to iFixit online self-repair instructions for replacing iPhone batteries. Traffic to these pages went up significantly after Dec. 20, showing that many customers are interested in self-repair as an option for phone maintenance.

More than 180,000 American visitors accessed repair instructions between Dec. 20 and Jan. 22, more than 2.5 times the average traffic of the weeks prior (153% increase in traffic).

State	% increase in traffic	Visits Dec. 20 to Jan. 22	State	% increase in traffic	Visits Dec. 20 to Jan. 22
Alabama	144	1,680	Montana	148	450
Alaska	161	339	Nebraska	162	986
Arizona	157	3,376	Nevada	100	1,485
Arkansas	194	994	New Hampshire	146	750
California	139	28,923	New Jersey	151	5,341
Colorado	159	3,546	New Mexico	207	725
Connecticut	145	2,007	New York	139	11,943
Delaware	161	475	North Carolina	177	5,412
District of Columbia	141	2,169	North Dakota	161	335
Florida	144	9,985	Ohio	130	4,851
Georgia	159	6,009	Oklahoma	143	1,357
Hawaii	166	703	Oregon	176	3,048
Idaho	200	734	Pennsylvania	163	6,692
Illinois	163	8,553	Rhode Island	173	652
Indiana	138	2,812	South Carolina	206	1,836
Iowa	175	1,182	South Dakota	140	285
Kansas	216	1,480	Tennessee	152	3,184
Kentucky	138	1,649	Texas	141	14,297
Louisiana	115	1,505	Utah	102	1,611
Maine	152	566	Vermont	263	584
Maryland	226	3,997	Virginia	199	5,502
Massachusetts	152	4,969	Washington	174	5,942
Michigan	152	4,929	West Virginia	145	608
Minnesota	173	3,246	Wisconsin	215	2,711
Mississippi	151	830	Wyoming	78	208
Missouri	155	2,726			

Survey respondents also included comments and stories about their work. Here are some select responses:

"A customer brought in a phone that was dropped into a lake. He brought it to Apple who said there was nothing they could do for him. He then brought it to me and I took it apart and soaked the main logic board in anhydrous alcohol, cleaned it, and dried it out. I also put a new battery in, and then the phone was as good as new. Customer was ready to throw it away, but it's still working to this day."

-- David Hauf of ServiceMacs LLC, Connecticut

"Several customers have traveled to Apple an hour away, only to be told they would have to pay full price for their battery replacement since their battery did not test 'bad' enough to be covered by this new program."

-- William Jacob Bell of ByteForce, Kentucky

"We have had customers go to the Apple Store because their phone wouldn't charge and they begin selling them their newest phone. They left frustrated and came to our store when there was just lint crammed in their charging port preventing the port from charging. It took us five minutes to clean out the port appropriately. We didn't even charge the customer."

-- Casey Parish of Mobi Repair, Washington

"There is lack of service options. The closest Apple store is 120 miles away from our town, and even further from other rural communities in our area. People need and want repair alternatives to Apple's exorbitant repair rates and restrictive policies so they can keep their equipment in working order, rather than being forced to purchase a new unit that many people simply cannot afford."

-- Angele Florisi of Technology Medics, Arizona

"In most of the iPhone 6 battery replacements requests I see, Apple has told the customer the phone is too old or had a motherboard issue. In most cases, a simple battery swap, with an occasional OS reset, gets them working like new again."

-- Tom Gray of Laptop MD+, New Jersey

"I had a customer with important data and pictures on their device but Apple said 'oh well, nothing we can do.' We opened it up, replaced the battery which allowed the customer to get all the info off the phone."

-- Chad Johansen of NH iPhone Repair, New Hampshire

"If a product is being made by a company, the repair tools for it need to be made available as well. Repairing devices using tools created by and supplied from the device's manufacturer is just another way to ensure product reliability with considerably less environmental waste for a better tomorrow."

-- Ronny Hamida of Rontronix, Nebraska

"I restored an iPhone where the customer was getting a searching notification with no phone signal. Verizon told them the device was faulty and they needed a new one. We restored the device, saved the customers data and they were extremely happy."

-- Robert Slater of Advanced Cellular Repair, Califomia

"Apple is a seller not a repair shop. It should concentrate on sales."

-- Syed Kazmi of Phontronics, Illinois

"One of our locations is two blocks from a busy Apple store. We routinely service water damaged devices refused by Apple as well as perform battery replacements on devices with evidence of water damage but no actual faults. People want more repair options, which is why Right to Repair is important."

-- Adam Fullerton of MEGA MOBILE Boston, Massachusetts

"One customer with an iPhone 7 took the trip up to the Mall of America to go to the Apple Store, waited over an hour just to be waited on. After the tech took almost 30 mins looking at the device in their backroom, they were told Apple could not fix the device and for approximately $130 they could switch to a certified refurbished iPhone 7, and all of their info and settings would simply transfer over to the new device. We found out about the customer through a friend-of-a friend, ordered the new battery and had them back up and running in a few days."

-- Eric Freeberg of Eric's Computer Service, Minnesota

"I wish we could let customers know they are allowed to seek independent repair and don't have to jump through the Apple repair hoops or that Apple authorized repair shops aren't fixing their phone. They are sending it in and a refurb is sent back."

-- Mollie McAuley of Reboot Tech, Oregon

"We see a lot of customers who think their phone is useless because it won't charge. We are several hours from an Apple store so they aren't willing to travel there. We either clean out the charging port for free or replace the port or battery as needed in 30 minutes at $50 for an iPhone 6. The customer is happy and willing to continue using their Apple device."

-- Brian Mills, CPR of Wichita Falls, Texas

"I run a repair business, and people need things repaired, it's often cheaper. Why can't Apple, who's nearest store is 1.5 hours away, let me run my repair business as they focus on new technology? People want things repaired quickly!"

-- Nathan Prodell of Fox Valley Mobile Repair, Wisconsin

"I see so many people want to just toss it and get a new phone, but then find out parts are cheaper."

-- James Rylek of Rylek Mobile Cell Repair, Illinois

America throws away 350,000 cell phones per day

We go through a massive number of phones in America. The EPA Office of Solid Waste and Emergency Response estimated that, in 2009, Americans threw away 141 million phones, approximately 350,000 per day.[x]

Overall, electronic waste or e-waste is difficult to recycle, and this is particularly true of mobile phones. That same EPA estimate puts the percentage of discarded phones that are recycled at 8 percent, as opposed to desktop computers, of which 38 percent are recycled. Because cell phones contain toxic metals, that waste can pose dangers to public health if it is buried in a landfill or incinerated. It's estimated that 40% of the heavy metals in U.S. landfills come from discarded electronics, according to EPEAT, a green electronic rating system.[xi]

Pew estimates that phone ownership grew from 83% to 95% from the end of 2009 to Nov. 2016, the most recent data available.[xii] The U.S. population also grew by some 18 million people over that span, so it is likely that the number of phones thrown away has increased.[xiii]

Assuming that each state throws out the same number of phones per capita, and using 2009 estimates to be conservative, we estimated each state's daily share of the phones thrown out nationally.

State	Estimated Phones Thrown Out Per Day	State	Estimated Phones Thrown Out Per Day
Alabama	5,800	Montana	1,200
Alaska	800	Nebraska	2,200
Arizona	8,200	Nevada	3,500
Arkansas	3,500	New Hampshire	1,500
California	46,900	New Jersey	10,600
Colorado	6,600	New Mexico	2,400
Connecticut	4,200	New York	23,600
Delaware	1,100	North Carolina	12,100
District of Columbia	800	North Dakota	900
Florida	24,600	Ohio	13,800
Georgia	12,300	Oklahoma	4,600
Hawaii	1,700	Oregon	4,800
Idaho	2,000	Pennsylvania	15,200
Illinois	15,300	Rhode Island	1,200
Indiana	7,900	South Carolina	5,900
Iowa	3,700	South Dakota	1,000
Kansas	3,400	Tennessee	7,900
Kentucky	5,300	Texas	33,300
Louisiana	5,500	Utah	3,600
Maine	1,500	Vermont	700
Maryland	7,100	Virginia	10,000
Massachusetts	8,100	Washington	8,700
Michigan	11,800	West Virginia	2,100
Minnesota	6,500	Wisconsin	6,900
Mississippi	3,500	Wyoming	600
Missouri	7,200		

Recommendations

Appetite for battery repair shows need for Right to Repair reforms

People should be free to fix what they own themselves. We should encourage repair of products and avoid encouraging disposing an entire product that could be repaired. Given the logistical challenges Apple faces in doing repairs themselves, and the clear interest demonstrated by consumers in independent or self-repair, we believe the findings in this report support the case for

Right to Repair reforms. Passing Right to Repair or Fair Repair laws would require access to replacement tools, parts, schematics and diagnostic software.

Currently, digital Right to Repair bills are filed and pending in 18 states.

State	Bill Number/s	Lead Sponsor/s
Hawaii	HB 1649	Rep. Scott Nishimoto
Illinois	HB 3030	Rep. David Harris
Iowa	SF 2028, HF 556	Sen. Mary Jochum, Rep. David Jacoby
Kansas	HB 2122	Rep. John Barker
Massachusetts	S 96, H 143	Sen. Michael Brady, Rep. Claire Cronin
Minnesota	SF 15, HF 287	Sens. David Osmek, Rep. Hertaus
Missouri	HB 2204	Rep. Tracy McCreery
Nebraska	LB 67	Sen. Lydia Brasch
New Hampshire	HB 1733 / LSR 2385	Reps. Virginia Irwin and David Luneau
New Jersey	A 4934	Asms. Paul D. Moriarty and Ralph R. Caputo
New York	S 618B, AB 8192	Sen. Phil Boyle, Asm. Joseph Morelle
North Carolina	HB 663	Rep. Bobbie Richardson
Oklahoma	HB 2551	Rep. Tommy Hardin
Tennessee	SB 888, HB 1382	Sen. Ferrell Haile, Rep. Darren Jernigan
Vermont	SB 180	Sen. Christopher Pearson
Virginia	HB 20	Del. Mark L. Cole
Washington	HB 2279	Rep. Jeff Morris
Wyoming	HB0199	Reps. Hunt, Blackburn, Halverson, Laursen and Northrup; Sens. Christensen and Meier

Repairing a throwaway culture

We have a stuff problem.

Our problem goes far beyond smartphones. We use more than we need to, and more than we can sustain. Every year we consume 1.7 times what the earth can replenish,[xiv] and 99% of the items we consume is thrown out within 6 months of purchase.[xv]

The basic model for making anything is linear. We mine or harvest materials, we manufacture something, we use it, we throw it away. But as that linear model is applied with increasing speed and volume, we are running into problems sourcing the materials and managing the waste. We need to move to a more circular system, in which we keep resources in circulation as long as possible, and then salvage, compost or recycle the rest.

Repair is a vital part of moving to a more circular economy -- from empowering more repair professionals to reducing barriers for people to repair things themselves. One common-sense way we can move in that direction is to grant access to replacement parts, tools and schematics. If we want to be more sustainable, companies need to stop blocking people from doing things for themselves.

Sources

[i] "Batteries - Service and Recycling," *Apple Inc,* Accessed January 30, 2018. https://www.apple.com/batteries/service-and-recycling/

[ii] Ibid

[iii] Brandon Hill, "Apple Accused Of Throttling CPU Performance On iPhones With Aging Batteries," *Hot Hardware,*published December 11, 2017. https://hothardware.com/news/apple-accused-of-throttling-performance-on-iphones-with-aging-batteries#xXBo4Jo96GvrloY2.99

[iv] Brandon Hill, "Geekbench Dev Confirms Apple Throttles Performance On iPhones With Older Batteries," *Hot Hardware,* published December 18, 2017. https://hothardware.com/news/geekbench-dev-confirms-apple-throttles-performance-on-iphones-with-older-batteries#LUJKc68zBkY7ttiK.99

[v] Matthew Panzarino. "Apple addresses why people are saying their iPhones with older batteries are running 'slower'," *TechCrunch,* published December 20, 2017. https://techcrunch.com/2017/12/20/apple-addresses-why-people-are-saying-their-iphones-with-older-batteries-are-running-slower/

[vi] "iPhone Battery and Performance," *Apple Inc,* published December 28, 2017. https://www.apple.com/iphone-battery-and-performance/

[vii] Geoffrey A. Fowler, "Run, don't walk, to replace your iPhone battery for $29," *The Washington Post,* published January 4, 2018. https://www.washingtonpost.com/news/the-switch/wp/2018/01/04/run-dont-walk-to-replace-your-iphone-battery-for-29/?utm_term=.fbb89ab79587

[viii] Nicole Nguyen, "iPhone Users Are Mad That Battery Replacements Are Backlogged Until March or April," *Buzzfeed News,* published January 19, 2018. https://www.buzzfeed.com/nicolenguyen/iphone-battery-replacement-iphone-6-plus?utm_term=.bxVdgMAqD#.hf5ZQ0kOP

[ix] Author's note: Most of the businesses surveyed provided a specific number of repairs per week, but several provided a range, which is why this number is more of a round estimate.

[x] U.S. Environmental Protection Agency, Office of Inspector General, *Improved Information Could Better Enable EPA to Manage Electronic Waste and Enforce Regulations,* Report No. 13-P-0298 (Washington, DC, 2013), https://www.epa.gov/sites/production/files/2015-09/documents/20130621-13-p-0298.pdf.

[xi] Green Electronics Council, *Understanding EPEAT Environmental Rating for Electronics - State Electronics Challenge*, (2013), http://www.stateelectronicschallenge.net/Webinars/How-to-Navigate-the-EPEAT-Registry.pdf.

[xii] "Demographics of Mobile Device Ownership and Adoption in the United States." Pew Research Center, Washington, D.C. (January 12, 2017) http://www.pewinternet.org/fact-sheet/mobile/.

[xiii] "United States Population, 1900-2018," Trading Economics (2018), https://tradingeconomics.com/united-states/population.

[xiv] "Earth's 2017 resource 'budget' spent by August 2: report," *Phys.org,* published August 1, 2017. https://phys.org/news/2017-08-earth-resource-spent-august.html

[xv] Annie Leonard, "The Story of Stuff, Referenced and Annotated Script," Berkeley, California (2007). https://storyofstuff.org/wp-content/uploads/movies/scripts/Story%20of%20Stuff.pdf



July 11, 2019

The Honorable David Cicilline
Chairman
House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law
United States House of Representatives
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The Honorable Jim Sensenbrenner
Ranking Member
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The Honorable Jerrold Nadler
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The Honorable Doug Collins
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Dear Chairman Cicilline, Ranking Member Sensenbrenner, Chairman Nadler and Ranking Member Collins:

Thank you for your bipartisan exploration into competition in digital markets. Ahead of your Subcommittee hearing titled, "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship," I wanted to be sure you were aware of the anti-competitive practices Spotify has encountered and how it could affect many others in the digital markets. We know we are not alone in experiencing these anticompetitive practices and hope you will continue to look into this issue to ensure innovation, competition and consumer choice.

In recent years Apple has introduced rules to the App Store that purposely limit choice and stifle innovation at the expense of the user experience—essentially acting as both a player and referee to deliberately disadvantage other app developers.

Apple operates a platform that, for over a billion people around the world, is the gateway to the internet. Apple is both the owner of the iOS platform and the App Store—and a competitor to services like Spotify. In theory, this is fine. But in Apple's case, they continue to give themselves an unfair advantage at every turn.

To illustrate what I mean, let me share a few examples. Apple requires that Spotify and other digital services pay a 30% tax on purchases made through Apple's payment system, including upgrading from our Free to our Premium service. If we pay this tax, it would force us to artificially inflate the price of our Premium membership well above the price of Apple Music, putting us at a clear disadvantage in the market. And to keep our price competitive for our customers, that isn't something we can do.[1]

[1] Apple's current practice is to require app developers to pay Apple 30% of their revenue for in-app purchases in the first year and 15% every year thereafter. The 30% fee imposes a huge disincentive to acquiring new subscribers. The subsequent lower fee does not alter the substantial barrier Apple imposes to growing Spotify's business.

As an alternative, if we choose not to use Apple's payment system, forgoing the charge, Apple then arbitrarily and unilaterally applies a series of technical and experience-limiting restrictions on Spotify. For example, they limit our communication with our customers—including our outreach beyond the app. In some cases, we aren't even allowed to send emails to our customers who use Apple. Apple also routinely blocks our experience-enhancing upgrades. Over time, this has included locking Spotify and other competitors out of Apple services such as Siri, HomePod, and Apple Watch, or significantly delaying or degrading access.

We aren't seeking special treatment. We simply want the same treatment as numerous other apps on the App Store, like Uber or Grubhub, who aren't subject to the Apple tax and therefore don't have the same restrictions. What we are asking for is the following:

- First, apps should be able to compete fairly on the merits, and not based on who owns the App Store. We should all be subject to the same fair set of rules and restrictions—including Apple Music.
- Second, consumers should have a real choice of payment systems, and not be "locked in" or forced to use systems with discriminatory tariffs such as Apple's.
- Finally, app stores should not be allowed to control the communications between services and users, including placing unfair restrictions on marketing and promotions that benefit consumers.

This is not a Spotify-versus-Apple issue. We want the same fair rules for companies young and old, large and small. It ***is*** about supporting and nurturing the healthy ecosystem that made our two companies successful in the first place.

Consumers win and our industry thrives when we're able to challenge each other on fair footing. That's what competition on the merits is all about. I have included a few articles on this topic attached to this letter and hyperlinked below and more information can be found at TimeToPlayFair.com.

Why Does Apple Control Its Competitors? - New York Times, May 2, 2019
Even Apple's ex-head of app reviews says App Store is unfair to Spotify, Netflix – CNET, May 29, 2019

We would like to request that this letter be included in the record. Thank you again for your attention to this very important topic that is critical to a vibrant, innovative and thriving marketplace.

Regards,



Horacio Gutierrez
General Counsel and VP, Business & Legal Affairs, Spotify

CC: Members of the House Judiciary Committee

Full Articles

New York Times
Why Does Apple Control Its Competitors?
Regulators should take a close look at the iPhone App Store.
By The Editorial Board
May 2, 2019
https://www.nytimes.com/2019/05/02/opinion/apple-app-store-iphone.html

Of the 17 most popular screen-time and parental-control apps in the App Store, 11 have been removed or restricted by Apple. The app makers believe they are being punished for competing with Apple's own screen-time control tools, or worse, for weaning people off Apple devices. Many of the apps had more stringent controls than Apple's in-house alternatives. Apple says that the applications — specifically, the parental-control apps — were removed because of their use of Mobile Device Management, a technology that gave third parties access to information such as "user location, app use, email accounts, camera permissions and browsing history." In other words, Apple says it removed the apps to protect the privacy of the children and parents who installed them.

The actions by Apple highlight the inherent tension in the company's fierce control over its mobile operating system: On the one hand, the closed environment is a boon to consumer privacy because the company has the leverage to insist upon it; on the other hand, that environment fosters a kind of monopoly.

[As technology advances, will it continue to blur the lines between public and private? Sign up for Charlie Warzel's limited-run newsletter to explore what's at stake and what you can do about it.]

This isn't the first time that the company has cracked down on products sold in its App Store. In January, the company revoked Facebook's control over an app that collected data on minors, which temporarily resulted in havoc at Facebook headquarters, since the revocation applied to several custom-made apps (like calendars) used internally within the company. Apple's caution around Mobile Device Management is reasonable — in a post-Cambridge Analytica world, third parties need not have overbroad access to user information.

But Apple's management of the App Store is also dangerously reminiscent of the anti-competitive behavior that triggered United States v. Microsoft, a landmark antitrust case that changed the landscape of the tech industry.

In the mid-1990s, Microsoft began to bundle its Internet Explorer browser with Windows, moving to elbow competing browsers — primarily, Netscape — out of the picture. This triggered a lawsuit from the Department of Justice and a coalition of state attorneys general in 1998. Microsoft ultimately lost.

The lawsuit is credited with opening up the marketplace for upstarts like Google and Facebook. Now, the companies that shot up to the top while Microsoft was busy fending off the Justice Department are engaging in similar anti-competitive tactics. In some ways, Microsoft's conduct was more egregious than Apple's appears to be today — internal documents outlined a clear strategy to "leverage" Windows to increase Internet Explorer's market share and ultimately dominate the browser market. The company also entered into agreements with

various service providers to optimize sites for Internet Explorer but not other browsers. Yet Microsoft never banned the installation of other browsers outright — how could it? If a user wanted to, they could still use Netscape.

But Apple's operating system for mobile devices makes it almost impossible to get an app outside of the App Store that will work on an Apple phone. Ultimately, the company controls what a user can or cannot do on their own iPhone. Apple also takes up to a 30 percent cut of in-app revenue, including revenue from "services" fulfilled in-app — like buying a premium subscription or an ebook. Because all apps go through the App Store, this 30 percent cut is nearly unavoidable.

Apple doesn't ban apps like Amazon Kindle or Spotify, which compete with Apple Books and Apple Music, respectively. But the 30 percent fee still stings. That's the reason you currently can't buy a Kindle ebook through the Kindle mobile app. Spotify, a much smaller company, now pays Apple between 15 and 30 percent of its in-app revenue in order to serve streaming music to its premium subscribers. Spotify recently filed a complaint with European regulators, accusing Apple of anticompetitive practices. In the United States, an antitrust lawsuit pending before the Supreme Court alleges that the 30 percent cut drives up prices for consumers.

Apple isn't the only company leveraging a mobile operating system for an unfair advantage. Last year, the European Union fined Google $5.1 billion for bundling the Chrome browser and Google Search with other Android apps.

Even if we take Apple at its word that it was only protecting the privacy and security of its users by removing screen-time and parental-control apps, the state of the app marketplace is troubling. Why is a company — with no mechanism for democratic oversight — the primary and most zealous guardian of user privacy and security? Why is one company in charge of vetting what users can or cannot do on their phones, especially when that company also makes apps that compete in a marketplace that it controls? Senator Elizabeth Warren's proposal to bar Apple from competing in its own app marketplace is too drastic, and doesn't take into consideration how intertwined the physical phone is with Apple's in-house apps. For example, iMessage competes with Facebook's WhatsApp and Google Hangouts, but what's a cellphone without text messages?

Still, the status quo is untenable. It's time for American regulators to take a good hard look at app stores and mobile operating systems. It might be time for another United States v. Microsoft.

CNET
Even Apple's ex-head of app reviews says App Store is unfair to Spotify, Netflix
BY JOAN E. SOLSMAN, SHARA TIBKEN
MAY 29, 2019
https://www.cnet.com/news/apple-app-store-is-unfair-to-spotify-netflix-former-app-reviews-head-shoemaker-says/

Apple's former head of App Store approvals believes his former team is the best in the world -- but the policies it enforces aren't.

"Over the years, Apple has struggled with using the App Store as a weapon against competitors," Phillip Shoemaker, who ran Apple's third-party app reviews for seven years, said in a Medium post Tuesday.

Apple is facing intensifying scrutiny over how its App Store policies treat services, like Spotify and Netflix, that directly compete with its own. Earlier this year, Spotify lodged a complaint with Europe's antitrust watchdog, saying Apple uses its App Store policies as a cudgel to stifle Spotify, the main competitor to Apple Music.

The App Store is the biggest moneymaker in Apple's services business, but the issue will only grow thornier this year, as Apple launches subscription services in new arenas like video, with its Netflix competitor Apple TV Plus, and video games, with Apple Arcade set to compete against Google Stadia.

Apple didn't immediately respond to a request for comment. In the past, it has rejected Spotify's claims. Wednesday morning, the company also launched an App Store explainer page that noted how Apple operates "a store that welcomes competition."

Dumb readers

Shoemaker called on Apple to change two policies. One, known as the dumb reader rule, prevents third-party apps from using any payment system other than Apple's own in-app purchases, all of which pay Apple a 30% fee in the first year and a 15% fee after that. Another policy, known as the no-linking-out rule, prohibits apps from including any buttons, links or other directions that would help potential subscribers find other sign-up options.

Spotify and others have complained that the two policies give Apple the power to put its rivals at an unfair competitive disadvantage.

"With the App Store being the only way to install apps onto your iPhone and iPad, Apple has complete and unprecedented power over their customer's devices," Shoemaker said. "The decisions they make with regards to third-party apps needs to be above reproach, and currently are not."

Shoemaker called on Apple to create a limited exception to both policies, specifically for apps that directly compete with Apple. He suggested allowing external links to other purchasing options only for apps that directly compete with Apple in areas with tight margins, where a 30% fee hits the app maker hard. That would include things like news services, books, movies, music and cloud storage.

"Some may argue that this is generally difficult to police, and that it is a slippery slope," said Shoemaker, who was Apple's senior director of App Store review until his departure in 2016. "Slippery slopes and policing is what the App Store review team does, and during my time, they did it better than anyone else in the world."

The US Supreme Court ruled iPhone customers could sue Apple for allegedly operating the App Store as a monopoly that overcharges people for software.

Apple came under fire for removing parental-control apps that compete with iPhone's own screen-time features.
Europe's antitrust watchdog, which has doled out billions in fines against Google, reportedly planned to launch a formal investigation into Spotify's complaints.

In the midst of these squalls, Apple launched an App Store explainer page ahead of its biggest annual event for app developers, its Worldwide Developers Conference set to start Monday. The site notes that Apple operates "a store that welcomes competition," as listed apps in the App Store compete with Apple's own. The page also breaks down the steps it takes to "make sure apps are respectful to users with differing opinions" and reject apps that are "over the line."

But the page didn't directly address any of the recent claims alleging Apple abuses the App Store's power.

"Apple needs to own up to their irresponsibilities and fix these significant problems," Shoemaker said in his post. "If they don't, the regulators just might."

Originally published May 29, 8:49 a.m. PT.
Update, 10:35 a.m. PT: Adds details about App Store explainer page.

July 15, 2019

The Honorable David Cicilline
Chairman, Subcommittee on Antitrust, Commercial, and Administrative Law
2233 Rayburn House Office Building
Washington, D.C. 20515

The Honorable James Sensenbrenner
Ranking Member, Subcommittee on Antitrust, Commercial, and Administrative Law
2254 Rayburn House Office Building
Washington, D.C., 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner,

I understand that the Committee recently received a letter from Spotify making allegations related to Apple and the App Store. In March, Apple released the attached statement addressing these allegations in full. Please contact me if you have any questions or need any additional information.

Sincerely,

Tim Powderly

Timothy Powderly

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APPLE STATEMENT March 14, 2019

We believe that technology achieves its true potential when we infuse it with human creativity and ingenuity. From our earliest days, we've built our devices, software and services to help artists, musicians, creators and visionaries do what they do best.

Sixteen years ago, we launched the iTunes Store with the idea that there should be a trusted place where users discover and purchase great music and every creator is treated fairly. The result revolutionized the music industry, and our love of music and the people who make it are deeply engrained in Apple.

Eleven years ago, the App Store brought that same passion for creativity to mobile apps. In the decade since, the App Store has helped create many millions of jobs, generated more than $120 billion for developers and created new industries through businesses started and grown entirely in the App Store ecosystem.

At its core, the App Store is a safe, secure platform where users can have faith in the apps they discover and the transactions they make. And developers, from first-time engineers to larger companies, can rest assured that everyone is playing by the same set of rules.

That's how it should be. We want more app businesses to thrive — including the ones that compete with some aspect of our business, because they drive us to be better.

What Spotify is demanding is something very different. After using the App Store for years to dramatically grow their business, Spotify seeks to keep all the benefits of the App Store ecosystem — including the substantial revenue that they draw from the App Store's customers — without making any contributions to that marketplace. At the same time, they distribute the music you love while making ever-smaller contributions to the artists, musicians and songwriters who create it — even going so far as to take these creators to court.

Spotify has every right to determine their own business model, but we feel an obligation to respond when Spotify wraps its financial motivations in misleading rhetoric about who we are, what we've built and what we do to support independent developers, musicians, songwriters and creators of all stripes.

So we want to address a few key points:

Spotify claims we're blocking their access to products and updates to their app.

Let's clear this one up right away. We've approved and distributed nearly 200 app updates on Spotify's behalf, resulting in over 300 million downloaded copies of the Spotify app. The only time we have requested adjustments is when Spotify has tried to sidestep the same rules that every other app follows.

We've worked with Spotify frequently to help them bring their service to more devices and platforms:

- When we reached out to Spotify about Siri and AirPlay 2 support on several occasions, they've told us they're working on it, and we stand ready to help them where we can.

- Spotify is deeply integrated into platforms like CarPlay, and they have access to the same app development tools and resources that any other developer has.

- We found Spotify's claims about Apple Watch especially surprising. When Spotify submitted their Apple Watch app in September 2018, we reviewed and approved it with the same process and speed with which we would any other app. In fact, the Spotify Watch app is currently the No. 1 app in the Watch Music category.

Spotify is free to build apps for — and compete on — our products and platforms, and we hope they do.

Spotify wants all the benefits of a free app without being free.

A full 84 percent of the apps in the App Store pay nothing to Apple when you download or use the app. That's not discrimination, as Spotify claims; it's by design:

- Apps that are free to you aren't charged by Apple.

- Apps that earn revenue exclusively through advertising — like some of your favorite free games — aren't charged by Apple.

- App business transactions where users sign up or purchase digital goods outside the app aren't charged by Apple.

- Apps that sell physical goods — including ride-hailing and food delivery services, to name a few — aren't charged by Apple.

The only contribution that Apple requires is for digital goods and services that are purchased inside the app using our secure in-app purchase system. As Spotify points out, that revenue share is 30 percent for the first year of an annual subscription — but they left out that it drops to 15 percent in the years after.

That's not the only information Spotify left out about how their business works:

- The majority of customers use their free, ad-supported product, which makes no contribution to the App Store.

- A significant portion of Spotify's customers come through partnerships with mobile carriers. This generates no App Store contribution, but requires Spotify to pay a similar distribution fee to retailers and carriers.

- Even now, only a tiny fraction of their subscriptions fall under Apple's revenue-sharing model. Spotify is asking for that number to be zero.

Let's be clear about what that means. Apple connects Spotify to our users. We provide the platform by which users download and update their app. We share critical software

development tools to support Spotify's app building. And we built a secure payment system — no small undertaking — which allows users to have faith in in-app transactions. Spotify is asking to keep all those benefits while also retaining 100 percent of the revenue.

Spotify wouldn't be the business they are today without the App Store ecosystem, but now they're leveraging their scale to avoid contributing to maintaining that ecosystem for the next generation of app entrepreneurs. We think that's wrong.

What does that have to do with music? A lot.

We share Spotify's love of music and their vision of sharing it with the world. Where we differ is how you achieve that goal. Underneath the rhetoric, Spotify's aim is to make more money off others' work. And it's not just the App Store that they're trying to squeeze — it's also artists, musicians and songwriters.

Just this week, Spotify sued music creators after a decision by the US Copyright Royalty Board required Spotify to increase its royalty payments. This isn't just wrong, it represents a real, meaningful and damaging step backwards for the music industry.

Apple's approach has always been to grow the pie. By creating new marketplaces, we can create more opportunities not just for our business, but for artists, creators, entrepreneurs and every "crazy one" with a big idea. That's in our DNA, it's the right model to grow the next big app ideas and, ultimately, it's better for customers.

We're proud of the work we've done to help Spotify build a successful business reaching hundreds of millions of music lovers, and we wish them continued success — after all, that was the whole point of creating the App Store in the first place.

Mr. ARMSTRONG. And I do appreciate particularly Mr. Reed talking in that I think when we recognize—I come from a very rural area. The closest what you would consider big box store is Minneapolis or Denver. So, when we're talking about competition and all of this, I also think we've got to remember, at no point in time from my house in Dickinson, North Dakota, have I had more access to more diverse and cheap consumer products, I mean, things that often would require a plane ticket or a 9-hour car ride to buy can now be brought to our house. So I think when we're talking about consumers, we need to remember that side of it too.

And I'm glad you brought up Bushel because Bushel is a fantastic company that has created—I don't know if they're going to qualify as a unicorn or not. I don't know what the real definition is, but they have created a space that hasn't existed at this point as well as they do it.

Now, I don't know about this particular company, but I do know that there is—whether it's in technology or in traditional business, there are startups that get to a point where they have a certain product and a certain idea, but they've gone as far as they could do—go and they get acquired. And it can be in the oil and gas industry. It can be in any industry. It can be in the tech industry. So I would hope that when we deal with this we don't—if, at some point in time Bushel decides they do want to sell, I hope they have the ability to do that.

But I guess I would just go to this, and all of the witnesses talked about different companies in different what they viewed as problems or potential problems with those companies, but they're not the same for every company. And I think that's where we go is that it's well established that the role of antitrust enforcement is to ensure that companies with significant market power don't use that power to unfairly harm competitors or consumers.

And traditionally in antitrust it's very company specific, and it's very fact specific. So there are limits to what antitrust can do and enforcement process often takes years. So, outside of antitrust, I mean, we don't have to only exist in that universe. Are there measures we can take beyond those laws that promote competition in technology markets? And I've got 50 seconds so—which means you all have 50 seconds so we get to go down the line. So please be quick.

Ms. SCOTT MORTON. Yes, there are. My report outlines a number of things that a regulator could do. But regulations that break down entry barriers and try to make a more level playing field for small businesses and entrepreneurs to actually get share and compete, that's the kind of regulation that I think would be really helpful.

Mr. REED. I would say support for open standards and ensuring that we don't have abusive use of patent rights in a way that actually harms open standards that are done in a voluntary manner.

Mr. SZABO. And I would warn against turning to a know-it-when-I-see-it definition for antitrust or monopoly and instead actually doing a fact analysis and an independent analysis as you've suggested.

Ms. OHLHAUSEN. I agree with trying to break down regulatory barriers for small business and entrepreneurs, but I would caution

against creating a single regulator. When you look at the history of the Civil Aeronautics Board and the FCC pre the AT&T break-up, I think there are important lessons there.

Mr. CICILLINE. The time of the gentleman is expired.

I'll recognize the gentleman from Georgia for 3 minutes.

Mr. JOHNSON. Thank you. We've run out of time. I do want to thank the panelists for being with us today. I know it's a late evening for you all. You had not planned on being here.

I want to thank the chairman for hosting this very important topic today. If we do not oversee what's going on in this digital economy, in this digital marketplace with the four dominant players that we hosted today on the first panel, if we don't understand their market reach, if we don't understand their business practices and how those practices affect consumers, then we will never be able to regulate or legislate as may be necessary.

So I do appreciate us having this hearing today, which is one in a series, and with that, I yield back.

Mr. CICILLINE. I thank the gentleman for yielding back.

And I do want to thank the witnesses. We will continue to rely on you as resources as we continue this investigation. I appreciate your patience and your testimony today.

This will conclude our hearing. I want to again thank our witnesses. And, without objection, all members will have 5 legislative days to submit additional written questions for the witnesses or additional materials for the record.

Without objection, this hearing is adjourned.

[Whereupon, at 6:42 p.m., the subcommittee was adjourned.]

APPENDIX

KING & SPALDING

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November 4, 2019

BY ELECTRONIC MAIL

The Honorable Jerrold Nadler
Chairman
United States House of Representatives
Committee on the Judiciary
2138 Rayburn House Office Building
Washington, DC 20515

RE: Google's Response to Subcommittee Questions for the Record Received September 13, 2019

Dear Chairman Nadler:

On behalf of our client, Alphabet Inc. ("Alphabet," its subsidiary "Google," or "the Company"), I am writing in response to your September 13, 2019 letter requesting responses to questions for the record from the Subcommittee on Antitrust, Commercial, and Administrative Law, following the Subcommittee's July 16, 2019 hearing titled, "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship." Google has asked me to formally submit information responsive to the Subcommittee's questions for the record (see attached Appendix A). Today's submission supplements information Google has provided to the Subcommittee at the hearing on July 16, 2019, in its prior briefing for Committee staff on June 25, 2019, and throughout its long-standing and productive engagement with the Committee.

In responding to the Subcommittee's questions at the July 16 hearing, Adam Cohen used his best efforts to be as accurate and responsive as possible based on his knowledge and recollection of the facts. Similarly, in responding to the Subcommittee's subsequent questions, Google has used its best efforts to be as accurate and responsive as possible based on its understanding of the terms used in your questions. The representations herein are based on reasonably available information and are not intended to, and do not, capture every fact related to the topics raised during the hearing or in your questions for the record.

Some of your questions call for material non-public information, as well as highly confidential and proprietary information that Google does not share publicly. Other questions call for more granular information than Google tracks in the ordinary course of its business. Google is happy to coordinate with the Subcommittee regarding a briefing on these issues or other alternative means of providing this information in a confidential manner.

In providing information and documents in response to your requests, the Company does not waive, nor does it intend to waive, any of its rights or privileges with respect to this inquiry, including any applicable attorney-client, work product, or other evidentiary privilege, or any objections to the assertions or questions in your letter.

Should you have any questions concerning the information provided herein, please contact me directly at 202-626-5575.

Sincerely,

Alicia C. O'Brien

cc: The Honorable David N. Cicilline,
Chairman, Subcommittee on Antitrust, Commercial, and Administrative Law
The Honorable Mary Gay Scanlon

Enclosure

Appendix A

GOOGLE'S SUBMISSION IN RESPONSE TO SUBCOMMITTEE QUESTIONS FOR THE RECORD FOLLOWING JULY 16, 2019 HEARING

Written Questions for the Record from the Honorable David N. Cicilline

1. Please identify the average number of daily search queries submitted in the U.S. to Google Search for each quarter since 2004, broken down by:

a. Number of queries submitted on desktop; and

b. Number of queries submitted on mobile.

Providing users with the information they seek is core to our business model, our company's mission, and our success. While we don't have more detailed public metrics, we can confirm that Google Search responds to trillions of user queries from around the world every year. Our industry is highly dynamic and drives innovation that gives consumers better choices for lower costs. Thus, we've seen an increase in searches on mobile versus desktop. In fact, more than 50% of those trillions of searches we see are on mobile. They are also geographically diverse, with more than 50% of our searches coming from outside the United States. And we are constantly competing to serve our users with new information: every day, 15% of the queries we process are ones we've never seen before.

We also face robust competition from other sites on the Internet, with intense competitive pressure on us to ensure users find what they are searching for—regardless of the source. For every type of query — travel, news, local, video, images, etc. — there are many different sites competing with Google to attract users. When consumers want to search for information, they can choose from Amazon, Yelp, Microsoft, Travelocity, and many other companies that consistently report strong user growth. As an example, 55% of consumers start their product searches on Amazon, making it one of our many successful competitors. We also face formidable competition around the world, with an ever-increasing competitive environment emerging from other continents. As a result, we invest heavily in research and development to compete in a global environment with other global players. Google last year spent $21.4 billion on research, development, and related areas, which is three times more than what we spent in 2013. We are committed to finding better

ways to connect people with the information about the world around them through Search, and fulfilling ever-growing expectations for how quickly users receive answers from digital services.

2. Please identify the average number of daily search queries submitted globally to Google Search for each quarter since 2004, broken down by:

a. Number of queries submitted on desktop; and

b. Number of queries submitted on mobile.

We are always striving and competing to serve users globally: our platforms are about sharing information everywhere, making products for everyone, and giving many different people in the world a voice. As described in response to Question No. 1, above, our users are geographically diverse. Google Search responds to trillions of user queries from around the world every year, with more than 50% of those searches coming from users outside the United States. Our competitors are similarly diverse. We face formidable competition around the world, with an ever-increasing competitive environment emerging around the globe. Our industry is highly dynamic and drives innovation that gives consumers better choices for lower costs. In addition to competitors such as Microsoft, Yelp, and Amazon, we face competitors like Bookings.com and Flipkart, and therefore invest heavily in research and development, so we can compete in a global environment with other global players.

3. Please identify the percentage of search queries per year since 2004 that have terminated on Google's search engine results page (SERP).

4. Please identify the percentage of search queries per year since 2004 that have terminated on a page with a Google domain (including on Google's SERP).

Because the answers to these questions are related, we have grouped together our response to Question Nos. 3 and 4.

Google's goal with Search is to deliver the most relevant and reliable information available to our users. Search has long sent extraordinarily large amounts of traffic to third parties, and the vast majority of click-throughs from Google's Search results page are to non-Google domains. While we don't have more detailed public metrics on search query terminations and click-throughs, we have designed Google Search to provide people with accurate and useful information, much of which is on non-Google

domains. That's because our mission, since the very beginning, has been to organize information on the web and make it universally accessible and useful.

We do not necessarily know why a user terminates their search with Google. Users decisions are varied and based on information we cannot assess. For example, it may be that some users are dissatisfied by the answer or results and switched to an alternative, whether that is a different search engine (like Amazon, for shopping, or OpenTable, for nearby restaurants with open reservations). Others may have realized that a different search query is more likely to help them find the results they are looking for (by entering a new search query into a search bar, for example, this would mean that the original search appeared to "terminate" on Google, but, in fact, they continued to search). Others may have found what they needed. Whatever the reasons, we understand that providing users with the most useful and accurate information is the reason they will come back to use our search engine again.

5. Please identify the percentage of search queries per year since 2004 that have resulted in a click-through to a non-Google domain.

6. For each year since 2004, please identify the percentage of clicks on Google's search engine results page that have been directed to:

a. A non-Google domain; and

b. A Google-owned domain.

Because the answers to these questions are related, we have grouped together our response to Question Nos. 5 and 6.

As noted above in Question No. 4, Google has long sent extraordinarily large amounts of traffic to third parties, and the vast majority of click-throughs from Google's Search results page are to non-Google domains. While we don't have more detailed public metrics on search query terminations and click-throughs, our goal is to provide users with accurate information in a useful way, which is the reason users will come back to use Google Search again.

To better understand the search ecosystem in which we operate, it is useful to understand our mission and how Google Search works. The success of Google Search is dependent on its ability to provide the most relevant and reliable information

available, and we understand that is what users want, whether or not those results are from Google or non-Google owned domains.

Every time our users search, there are thousands, sometimes millions, of webpages with helpful information. How Google figures out which results to show starts long before we even receive a query: we organize information about webpages in our Search index. We then use software known as web crawlers to discover publicly available webpages. Crawlers look at webpages and follow links on those pages, much like you would if you were browsing content on the web. They go from link to link and bring data about those webpages back to Google's servers. When crawlers find a webpage, our systems render the content of the page, just as a browser does. We take note of key signals — from keywords to website freshness — and we keep track of it all in the Search index, which contains hundreds of billions of webpages. Our Search Algorithms are designed to sort through those billions of webpages to find the most relevant, useful results in a fraction of a second, and present them in a way that helps our users find what they are looking for, looking at factors such as the words of your query and the usability of webpages.

7. Please describe how Google currently measures the quantity of traffic it refers to other websites, through paid results and organic results.

Google currently measures the quantity of traffic it refers to other websites by logging user activity like queries and clicks, and then using tools that analyze those logs to produce aggregate metrics that, in our experience, correlate with user satisfaction with Google Search results. While these metrics may provide information about traffic that is referred to other websites, the primary purpose of our analysis is to improve Google Search's ability to provide the most relevant, accurate, and reliable information available in response to a user query.

Google is an industry leader in providing choice, transparency, control, and security for user data. At Google we believe a user should be in control of the information that is shared with Google when searching the web. As explained in more detail below in response to Question No. 97, in 2015 we initiated MyAccount (now Google Account), which lets users make informed choices about their data through easy-to-use tools designed to help manage their privacy and security, including management of their Web and App Activity. We also offer instructions to users on how to search and browse the web privately on various browsers, including Chrome, Safari, and Firefox. For more detail, see

https://support.google.com/websearch/answer/4540094?co=GENIE.Platform%3DDesktop&hl=en.

Google is also invested in helping website owners be discovered in Search, and we provide a suite of tools and informational resources to help drive billions of visitors to websites small and large. We offer extensive resources to all webmasters to help them succeed in having their content discovered online — including interactive websites, videos, starter guides, frequent blog posts, forums, and live expert support. Website owners and others have access to resources on the Google Webmasters site, available at https://www.google.com/webmasters/#?modal_active=none.

8. Does Google set targets for search metrics? If yes, please identify all targets and describe Google's reason or method for setting each target.

Google's target metric for Search is to continually improve user satisfaction by delivering the most relevant and reliable information available in response to a user query. We're always looking for ways to improve a user's search experience, and these improvements are largely made through experiments on various queries with feedback from our third party Search Quality Raters. These Raters are trained on and subject to extensive guidelines (available at https://static.googleusercontent.com/media/guidelines.raterhub.com/en//searchqualityevaluatorguidelines.pdf). Rater feedback helps us understand what changes make Search more useful and to categorize information to improve systems.

Google faces stiff competition worldwide and constantly competes to provide our users with the best and most current information. Every day, 15% of the queries we process are ones we've never seen before so our search capabilities must evolve constantly to benefit our users, fulfill our mission, and compete in the digital marketplace. For that reason, we invest heavily in research and development of Search. This includes conducting over 500,000 search quality tests and thousands of search traffic experiments in 2018 alone. Our Search Quality Raters are heavily involved in these experiments. This work led to over 3,000 launches devoted to improving the quality of Google Search so that our users can find what they are looking for. Google remains dedicated to its mission to organize the world's information and make it universally accessible and useful, and we will continue our efforts to improve Google Search to meet that goal.

9. Please describe Google's current policy on copying or scraping content from third parties.

Google is committed to leading on transparency and consistent with that goal, we provide our policies regarding how we create our Google Search index and a detailed description of how Google Search works on our "How Search Works" site, at https://www.google.com/search/howsearchworks/ and our Search Console Help Center, at: https://support.google.com/webmasters#topic=9128571. As those sites describe, Google Search operates by building an index of the World Wide Web so that users can be offered links to content relevant to their queries. In general, if a web page is publicly available and found by our crawlers, and configured to provide information to Google, we will download that information and include it in our index. When doing so, we always identify ourselves as "Googlebot," allowing webmasters to exercise control at the point of crawling.

Google respects industry-standard controls by which webmasters can tell Google not to crawl their content (via robots.txt, see https://support.google.com/webmasters/answer/6062608), and not to index it (via the "noindex" directive, see https://support.google.com/webmasters/answer/93710). We also offer a number of granular controls allowing webmasters to specify that Google should not use certain content or use it only in certain ways. For example:

- Webmasters can specify that their data should not be included in Google Images (https://support.google.com/webmasters/answer/35308) or Google News (https://support.google.com/news/publisher-center/answer/93977).
- They can opt out content from particular domains from appearing in a set of our products (https://webmasters.googleblog.com/2013/03/a-new-opt-out-tool.html).
- Webmasters also can direct that we not show a snippet or cached copy of the page (https://support.google.com/webmasters/answer/79812).

Most recently, we have offered webmasters additional controls that allow them to specify limits on the "snippet" that is shown in our search results, sizes for image previews in Google search results, as well as identifying portions of their page that should be ineligible for inclusion in the snippet (https://webmasters.googleblog.com/2019/09/more-controls-on-search.html).

We are always working to be good stewards of Search, and will continue to develop additional tools to allow webmasters to control if and how their sites appear in Google Search.

10. Please identify which, if any, third parties have expressly permitted Google to copy or scrape their content, including the form and substance of the communications.

Our business model and mission is to provide our users with the most accurate and useful information. Consistent with that goal, Google Search indexes available websites, and we rank our Google Search results based on their relevance to the user query. As described in response to Question No. 9, if a web page is publicly available and found by our crawlers, and configured to provide information to Google, we will include it in our index.

From time-to-time and for the purpose of optimizing user results on Google Search, we enter into contractual agreements with third party data providers who are particularly well-positioned to supply our users with reliable and up-to-date content. For instance, we have an agreement with The Weather Channel to provide us and our users with up-to-date weather information, as well as with numerous stock exchanges and other financial information sources to provide share quotes and other financial data. Such content licensing agreements is one way we improve Search and give our users the most useful and accurate information available. We will continue to invest in ways to improve Search so that users can find useful and accurate information when they choose Google Search.

11. Please describe the steps third parties can take to prevent Google from copying or scraping their content.

Webmasters can take a series of steps to control how Google crawls, indexes, and uses content. As described in Question No. 9 above, Google respects industry-standard controls by which webmasters can tell Google not to crawl their content (via robots.txt, see https://support.google.com/webmasters/answer/6062608), and or having crawled it, not to index it (via the "noindex" directive, see https://support.google.com/webmasters/answer/93710). We also provide a number of tools for webmasters to control how Google crawls, indexes, or uses content from their websites, including controls that allow webmasters to specify that their data should not be included in Google Images or Google News, opt

out content from particular domains, and to specify limits on the "snippet" that is shown in search results. Google is always looking for ways to enhance tools and controls to improve Search, and will continue to do so.

12. Please explain how Google's algorithm takes into account whether a third party has allowed or disallowed Google from scraping its content.

Google Search respects industry standards regarding web crawling and works to create tools to allow webmasters control over this process (please see our response to Question No. 9, above, for more detail regarding the tools made available to webmasters). In order for a web page to be included in Search results, it is generally necessary that the page be indexed by Google. Thus, if a website owner decides to exclude certain content via robots.txt, it will normally not be indexed and, in turn, will be unlikely to surface in our Search results.

Additionally, if a webmaster uses one of the controls mentioned above in response to Question No. 9, Google's algorithm will ensure that those controls are respected. For instance, if a website operator has used the opt-out for a particular domain, information for that domain will not appear on the affected products. A site's decision not to allow Google to show certain content will not directly affect its ranking in Google Search, unless the site uses an opt-out control for organic search itself.

13. Has Google ever represented to any third party that it would remove the third party's listing or content from its general web search results unless the third party permitted Google to copy or scrape their content? If yes, please describe the relevant circumstances.

Our company mission is to organize the world's information and make it universally accessible and useful. To keep information openly accessible, we only remove content from our search results in limited circumstances, such as compliance with local laws or site owner requests.

Google strives to be a good steward of Search and to work with webmasters to meet their needs for Search. It is simply not possible for Google to include content from third-party websites in its search results unless Google first crawls the content from the site into its Search index. Google has at times heard from webmasters who have expressed a desire that our controls should be more granular; for instance, that there should be a control allowing content from a site to be excluded from certain features

of Google Search without excluding it from Search as a whole. As explained in more detail in response to Question No. 9, we offer a number of granular controls allowing webmasters to specify that Google should not use content it has downloaded, or should use it only in certain ways. We are always looking for ways to improve Search, including adding additional granular controls governing how websites are displayed in Search, and will of course continue these efforts.

14. For each of the past five years, please identify the percentage of clicks on Google's search engine results page that consist of news articles.

15. For each of the past five years, please identify the percentage of clicks on "Trending Queries" that consist of news content.

16. For each of the past five years, please identify the percentage of clicks on high-volume queries in Google Search that consist of news content.

Because the answers to these questions are related, we've grouped together our response to Question Nos. 14 through 16.

Google Search was built to provide everyone with access to information on the web. Every time a user searches on Google, there are thousands, sometimes millions, of web pages with helpful information. When users are looking for news, those pages could be from sources ranging from large traditional news publishers, to new digital outlets, local news sites, or nontraditional outlets such as Twitter. Google strives to sort through those and connect users with the most relevant information based on the text of their query.

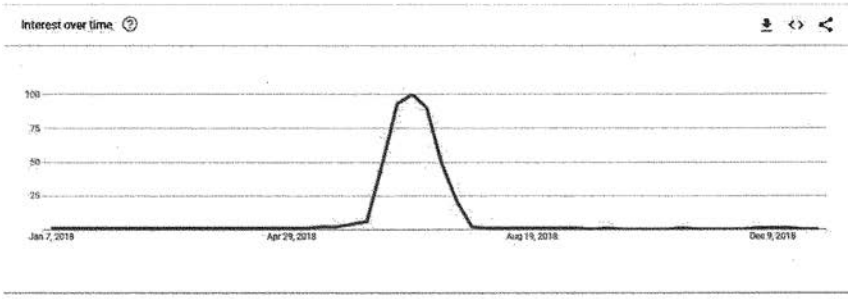
Our news experiences are designed to help users quickly discover relevant, authoritative news from a range of sources across the web. If a user searches for a topic that is in the news, their results may include some news articles labeled "Top Stories" at the top of the results, featuring articles related to the search and a link to more related articles on the News tab. Users can also search for news stories and see context and multiple perspectives in the results on http://news.google.com/, news on the Assistant, and within the "Top News" section of search results on YouTube. Depending on the search terms a user uses, news articles may also surface in our Search results. And, of course, search results can also include news from nontraditional outlets, like Twitter, blogs, or other sites. For these reasons, whether an individual link is considered "news content" can vary, based on whether that definition

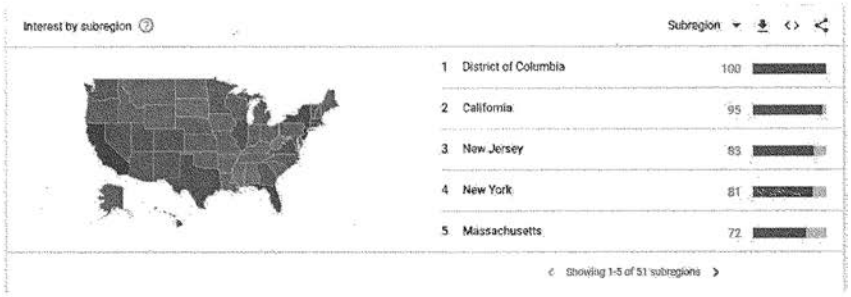
includes social media sites, like Twitter, and non-mainstream media sites, like blogs, among other factors.

We recognize people are interested in Search and associated trends, which is one of the reasons we created our Google Trends site, available at https://trends.google.com/, where people can find data on trending topics in the news and related data, as well as several other topics.

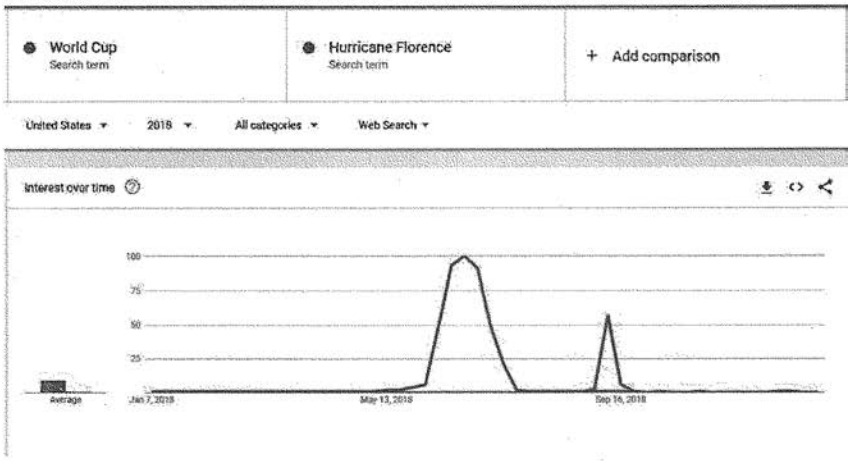
The Google Trends site provides the ability to sort data such as trending news topic by year or country and to compare terms against each other. The tools on Google Trends enable a user to sort news searches by location, volume of interest, and trends over time.

For example, the most popular news topics in the United States during 2018 were "World Cup," followed by "Hurricane Florence," and then "Mega Millions." Using Google Trends to further analyze the search term "World Cup" in the United States for that year, our Google Trends site shows that interest peaked during the summer months of 2018 and that interest was particularly strong in the District of Columbia, California, and New Jersey.





Comparing the term "World Cup" against the term "Hurricane Florence" shows comparable volumes and timing of searches run on those two terms during 2018.



Additional analytics report data on news and other searches trending over the past 90 days, 30 days, 7 days, 24 hours, 4 hours, and even the past hour. Google will continue to look for ways to help publishers understand trends in news queries through Google Search.

17. For each of the past five years, please identify the value of news articles crawled on Google Search, including but not limited to any value derived for:

a. Drawing traffic to Google Search;

b. Improving search results on Google Search;

c. Collecting data for Google Ads;

d. Collecting data for Google Home; and

e. Collecting data for any machine learning projects.

Google drives valuable referral traffic to news sites — approximately 24 billion visits to news publishers globally each month; or 9,000 visits (clicks) a second. This allows publishers to build new audiences and grow revenue. Deloitte conducted a recent study of European news publishers, and found that web search referral traffic supports 6.2% of news publishers' total revenue. In addition, the Deloitte study found that the average value (measured in revenue) to a publisher of web visits were .04 to .06 euro per web visit/click. For more information, please see https://www2.deloitte.com/content/dam/Deloitte/es/Documents/financial-advisory/The-impact-of-web-traffic-on-revenues-of-traditional-newspaper-publishers.pdf. An overwhelming number of news queries do not show ads. And, although publishers can opt-out of search, an overwhelming number of publishers do not choose to do so.

We work hard to provide our users with a useful and trustworthy source of information and to ensure the most relevant results are surfaced on Search, and that includes when a query may call for information that is in the news. We believe that the inclusion of links to news articles in Google Search benefits both publishers and users by helping them find each other, as readers find sources of news information and publishers receive traffic which they can monetize through advertising and subscriptions. Google benefits by being able to fulfill its mission of organizing the world's information and making it universally accessible and useful. Theoretically, improving the quality of its search results generally, including by surfacing quality and relevant news results, might be said to result in increased traffic; however, this is a qualitative benefit, not a direct monetary benefit.

Further, we've worked with publishers of all sizes to make Google work better for them. Our "Subscribe with Google" feature was a specific ask from publishers who wanted us to help support their business models. We have also launched a series of labs working directly with local publishers to drive value in their subscriptions and improve their underlying data capabilities.

18. For each of the past five years, please identify the percentage of video search results on Google that consist of YouTube results.

19. For each of the past five years, please identify the percentage of video search traffic on Google that terminates on YouTube.

Because the answers to these questions are related, we've grouped together our response to Question Nos. 18 through 19.

YouTube is one of several online digital platforms for sharing videos that may appear in Search results for inquiries that may call for video content. A user may specify YouTube in a search query for video content, but also may not, or may request results from a different online digital platform, such as Twitch. Google Search strives to deliver the most relevant and reliable information available to the user. Thus, when a user searches for video content, results will include links to YouTube and other online digital platforms if those are the most relevant links responsive to a user's query. YouTube is a content rich digital platform, with over one billion hours of content watched on a given day. If a search query seeks a video that is on YouTube and not on another platform, such as Twitch, Google Search will surface the most relevant link, and in this example, that would be YouTube. As noted below in Question No. 21, Google Search is not designed to favor YouTube over other online digital platforms in Search ranking.

20. Since 2014, Google has stopped allowing video providers such as Vimeo, Wistia, and others to be embedded on Google web pages and displayed in Google's video results.

a. Why did Google institute this change?

b. Please describe the effects of this change.

Google has not stopped allowing video providers such as Vimeo, Wistia, and others to be included in our search results, including in the "Videos" tab in Search and in the video thumbnails at the top of the Search page. We are unsure what is referred to by "stopped allowing video providers...to be embedded on Google web pages"; it is possible, for instance, to embed Vimeo-hosted videos on Google's Blogger service.

21. Does Google plan to continue favoring YouTube in this manner for the foreseeable future?

Google Search is not designed to favor YouTube over other online digital platforms in Search ranking. The success of Google Search is dependent on its ability to provide the most relevant and reliable information available, understanding that is what users want, whether or not those results are from Google or non-Google owned domains.

22. Why is Google review content excluded from the organic index?

When a user searches for information about a place, user reviews may appear in a formatted search unit about that place. We work hard to provide our users with a useful and trustworthy source of information and continuously work on ensuring that the most relevant results are surfaced. Consistent with those goals, Google has assembled different indexes for different types of online content, e.g., websites, images, videos, book excerpts, scholarly articles, and news. When a user enters a query, Google may display relevant search results from some or all of those indexes depending on the inferred intent of the query. For instance, Google's review content is part of its local index, as is other information about local places such as the address, hours of operation, and phone number of a particular establishment. The local index is used to display relevant search results when a user enters a query related to a place, such as "pizza washington dc." If users do not find our search results to be helpful, they can and will use another general search engine or go to a specialized vertical search site. Providing the best possible search results is one way we meet our commitment to our users, and we'll continue to work hard to improve them.

23. In Google's view, is it economically feasible to develop a competitive search engine without either (a) creating a comprehensive and up-to-date index of websites; or (b) entering into an arrangement with a search syndicator? Please explain why or why not.

Developing a comprehensive and up-to-date index of websites or entering into an arrangement with a search syndicator is certainly an option, but not a requirement to developing a search engine in this robust and competitive environment. Search engines have different methods of displaying relevant results to users; some search engines utilize an index of websites while others do not. For search engines that provide links to other websites and other online content, some develop their own results, such as Google, Microsoft, and Baidu, and other search engines license their

results, such as DuckDuckGo and Yahoo!. Search providers can also obtain information on indexed sites from third-party indexers, such as the non-profit organization Common Crawl.

There are also many search engines that operate without displaying links to other websites and instead focus on providing different types of content (e.g., specialized search engines in local, travel, and shopping). And in the last several years, it has become even easier to create new, competing search services. Merchants face low barriers to entry and use standardized data formats to put their product listings online, and user-generated content allows sites to rapidly add searchable content to provide answers without the need for crawling or indexing. The availability of such data sources means that it is increasingly easy to create a successful search site in categories like flights, hotels, product search, local ratings and reviews, and restaurants.

24. Does Google obtain, or seek to obtain, any data related to, or associated with, individual search queries from search syndication partners? If yes, please identify the types of data and describe the relevant circumstances.

Yes, all search syndication services, including those offered by Google and Bing, obtain search query data from their search syndication partners. Search syndication services cannot function unless participating sites send search queries to the syndicator's servers. When Google syndicates search results, the syndication partner transmits user queries to Google, then Google generates a list of results and sends them back to the partner, so that the partner can render the results to the user.

25. Does Google require, or has it ever required, search syndication partners to share any type of data with Google as a condition of using Google's syndication services?

a. If yes, please identify what types of data. Google requires search syndication partners to share with Google.

b. If yes, please explain why Google requires search syndication partners to share this data.

c. If yes, please describe how Google uses this data.

Except for the basic data — i.e., the queries themselves and metadata like IP address — required to provide the services, Google does not require, and in the past has not required, that search syndication partners share any other type of data with Google as a condition of using Google's syndication services.

26. Does Google offer differential terms to search syndication partners based on whether they do or do not share user data with Google? If yes, please describe them and explain the reasons for each differential term.

No, Google does not offer differential terms to search syndication partners based on whether they do or do not share user data with Google.

27. Please identify and describe any conditions that Google imposes, or seeks to impose, on downstream providers who provide users with ad-blocker or tracker-blocker functionality. Please explain how these conditions vary across platforms or devices, such as desktop, mobile, apps, extensions, and browsers.

Google does not impose limits on the ability of third parties to use or develop ad-blockers. For more information, please see https://security.googleblog.com/2019/06/improving-security-and-privacy-for.html.

Numerous ad blocking services and browsers are available through Google Search. With respect to its own web properties, Google also provides a platform for distribution of numerous third-party ad blockers: for Android devices through the Google Play Store, and for devices running Chrome or Chrome OS through the Chrome Web Store. Unlike other companies that require their browser to be set as the permanent default on all their devices, Google actively facilitates the ability of users to choose browsers, applications, and extensions of their choice, including those that include ad blocking functionality. As a result, numerous ad blocking apps, browsers, and extensions are available throughout Google's ecosystem, including on Android and as extensions for Chrome.

Chrome's policies are the same for all developers on the Chrome Web Store platform, regardless of an extension's functionality. The only requirements placed on Chrome and Android ad blocker developers by Google are the same as those placed on all app developers: namely, that Android apps comply with Google's Play Store Developer Distribution Agreement and that Chrome extensions comply with the Chrome Web Store Developer Agreement. The policies in these agreements apply to all developers,

and do not prohibit or restrict ad blocking or any other category of functionality that complies with the Chrome Web Store and Play Store policies. For more information, please see https://blog.chromium.org/2019/06/web-request-and-declarative-net-request.html.

28. Does Google ever require downstream providers to allow ads and/or trackers embedded in ads to pass through ad- or tracker-blocker filters? If yes, please explain why Google requires this and describe the relevant circumstances.

No. Google has no requirements for Chrome extensions to allow ads or trackers embedded in ads to pass through ad- or tracker-blocker filters.

29. Please describe the types of algorithms that Google offers or markets to downstream providers as part of its search syndication services.

Google offers several search syndication options (Google Custom Search), each of which is based on Google's core search technology. With Google Custom Search, providers can create a search engine for their websites, blogs, or a collection of websites. For instance, providers can create a search engine that searches only the contents of one website (site search), or can create one that focuses on a particular topic from multiple sites. Providers can also customize the look and feel of search results, add promotions to search results, and leverage structured data to customize search results. For more information, please see the guide for users available at https://developers.google.com/custom-search/docs/overview.

30. Does Google allow downstream providers to purchase an algorithm feed on commercially reasonable terms without requiring an accompanying ad feed?

Yes, Google Custom Search offers both "ads" and "ad-free" options. For instance, a provider has the option to connect its search engine with a Google AdSense account to display relevant Google ads on the provider's result pages. When users click on an ad in search results, the provider gets a share of the ad revenue.

For more information, please see the guide for users available at https://developers.google.com/custom-search/docs/overview.

31. Does Google impose any kind of exclusivity provisions in its agreements with search syndication partners? If yes, please describe each type of exclusivity provision and explain why Google requires it.

Google syndicates search results and advertisements. Our standard terms for our online syndication agreements for search and ads do not contain any exclusivity provisions. Partners can also choose to not include search advertising alongside their search results. We also have negotiated agreements with larger syndication partners that contain individually negotiated terms.

Google's standard search syndication feature, known as Custom Search Engine, allows webmasters to embed custom Google search results on their site. The Custom Search Engine terms (https://developers.google.com/custom-search/docs/overview) do not contain any exclusivity provisions, and Google does not seek to impose any such requirements on partners.

As noted, Custom Search engine partners also have the choice of whether or not to include search advertising alongside their search results, which allows them to earn revenue for each search a user conducts. This program, known as "AdSense for Search," is also non-exclusive, and its terms are publicly available online (https://support.google.com/adsense/answer/1354757?hl=en).

Partners with negotiated agreements are generally free to display websearch results from competitors, but Google generally asks that Google websearch results are not displayed on the same page as results from another websearch provider in order to prevent ambiguity or consumer confusion about which results are provided by Google.

Partners with negotiated agreements typically also include terms related to search ads syndication. While each of these agreements is unique, typical terms include a minimum number of search ads to be displayed together with no substantially similar ads above or directly next to them, and limitations on the font and color of other text-based search ads to ensure that users do not mistake them for Google ads. In exchange, the publisher typically receives a larger share of Google search advertising revenue from searches on each selected site. These terms only apply to sites selected by a partner, and only apply to within-site search advertisements, not to other competing types of advertising, such as display and product ads. Publishers choose which of their websites to include in the agreement.

32. Are there any categories of vertical search feeds (e.g., images, news, video) that Google does not make available for syndication? If yes, please identify each category and explain why it is not made available.

Google's Custom Search Engine allows partners to select and customize the categories of content they receive, including giving partners the ability to create custom "topical" search engines that focus on a specific source or type of result (https://developers.google.com/custom-search/docs/topical). For partners who are interested in specific types of content, Google also makes available the option of an individually negotiated agreement.

In addition, for certain types of content, Google licenses specific APIs such as for Google Maps (https://cloud.google.com/maps-platform/) and Google News (https://newsapi.org/s/google-news-api).

33. Does Google require search syndication partners to include any additional product or service components? If yes, please identify each required product or service and explain why it is required.

Google does not require search syndication partners for search results or advertisements to include any additional product or service components.

34. Does Google specify any product design features that its search syndication partners must adopt (e.g., minimum number of ads per results page, notice-screens, default settings). If yes, please identify each required feature and explain wily it is required.

The standard Google Custom Engine and AdSense for Search (AFS) terms of use are publicly available at https://developers.google.com/custom-search/docs/overview and https://support.google.com/adsense/answer/1354757?hl=en. These terms contain no minimum ad or placement requirements, and contain only minimal formatting requirements designed to avoid user confusion and prevent fraud.

Partners with negotiated agreements are generally free to display websearch results from competitors, but Google generally asks that Google websearch results are not displayed on the same page as results from another websearch provider in order to

prevent ambiguity or consumer confusion about which results are provided by Google.

Partners with negotiated agreements typically also include terms related to ads syndication. While each of these agreements is unique, typical terms include a minimum number of search ads to be displayed together with no substantially similar ads above or directly next to them, and limitations on the font and color of other text-based search ads to ensure that users do not mistake them for Google ads. In exchange, the publisher typically receives a larger share of Google search advertising revenue from searches on each selected site. These terms only apply to sites selected by an AFS user, and only apply to within-site search advertisements, not to other competing types of advertising, such as display and product ads. Publishers choose which of their websites to include in the agreement.

35. Does Google constrain search syndication partners from blocking, moving, labeling, or re-ordering advertisements? If yes, please describe each type of constraint and explain all the reasons each constraint is imposed.

Google provides its search ad syndication partners (i.e., AdSense for Search or AFS partners) with several options for reviewing and blocking ads via the AFS user interface. For example, in the AFS user interface, publishers may block ads related to sensitive topics such as religion or politics, or from general categories, such as apparel, internet, or real estate; they may also block specific advertisers and creatives. In addition, publishers may customize the length and layout of the Google search box, and select colors or styles for AFS ad results, as well as choose different ad formats. Note that Google does not permit AFS publishers to alter AFS code, as per Google's program policy, to benefit and protect end users.

36. How does Google determine which developers are permitted to use Widevine?

Widevine is Google's proprietary digital rights management (DRM) component. Widevine's DRM solution provides the capability to license, securely distribute, and protect playback of content on consumer devices. Content owners, multiple service operators, and digital media providers utilize Widevine's solutions to ensure the secure delivery of premium content to their customers. Integration between Widevine and developers' platforms requires significant resources from both sides because of, in part, necessary technical integration discussions and robust testing.

Therefore, the experience and resources of an applicant are important factors in determining whether it is efficient to devote resources to enable a successful integration that meets studio DRM requirements.

All developers can apply for a free license to use Widevine. Among other successful integrations, Widevine has licensed its DRM to Mozilla (Firefox), Opera, Brave, Vivaldi, and the Electron open-source framework. Notably, Google licenses Widevine more broadly than alternative DRMs, such as FairPay and PlayReady. Widevine does not, however, support developers whose design facilitates unauthorized distribution of content or does not meet studio DRM requirements.

37. What factors determine whether Google's services (e.g., Google Docs, Gmail, YouTube) work as well on non-Google browsers as they do on Chrome? Please identify each factor that does or could account for any difference in functionality and explain the basis for including each factor.

As a developer of web services, it is in Google's best interests to have its products be as widely accessible as possible. Google works constantly with other developers to develop generally-applicable standards that benefit users of any browser. We also devote substantial engineering resources to running performance tests and troubleshooting before and after launches and updates to ensure that our web services function similarly across all browsers. We also provide dedicated support centers for each of our products that allow the community to bring to our attention any performance-related issues or bugs. When we become aware of performance bugs impacting users for any browser, we work quickly to address the issue.

38. What steps does Google take to ensure that Google's services work as well on rival browsers as they do on Chrome?

Google strives to make its products as widely accessible as possible, which includes making products that work well regardless of browser choice. To meet this goal, Google runs performance testing across browsers before and after launch. Google also provides in-product channels for users across browsers to provide Google feedback, as well as dedicated support centers for each of our products that allow the community to bring to our attention any performance-related issues or bugs. Additionally, Google works to better the web ecosystem for the vast array of digital services available to users for email, productivity, videos, and more by contributing to generally-applicable web standards that benefit all users of the internet, regardless of browser choice.

39. When Google updates Google's services, what processes does Google have in place to inform non-Google browsers of those changes?

When Google updates its services, we have processes in place to inform the developer community at large, which includes non-Google browsers. Making products available across all browsers meets our users' high expectations and helps achieve our goal to make each product useful and accessible to all of our users. To ensure our products work across several browsers, we regularly publish updates informing the developer community about upcoming new features and functionalities. We also provide dedicated support centers across browsers for our products that allow the community to bring to our attention any performance-related issues or bugs.

40. In September 2018, Google modified Chrome so that users who log into any Google service (e.g., Gmail) would automatically be signed into Chrome, subjecting users to greater tracking by Google. Does Google permit users to sign into Google services while using Chrome without also being signed into Chrome? If yes, please describe all the steps a user would need to take in order to prevent Google from signing the user into Chrome every time the user signs into a separate Google service. If no, please explain why.

Yes, users have the option to sign in to Google services in Chrome without being automatically signed in to Chrome. We are an industry leader when it comes to choice, transparency, and control for users, and this feature is no different. To learn more about how users can turn off automatic sign-in to Chrome through the steps described on the Google Chrome Help Page, please see https://support.google.com/chrome/answer/9159867?hl=en&ref_topic=7439538. For instance, as of the drafting of this response, the Help Page lists the following four steps:

1. On your computer, open Chrome.
2. At the top right, click More ⋮ > **Settings**.
3. At the bottom, click **Advanced**.
4. Under "Privacy and security," turn off **Allow Chrome sign-in**.
   - If you turned sync on in Chrome, turning off this setting will also turn off sync.

Google works to give users options when using our services. If a user does not turn off the automatic sign in, when that user signs in to their Google Account in desktop through Google services like Gmail, they are automatically signed in to Chrome. This feature was added in 2018 to give users one-click sign-in to their Google Account and to help users be more aware of their sign-in status, particularly when they share a single device among multiple users (i.e., a family computer). When a user is automatically signed in to Chrome upon sign in to a Google web service (e.g., Gmail), Google does not collect additional user data than it would have had the user only signed in to the Google service.

41. If a user visits, using a non-Google browser, a website that uses Google Analytics, will the website be slower to load than if the user had accessed the same website through Chrome? If yes, please describe the average length of delay and the source of the delay.

Google strives to ensure that its services work well no matter how a user accesses the web. Consistent with this goal, Google Analytics is designed to be compatible with all major browsers. For example, Google Analytics supports the two most-recent major releases of Firefox, Edge, Chrome, and Safari. In addition, Google does not design or use Analytics to favor Chrome over third-party browsers. When Google is informed about a performance issue of a service on a third-party browser, Google moves promptly to explore and redress the issue if possible. We are committed to taking steps to remedy performance issues as quickly and thoroughly as possible.

We created Analytics to simplify marketing analytics in the same way we simplified web search with Google.com. With infrastructure that allows us to handle billions of daily search queries — generating answers before users even finish typing — we set out to give enterprise marketers the same utility. Marketers need enormous computing power, data science, and smart algorithms, all working together to quickly make sense of data for them. Google Analytics' compatibility with major browsers helps enable Google to meet marketers' needs.

42. Does Google use Google Analytics to disadvantage non-Google web browsers? If yes, please describe the relevant circumstances and explain why Google engages in this conduct.

No. Google Analytics is designed to be compatible with all major browsers and is not designed to disadvantage third-party browsers. For example, and as noted above,

Google analytics supports the two most-recent major releases of Firefox, Edge, Chrome, and Safari.

43. If a user visits, using a non-Google browser that blocks Google Analytics, a website that uses Google Analytics, will the website be slower to load than if the user accesses the same website through a browser that does not block Google Analytics? If yes, please describe the average length of delay and the source of the delay.

Google strives to ensure that its services work well no matter how a user accesses the web. Google Analytics is designed to provide a consistent experience across all browsers without a perceptible difference in page load times, including for browsers using typical blocking techniques.

44. Does Google in any way limit the ability of users to install third-party extensions that affect how websites display and operate on Chrome and Chromium? If yes, please describe each limitation and explain all the reasons why each is imposed.

Since its launch in 2008, Google has worked hard to build an increasingly robust system of APIs for Chrome and Chromium as part of the Chrome Extension system, which has allowed developers to create more than 180,000 extensions for users to download and extend Chrome's functionalities. With a goal of further improving user security and protecting user privacy, as well as Chrome's security and functionality, Google periodically updates the Chrome Extension system, including adding new APIs and removing or replacing APIs that have become obsolete or proven to reduce user security. These platform improvements apply to the developers of all extensions available on the Chrome Web Store, irrespective of an extension's functionality. Google's objective in such updates is to improve the security, functionality, and performance of Chrome, not to limit the ability of users to install extensions of their choice.

Google has robust policies for developers that distribute their extensions through the Chrome Web Store. For example, an extension must have a single purpose that is narrow and easy-to-understand. Developers must not create an extension that requires users to accept bundles of unrelated functionality, such as an email notifier and a news headline aggregator, or that downloads a local executable. If two pieces of functionality are clearly separate, they should be put into two different extensions,

and users should have the ability to install and uninstall them separately. Ad blockers are not prohibited by policy, and are required to abide by the same policies as all other extensions. For more information, please see our Chrome Developer Program Policies available at https://developer.chrome.com/webstore/program_policies.

45. Has Google made, or does Google plan to make, any changes that will impede the ability of ad-blocking extensions to reliably detect ads? If yes, please describe each change and explain all the reasons Google has made, or plans to make, each change.

As noted above, Google periodically updates the set of APIs available to Chrome's extensions system as part of a broader effort to increase user security and privacy, but these updates are not designed to prevent ad-blocking, but rather to further user security and privacy. One of the many changes currently being contemplated involves replacing the Web Request API — which has been implicated in over 42% of recent malware found in the Extensions Web Store — with an upgraded version of the Declarative Net Request API. This change will improve user security, while still allowing ad blocking extensions to reliably detect and block ads. For context, Apple's Safari uses a similar API in Safari's ad-blocking technology. For more information, please see https://blog.chromium.org/2019/06/web-request-and-declarative-net-request.html.

46. Has Google made, or does Google plan to make, any changes to Chromium that will require non-Google web browsers to invest resources to restore previous levels of functionality? If yes, please describe each change and explain all the reasons Google has made, or plans to make, each change.

Chromium is an open-source project, whose code is used by Google as the foundation of Chrome and by many other developers as the foundation for their browsers (i.e., Microsoft's Edge Browser). Open source means that the source code is freely available for all users and other developers to use or modify as they see fit. Open-source projects reflect Google's support and commitment to community and transparency for the benefit of all users and the digital ecosystem. The open exchange of information and the benefits of collaboration inherent in open-source projects often result in the most cutting edge technology.

By virtue of its significant contributions to Chromium, Google actively subsidizes other browser developers who choose to use Chromium's code. Any project contributor — not just Google — is able to suggest improvements. Because

Chromium is constantly evolving and improving, sometimes existing functions will be replaced with new features, and Chromium-based browser developers will need to make a choice about whether to use their existing version of Chromium or upgrade to the newer version. Because Chromium is open-source, developers have access to both the latest version as well as prior versions. For more information, please see https://www.chromium.org/Home.

47. Please identify all of the ways that Google Search differentiates its treatment of publishers based on whether the publisher has or has not adopted Google's Accelerated Mobile Pages (AMP) and explain all the reasons for treating them differently.

Accelerated Mobile Pages (AMP) is an open-source HTML framework overseen by the AMP Open Source Project. As noted above in the response to Question No. 46, open-source projects are designed for the benefit of all users and the digital ecosystem. AMP helps webmasters create web pages that are fast, smooth-loading, and that prioritize the user-experience, which helps publishers create mobile-friendly websites.

Google's search ranking is based on over 200 factors that interact in complex ways. A web page's status as an AMP Page is not one of the factors considered. Specifically, content does not receive any ranking advantage in general Google Search results merely because it is AMP, and content is not penalized in organic Google Search results for being non-AMP.

Some limited Search features require AMP content for technical reasons. For example, there is a type of specialized search result called the "Top Stories carousel" on mobile devices, in which a selection of fast-loading mobile pages of news stories are displayed together to allow a user to quickly "flip" through them. Because the carousel user experience involves being able to click on an article in the carousel and then swipe between full pages of content in a "viewer" (essentially an AMP gallery), this carousel does require caching, privacy-preserving pre-rendering, and embeddability, which are implemented via the AMP framework on the technical level. Carousels typically appear only on mobile devices and only for certain content types, making up only a small portion of Google's overall search results.

Non-AMP content can and does appear everywhere else on the Search results page, including as part of the "Top Stories" block above the AMP carousel or in the organic

links that make up the remainder for the page. For more information, please see https://webmasters.googleblog.com/2018/01/using-page-speed-in-mobile-search.html.

48. When a user clicks on content that has adopted AMP, why does Google display that third-party content through a Google URL?

One of the advantages of the AMP format is that content can be locally cached close to the end-user, which allows it to load quickly and reliably. This lightens the burden on publishers to pay for or run expensive content distribution networks.

Google is one of the entities who runs an AMP cache, and links from Google Search go to those cached versions of publisher pages. Web browsers automatically display the URLs for Google's AMP cache when showing these fast-loading, locally-cached pages because that is the URL that is serving the content. However, because some publishers value having their own URL displayed with their content, even when that content is cached elsewhere, the AMP Project has created and implemented a feature known as "signed HTTP exchange" that allows for content to be displayed under the original publisher's URL regardless of where on the web it is cached. This is available through supported web browsers. Google does not display third-party AMP content under a Google AMP cache URL for publishers that have adopted this new technology.

49. Does Google Search privilege publishers who use AMP over publishers that adopt non-Google technical solutions that would also guarantee fast-loading pages? If yes, please describe the relevant circumstances and explain all the reasons why Google engages in this preferential treatment.

No. Google Search does not privilege publishers who use AMP over publishers that adopt non-Google technical solutions that would also guarantee fast-loading pages. As noted in response to Question 47, a web page's status as an AMP Page is not one of the factors considered by Google's search ranking algorithms. Specifically, content does not receive any ranking advantage in general Google Search results merely because it is AMP, and content is not penalized in organic Google Search results for being non-AMP.

50. For each of the past five years, what percentage of searches on Google are "location searches" that return a Google OneBox containing location information for an establishment?

Google Search responds to trillions of users queries from around the globe every year, driven by our company mission to organize the world's information and make it universally accessible and useful. Thus, if a user is searching for a specific restaurant, for example, Google Search results may include a link to that restaurant, as well as a map showing that restaurant's location. A search for "hot dogs DC" may bring back, among other results, a listing for Ben's Chili Bowl in Washington, D.C., along with that restaurant's address and a link to a map reflecting where Ben's Chili Bowl and other nearby result listings are located.

We do not have a standard definition for what searches are considered "location searches" and thus, cannot provide the specific information requested. For example, a user could search for "McDonald's" and receive menu nutrition information, the company's stock price, and local restaurant locations, among many other types of information. Whether a user intended this to be a location search would be unclear.

51. How does Google determine which establishments are highlighted in Google Maps?

Google maps is designed to allow our users to fully explore the world around them, from finding new restaurants to obtaining traffic updates while on their way. In Google Maps, establishments are represented by "labels." A label can consist of an icon, text, or both an icon and text. In many areas, there are vastly more establishments than can be shown without labels overlapping. In order to make Maps useful to users, overlapping labels are not shown in most cases. This means that where labels would overlap, one or more of the labels may be hidden unless the user zooms in far enough that there is space for the label to show. This applies to both establishments as well as to other features on maps, such as bus stops and parks.

Several factors determine which labels are shown and when they should be shown, including the popularity of the establishment (as measured by searches or visits in general or with tourists), whether the user has previously searched for or visited the establishment, or whether the user has saved the place for later viewing, among other factors. Our goal is always to provide a user with the most accurate and useful information, while on Google Maps or on any Google product.

Establishments may also highlight their establishment on Google Maps through purchasing ads on Google AdWords. Using a local campaign, advertisers can bid to

show up on Google Maps with a special pin with a custom logo and accompanying text.

52. For each year since 2014, what percentage of mobile apps with map functionality have used the Google Maps Platform?

Google Maps Platform allows developers to embed Google Maps into mobile apps and web pages, or to retrieve data from Google Maps. We compete against a number of other companies that provide map functionality, including Apple, Foursquare, MapBox, Here, and others. Whether a developer decides to use Google Maps Platform versus services from a competitor, such as Apple, is a developer decision to which Google does not have insight. While device manufacturers and app stores, such as Apple's App Store and Google Play Store, may offer devices or apps with map functionality, Google is not in a position to query the total number of apps with map functionality to understand how many of such apps choose to use Google Maps Platform versus a competitor's product.

53. Please identify any conditions that Google imposes on app developers who use Google Maps Platform functionality in their apps.

Most of Google's partnerships with app developers who choose to use Google's Maps Platform are subject to the Google Maps Platform Terms of Service, which are available at https://cloud.google.com/maps-platform/terms. Other partnerships are governed by individually-negotiated contracts.

54. Please identify all of the ways that Google limits the ability of app developers who use the Google Maps Platform to also use non-Google mapping services and explain all the reasons for each limitation.

As noted in the Google Maps Platform Terms of Service, available at https://cloud.google.com/maps-platform/terms, Google's agreement with app developers is non-exclusive, and does not limit or prevent them from also collaborating with other mapping services, such as Mapbox and OpenStreetMap. In section 3.2.4(e) of these terms of service, in order to prevent brand confusion and other negative user experiences, we do restrict developers from incorporating Google Maps Core Services into an application that uses a non-Google map. For example, this might restrict a developer from displaying certain Google map data on a non-Google map.

55. Is the placement a business receives in Google Maps at all affected by whether that business purchases ads through Google? If yes, describe the relevant circumstances and explain why Google engages in this conduct.

Businesses can purchase ads in Google Maps to highlight their business location, and those ads are clearly labeled as ads for the user. In those instances, ads that feature the business location may appear when users make searches on the Google Maps mobile app. Businesses are charged a standard cost-per-click (CPC) for these types of clicks on local search ads. For more information, please see https://support.google.com/google-ads/answer/3246303?hl=en.

Aside from this ad product, businesses can optimize the likelihood that their results will be surfaced in Google Maps by providing and updating information about their business in Google My Business, which is free. Providing and updating business information in Google My Business can help a business's local ranking on Google and enhance its presence in Search and Maps. Local results favor the most relevant results for each search, and businesses with complete and accurate information are easier to match with the right searches. For more information, please see https://support.google.com/business/answer/7091?hl=en.

56. Does Google permit non-Google mapping services to appear in map results in local search boxes? If no, please explain all the reasons why.

Yes, other mapping services, such as MapQuest, Yahoo Maps, and OpenStreetMap are available on Google through its general web search results, which provide information about what is available on non-Google sites. Users can easily click through to the sites of third-party map providers (who operate their own local indexes) if they prefer to use those services, and can also navigate directly to their website, download their mobile apps, or access competing map services in other ways.

Our users receive tremendous value from quickly seeing highly relevant and high quality answers from Google's map results. These results are drawn from its local index, which contains information regarding places, such as hours of operation and reviews. The local index is formed with a variety of sources, including business owners' content, user-generated content, crawled content, and commercially licensed content. The use of a structured database with data about places like type of

business, hours, location in relation to the user, reviews, etc., further enables our algorithms to consider all of these attributes to provide better local results that can be easily filtered and sorted. For more information, please see https://support.google.com/business/answer/7091?hl=en.

57. Does Google require users or developers to utilize any part of the Google Maps Platform as a condition for using any other Google service? If yes, please identify each requirement and explain all the reasons for each requirement.

No. Google does not require users or developers to utilize any part of the Google Maps Platform as a condition for using any other Google service.

58. Does Google require users or developers to utilize another Google service as a condition for using the Google Maps Platform? If yes, please identify each requirement and explain all the reasons for each requirement.

No. Google does not require users or developers to utilize another Google service as a condition for using the Google Maps Platform.

59. What types of data does Google collect from apps that use the Google Maps Platform? Please identify each type of data and explain how each is used.

Google works hard to provide choice, transparency, control, and security for user data. We were one of the first companies to offer a centralized data portal when we launched MyAccount in 2015 (https://myaccount.google.com). Now referred to as Google Account, the portal provides easy-to-use tools to help manage privacy and security. That includes our Privacy Checkup tool (https://myaccount.google.com/Privacycheckup) that lets our users review and change their privacy settings:

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Privacy Checkup

Review key settings & the data Google uses to personalize your experience

- Activity controls reviewed
- Phone numbers reviewed
- About you reviewed
- Ad settings reviewed

When you're done, also consider reviewing your settings in the products you use most, like Maps, YouTube, and Gmail

Personalize your Google experience

Choose whether to save activity data in your Google Account for faster and more useful Google services, like better commute options in Maps and quicker results in Search



Web & App Activity (Paused)

Used by Assistant, Google Maps, and others

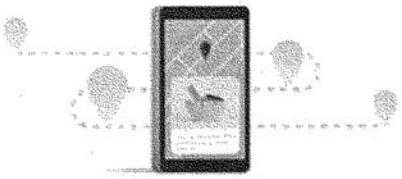
If you turn this setting on, Google will save your activity on Google sites and apps in your Google Account, including searches and associated info like location. You can also choose to save which apps you use, your Chrome history, and which sites you visit on the web.

This can help Google to give you faster results by autocompleting searches, as well as personalized experiences in Maps, Assistant, and other Google services. Learn more

Manage Web & App Activity

1020

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Location History (Paused)

Used by the Google app, Google Maps, and others

If you turn this setting on, Google will create a private map of where you go with your signed-in devices, including how long and how often you visit and how you travel between places, even when you aren't using a specific Google service. This map is only visible to you.

This gives you improved map searches and commute routes, as well as helping you to rediscover the places you've been and the routes you've travelled. Learn more

Manage Location History



Voice and audio recordings (Paused)

Used by Assistant, Google Maps, and others

If you turn this setting on and use voice commands (such as "Ok Google") or touch the microphone icon, Google will save a recording of your voice and other audio inputs.

Google can use this data to improve its speech recognition so it can understand you better.
Learn more

Manage voice and audio recordings

1021

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Additionally, Google has a longstanding commitment to ensuring both that our users share their data only with developers they can trust, and that they understand how developers will use that data.

For example, our Google APIs terms of service, which govern how developers can access user data, were introduced in 2011 (https://developers.google.com/terms/). Since their inception, our terms have required that developers provide and adhere to

a privacy policy that clearly and accurately describes what user information they collect and how they use and share that information with others.

Since 2016, those terms have been supplemented by a user data policy found at https://developers.google.com/terms/api-services-user-data-policy. That policy prohibits developers from exposing a user's non-public content to other users or to third parties without explicit opt-in consent and also prohibits scraping, building databases, or otherwise creating permanent copies of users' data.

As we disclose in our privacy policies and developer documentation, in order to provide information to users through the Google Maps Platform in response to the API calls initiated by them, Google must receive certain types of data. The actual data collected by Google depends on which API is implemented by the developer and how it is implemented, which may include the IP address of the end user in order to communicate with the users' device, geolocation information in order to provide query results to location-related API calls, and search terms input by users when they initiate API calls.

60. Does Google use any data collected from apps using Google Maps for Google's advertising business? If yes, please identify each type of data and explain how each is used.

No, Google does not use data related to the use of Google Maps in third-party apps for its advertising business.

61. Please identify all the factors that Google uses to determine when to allow or disallow non-Google properties to be listed in Google results across all of Google's products. For example, a hotel will not appear in Google Hotels unless that hotel is part of the Google Hotels program, but news stories will appear in Google News regardless of any affiliation with Google. Please explain what accounts for this and similar differences in how Google treats Google and non-Google properties.

Google Search includes many different products, and each one is designed to offer users the best experience for what they are seeking. For Google Hotels, in order to provide the information a user is seeking, Google must have a relationship with the travel agency or enterprise in order to search for reservations and display prices. This is more complicated than a standard display of potential websites responsive to a standard search. Similarly, we have standards for what content can appear in Google

News. Google allows webmasters to participate in Google News, but subject to certain content policies, including that the site in question be a source of fresh, original content and that it not be directed to providing medical advice. These standards are publicly available at https://support.google.com/news/producer/answer/6204050.

62. Please describe the Google My Business (GMB) program.

Google My Business (GMB) is a free tool for businesses to promote themselves online, connect with customers, and create and update their Business Profile. A Business Profile displays key information to users such as the business's phone number, website, and operating hours. Businesses can manage the information that users see when they search for them in the Business Profile. To create a GMB account and claim a business, Google requires that businesses verify themselves to ensure that the rightful owner of the business controls the Business Profile. Google then verifies businesses over the phone, through text message, or returning a postcard.

63. Please identify and describe each level of the digital ad tech supply chain.

Digital advertising technologies evolved to help: (1) advertisers reach their desired target audience across the internet and optimize their return on ad spend; and (2) digital publishers (e.g., web and app developers) increase competition for their ad space and maximize revenue from the sale of that ad space. Digital advertising technologies that help publishers are generally referred to as supply-side tools, while those that help advertisers are generally referred to as demand-side tools. But many advertising technology tools serve both advertisers and publishers. Common advertising technology tools include ad servers, demand-side platforms (DSPs), ad networks, ad exchanges, and supply-side platforms (SSPs). While historically different, many ad tech tools increasingly offer similar functionalities and are often used interchangeably by advertisers and publishers. In addition, these tools can be used in a variety of combinations, and many programmatic sales of online ad inventory only involve some of these tools described below:

- **Ad servers**: For advertisers and agencies, ad servers help serve ads and manage ad campaigns across thousands of publishers, websites, ad formats, and ad channels. The ad server decides which creatives to send to each web publisher, tracks ad performance across sites and publishers, and consolidates reporting. For publishers, ad servers help serve the right ad in the right ad unit

on the publisher's web page at the right time. Ad servers also help publishers forecast available ad inventory, manage and track returns on their ad sales, manage ad unit sales across different channels and buyers, enable "publisher-side" targeting, and provide reporting to bill advertisers.

- **DSPs**: These are web-based software platforms that help advertisers and ad agencies bid on and buy ad space and optimize their ad campaigns across sources of supply of online ad space, which can be ad exchanges, supply-side platforms, or web publishers themselves. DSPs thus help advertisers maximize the return on their ad spend and the success of their ad campaigns.

- **Ad networks**: Initially, ad networks aggregated and sold online ad space for multiple web publishers so that advertisers did not have to negotiate with individual publishers. By aggregating and selling online ad space from many different web publishers, ad networks enhanced market efficiency and grew the amount of online ad space available for purchase. Today, ad networks continue to do that, but also typically aggregate demand and spend from multiple advertisers and ad agencies and offer interfaces for advertisers and agencies to buy ad space on their network.

- **Ad exchanges**: Ad exchanges run an auction in which ad buyers (e.g., agencies, DSPs or ad networks) bid on ad impressions on various web sites or mobile apps, and web publishers or app developers sell ad impressions on their websites or apps, typically in real time.

- **SSPs**: These are web-based software platforms that help publishers sell their ad space across multiple potential demand sources (i.e., DSPs, ad networks, and ad exchanges) to maximize the publisher's revenue.

The list of advertising technology tools above is not exhaustive. There are yet other tools and services that advertisers and publishers use in connection with the purchase and sale of digital advertising space. And, the lines between different advertising technology tools have blurred in recent years. For example, many DSPs, SSPs, and ad networks include ad serving tools; many ad networks offer similar capabilities as DSPs; and SSPs and ad exchanges typically offer publishers similar functionality.

64. Please identify and describe each step of the digital ad tech supply chain where ad spend is debited.

There is a wide range of advertising technology products an advertiser or publisher might utilize in buying or selling digital advertising space. Each ad tech product and each ad tech provider charges different fees, and even the structure of those fees can vary. As an illustration, if an advertiser places an ad through a demand-side platform and wins a real-time auction on an ad exchange, each of those intermediaries will charge the advertiser or publisher a fee or revenue share in addition to the actual winning bid. An advertiser may use several demand-side platforms to buy on dozens of exchanges every day. In addition, publisher and advertiser ad servers may charge serving fees.

65. Assuming that an advertiser chooses to use Google's ad tech at each step of the supply chain, please identify the average amount that would be debited at each step, assuming $100 in ad spend.

Google Ads is designed to allow advertisers to take advantage of the benefits of online advertising and therefore boost advertisers' return on their investment, while giving advertisers control over how much they spend on advertising. Advertisers placing ads through Google Ads do not pay any fees, so $100 of spending through that channel is entirely available for bidding on inventory. Furthermore, Google Ads provides advertisers data about how much it costs them, on average, for advertising that leads to customer interaction with their product. For advertisers that choose to use other products, Google charges market-driven fees that vary based on factors such as the advertiser's volume, media spend, choices of optional services, etc. Advertisers can and do use other ad tech companies' tools in conjunction with or instead of Google's ad tech tools.

66. Please identify the number of impressions generated by Google in the U.S. for each of the past five years for each of the following:

a. AdSense for display on Google Network members;

b. AdX for display on Google Network members (broken down between Open Auction, Private Auctions, and Preferred Deals);

c. DoubleClick For Publishers (DFP) (now rebranded as Google Ad Manager);

d. DV360 for display on Google Network members; and

e. Google Ads for display on Google Network members.

Impressions for our Google Network Members' properties include impressions displayed to users served on Google Network Members' properties participating primarily in AdMob, AdSense for Content, AdSense for Search, and Google Ad Manager (includes what was formerly a stand-alone product known as DoubleClick AdExchange).

Cost-per-impression is defined as impression-based and click-based revenues divided by our total number of impressions and represents the average amount we charge advertisers for each impression displayed to users.

As our business evolves, we periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks on our Google properties and the number of impressions on Google Network Members' properties and for identifying the revenues generated by click activity on our Google properties and the revenues generated by impression activity on Google Network Members' properties.

For Google Network Members' properties, there was a 2% increase in impressions from 2017 to 2018 and a 12% increase in cost-per-impression during that same time period. Comparatively, there was a 3% increase in impressions from 2016 to 2017 and an 8% increase in cost-per-impression during the same period.

Additional information regarding impressions generated by Google is disclosed on a quarterly basis in our Forms 10-K and 10-Q. Recent filings are available at https://abc.xyz/investor/.

67. Please identify the annual revenue generated by Google in the U.S. for each of the past five years for each of the following:

a. AdSense for display on Google Network members;

b. AdX for display on Google Network members (broken clown between Open Auction, Private Auctions, and Preferred Deals);

c. DFP;

d. DV360 for display on Google Network members; and

e. Google Ads for display on Google Network members.

Overall, Google's advertising revenues for the past five years were approximately $116.3 billion in 2018, $95.4 billion in 2017, $79.4 billion in 2016, $67.4 billion in 2015, and $59.6 billion in 2014.

We generate revenues primarily by delivering advertising on Google properties and Google Network Members' properties. Google properties revenues consist primarily of advertising revenues generated on Google.com, the Google Search app, and other Google owned and operated properties like Gmail, Google Maps, Google Play, and YouTube. Google Network Members' properties revenues consist primarily of advertising revenues generated on Google Network Members' properties. Our customers generally purchase advertising inventory through Google Ads (formerly AdWords), Google Ad Manager as part of the Authorized Buyers marketplace (formerly DoubleClick AdExchange), and Google Marketing Platform (includes what was formerly DoubleClick Bid Manager), among others.

We offer advertising on a cost-per-click basis, which means that an advertiser pays us only when a user clicks on an ad on Google properties or Google Network Members' properties or when a user views certain YouTube engagement ads. For these customers, we recognize revenue each time a user clicks on the ad or when a user views the ad for a specified period of time.

We also offer advertising on other bases such as cost-per-impression, which means an advertiser pays us based on the number of times their ads are displayed on Google properties or Google Network Members' properties. For these customers, we recognize revenue each time an ad is displayed.

Our advertising revenue is disclosed on a quarterly basis in our Forms 10-K and 10-Q, along with details regarding our products and their performance, including the performance of our Google Network Members' properties (which include AdMob, AdSense, and Google Ad Manager). Recent filings are available at https://abc.xyz/investor/.

68. For each of the past five years, please identify the number of publishers in the U.S. that used DFP.

In 2018, more than 1.3 million businesses, website publishers, and nonprofits nationwide benefited from using Google's advertising solutions, Google Ads and AdSense. During previous years, the comparable numbers were 1.5 million in 2017, 1.5 million in 2016, and 1.4 million in 2015. More information regarding the number of publishers using Google's advertising solutions can be found in Google's annual economic impact reports. The most recent report, along with links to prior versions, is available at https://economicimpact.google.com/.

69. For each of the past five years, please identify the number of impressions served by DFP for publishers in the U.S.

Impressions for our Google Network Members' properties include impressions displayed to users served on Google Network Members' properties participating primarily in AdMob, AdSense for Content, AdSense for Search, and Google Ad Manager (includes what was formerly DoubleClick AdExchange).

Cost-per-impression is defined as impression-based and click-based revenues divided by our total number of impressions and represents the average amount we charge advertisers for each impression displayed to users.

As our business evolves, we periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks on our Google properties and the number of impressions on Google Network Members' properties and for identifying the revenues generated by click activity on our Google properties and the revenues generated by impression activity on Google Network Members' properties.

For Google Network Members' properties, there was a 2% increase in impressions from 2017 to 2018 and a 12% increase in cost-per-impression during that same time period. Comparatively, there was a 3% increase in impressions from 2016 to 2017 and an 8% increase in cost-per-impression during the same period.

Additional information regarding impressions generated by Google is disclosed on a quarterly basis in our Forms 10-K and 10-Q. Recent filings are available at https://abc.xyz/investor/.

70. For each of the past five years, please identify the revenues paid to Google Network members.

One of Google's costs of revenues is what it refers to as traffic acquisition costs (TAC), which are paid to Google Network Members primarily for ads displayed on their properties and amounts paid to Google's distribution partners who make available the Company's search access points and services. Google's distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers.

The cost of revenues related to revenues generated from ads placed on Google Network Members' properties are significantly higher than the cost of revenues related to revenues generated from ads placed on Google properties because most of the advertiser revenues from ads served on Google Network Members' properties are paid as TAC to our Google Network Members.

We have reported the following approximate TAC amounts over the past several years: $26.7 billion for 2018, $21.7 billion for 2017, $16.8 billion for 2016, $14.3 billion for 2015, and $13.5 billion for 2014. TAC figures are further broken out into amounts paid to Distribution Partners and Google Network Members in our Form 10-K filings.

Information regarding our traffic acquisition costs is disclosed in our Forms 10-K. Recent filings are available at https://abc.xyz/investor/.

71. For each of the past five years, please identify the revenues paid to Google Network members, broken down by source, including but not limited to the following sources:

a. Direct sales to advertisers;

b. Non-Google ad tech buyers;

c. Google Ads; and

d. Display and Video 360.

One of Google's costs of revenues is what it refers to as traffic acquisition costs (TAC), which are paid to Google Network Members primarily for ads displayed on their properties and amounts paid to our distribution partners who make available our search access points and services. Our distribution partners include browser providers, mobile carriers, original equipment manufacturers, and software developers.

The cost of revenues related to revenues generated from ads placed on Google Network Members' properties are significantly higher than the cost of revenues related to revenues generated from ads placed on Google properties because most of the advertiser revenues from ads served on Google Network Members' properties are paid as TAC to our Google Network Members.

We have reported the following approximate TAC amounts over the past several years: $26.7 billion for 2018, $21.7 billion for 2017, $16.8 billion for 2016, $14.3 billion for 2015, and $13.5 billion for 2014.

Information regarding our traffic acquisition costs is disclosed in our Forms 10-K. Recent filings are available at https://abc.xyz/investor/.

72. For each of the past five years, please identify the percentage of ad revenue generated by Google ad services that was retained by:

a. Publishers participating in AdSense; and

b. Publishers participating in AdX.

Overall, Google's advertising revenues for the past five years were approximately $116.3 billion in 2018, $95.4 billion in 2017, $79.4 billion in 2016, $67.4 billion in 2015, and $59.6 billion in 2014.

We generate revenues primarily by delivering advertising on Google properties and Google Network Members' properties. Google properties revenues consist primarily of advertising revenues generated on Google.com, the Google Search app, and other Google owned and operated properties like Gmail, Google Maps, Google Play, and YouTube. Google Network Members' properties revenues consist primarily of advertising revenues generated on Google Network Members' properties. Our customers generally purchase advertising inventory through Google Ads (formerly

AdWords), Google Ad Manager as part of the Authorized Buyers marketplace (formerly DoubleClick AdExchange), and Google Marketing Platform (includes what was formerly DoubleClick Bid Manager), among others.

We offer advertising on a cost-per-click basis, which means that an advertiser pays us only when a user clicks on an ad on Google properties or Google Network Members' properties or when a user views certain YouTube engagement ads. For these customers, we recognize revenue each time a user clicks on the ad or when a user views the ad for a specified period of time.

We also offer advertising on other bases such as cost-per-impression, which means an advertiser pays us based on the number of times their ads are displayed on Google properties or Google Network Members' properties. For these customers, we recognize revenue each time an ad is displayed.

Our advertising revenue is disclosed on a quarterly basis in our Forms 10-K and 10-Q. Recent filings are available at https://abc.xyz/investor/.

73. Please identify any fees or other deductions that Google subtracts from the amounts paid by advertisers before calculating publishers' revenue and explain all the reasons for each fee or deduction.

Google retains an industry-competitive revenue share when publishers sell their inventory through Google's services such as Google Ad Manager's ad exchange feature, or Google's AdSense or AdMob services; the revenue share varies based on the specific services used by the publisher. In general, Google, like its competitors, charges more where it provides more services and value to its customers, and pricing may vary based on the specific customer's agreement with Google.

74. For each of the past five years, identify the percentage of impressions traded on AdX that are:

a. Sold to Google Ads; and

b. Sold to DV360 users.

Impressions for our Google Network Members' properties include impressions displayed to users served on Google Network Members' properties participating

primarily in AdMob, AdSense for Content, AdSense for Search, and Google Ad Manager (includes what was formerly DoubleClick AdExchange).

Cost-per-impression is defined as impression-based and click-based revenues divided by our total number of impressions and represents the average amount we charge advertisers for each impression displayed to users.

As our business evolves, we periodically review, refine, and update our methodologies for monitoring, gathering, and counting the number of paid clicks on our Google properties and the number of impressions on Google Network Members' properties and for identifying the revenues generated by click activity on our Google properties and the revenues generated by impression activity on Google Network Members' properties.

For Google Network Members' properties, there was a 2% increase in impressions from 2017 to 2018 and a 12% increase in cost-per-impression during that same time period. Comparatively, there was a 3% increase in impressions from 2016 to 2017 and an 8% increase in cost-per-impression during the same period.

Additional information regarding impressions generated by Google is disclosed on a quarterly basis in our Forms 10-K and 10-Q. Recent filings are available at https://abc.xyz/investor/.

75. Please identify all the types of data that Google provide to publishers who participate in Google Ads.

Google Ads is the interface Google provides for advertisers to access Google's owned-and-operated and AdSense inventory. For those advertisers, Google does provide publishers a number of data-driven metrics, depending on the Google publisher tool being used, that are designed to help publishers capture advertising revenue more efficiently across all of their inventory. Such metrics include the following:

- **Impressions** – An ad impression is reported whenever an individual ad is displayed on a website. For example, if a page with two ad units is viewed once, two impressions will be displayed.

- **Coverage** – Coverage is the percentage of ad requests that returned at least

one ad. Generally, coverage can help identify sites where an account is not able to provide targeted ads.

- **Monetized Pageviews** – Measures the total number of pageviews on a property that were shown with an ad from a linked account. A single page can have multiple ad units.

- **Impressions / Session** – The ratio of ad impressions to Analytics sessions.

- **Viewable Impressions Percentage** – The percentage of ad impressions that were viewable. An impression is considered a viewable impression when it has appeared within a user's browser and had the opportunity to be seen.

- **Clicks** – The number of times ads were clicked on a site.

- **Click-Through Rate (CTR)** – The percentage of impressions that resulted in a click on an ad.

- **Revenue** – Revenue is an estimate of the total ad revenue based on impressions served.

- **Revenue / 1000 Sessions** – The total estimated revenue from ads per 1000 Analytics sessions. Note that this metric is based on sessions to a site and not ad impressions.

- **eCPM** – The estimated cost per thousand page views.

Because providing clear, comprehensive reporting is a big part of helping publishers make smarter decisions to grow their earnings, Google periodically introduces new types of data reporting that can be provided to publishers. For example, we are testing a new data file, the "Bid Data Transfer file," that gives publishers access to data from all the bids submitted to their auctions. Publishers are able to see the full bid landscape through this beta feature.

A more complete listing of available metrics is provided on Google's Ad Manager Help page available at https://support.google.com/admanager/table/7568664?hl=en.

Publishers can also link to their Analytics accounts to receive additional types of data.

Analytics reports provide a variety of dimensions and metrics. Dimensions are attributes of a site's data. For example, the dimension "City" indicates the city from which a session originates; "Page" indicates the URL of a page that is viewed. Metrics are quantitative measurements. For example, the metric "Sessions" is the total number of sessions and "Pages/Session" is the average number of pages viewed per session. A more complete listing of data available through Analytics is available on Google's Analytics Help at https://support.google.com/analytics/answer/1033861.

76. Does Google provide publishers with log-level data on prices paid by advertisers? If no, please explain all the reasons why.

Yes, in addition to the rich Google Ad Manager data reporting discussed in response to Question No. 75, Google enables publishers using Google Ad Manager 360, Google's premium supply-side ad server, to generate non-aggregated event-level data reports regarding the ads served on their sites. Publishers can set up these data transfer reports to include dozens of different data points about impressions, clicks, and other events transmitted through Google Ad Manager, including Open Bidding auction bids data.

Included among those potential data fields is "BidPrice," which shows the offered price for the bid after revenue sharing calculations, displayed in the Ad Manager network's default currency.

77. Does Google give advertisers the opportunity to share log-level data with publishers? If no, please explain all the reasons why.

Yes, Google does allow some non-aggregated event-level data to be shared with publishers. Google enables publishers using Google Ad Manager 360, Google's premium supply-side ad server, to generate non-aggregated event-level Data Transfer reports regarding the ads served on their sites. Publishers can set up these Data Transfer reports to include dozens of different data points about impressions, clicks, and other events transmitted through Google Ad Manager. We are also beta testing a new data file, the "Bid Data Transfer file," that gives publishers access to data from all the bids submitted to their auctions. Publishers are able to see the full bid landscape through this beta feature.

Third party exchanges and SSPs are also free to establish relationships with publishers outside of Google's ad tech products and can, and generally do, provide reporting

directly to the publisher in those cases for impressions won by the third party exchange or SSP and served by Google's Ad Manager.

78. Please describe how Google Ads converts the winning cost-per-click (CPC)-based bid into a cost-per-mille (CPM)-based bid in AdX.

Google Ads is designed to facilitate advertisers using different bid strategies depending on whether the advertiser wants to focus on getting clicks, impressions, conversions, or views. The advertiser is free to determine which strategy is best for it based on its advertising goals. When advertiser CPC and CPM ad bids compete for the same impression, Google converts CPC bids to effective CPM bids to make an "apples-to-apples" comparison of the price the competing advertisers are effectively willing to pay for the impression. To convert a CPC bid to an effective CPM bid, Google estimates how many clicks the ad might receive in 1,000 impressions to get the comparison.

79. Please identify whether the CPC-to-CPM conversion is informed by Google Ad Manager historic data or real-time data and explain why.

This conversion is informed by both historic data and real-time data. The CPC-to-CPM conversions utilize various prediction models to calculate the predicted click-through rates. Historical data is used to train the prediction models, and then those prediction models utilize real-time data to generate the predicted click-through rates.

80. Please describe how Google calculates the click-through-rate (CTR) of an ad.

The click-through rate is a ratio that shows how often people who see an advertiser's ad end up clicking on it. Google Ads provides advertisers with CTR so they can gauge which of their ads are successful and which need to be improved. The CTR is calculated as the number of clicks an ad receives divided by the number of times the ad is shown, which is publicly described on our website at https://support.google.com/google-ads/answer/2615875?hl=en-GB&ref_topic=24937. For example, if an ad receives 5 clicks and 100 impressions the CTR would be 5%. Google similarly calculates a viewable CTR for display and video ads that are trackable by Active View. Active View is a technology on YouTube and certain Display Network websites and apps that allows Google Ads to determine if an ad is viewable by

potential customers. The viewable CTR is equal to the number of clicks an ad receives divided by the number of times the ad becomes viewable on a website or app. For more information, please see "Understanding viewability and Active View reporting metrics" available at https://support.google.com/google-ads/answer/7029393?hl=en.

81. Google states that AdX may, "at its discretion," make adjustments to the bid submitted by the buyer "for the purpose of optimizing the auction." Please describe how Google exercises this discretion.

Google Ad Manager's ad exchange feature is designed to help publishers optimize revenue from their ad sales. There are two common situations where Google may make adjustments to optimize the auction process for advertisers and publishers. First, Google may apply optimization to video ads in which the billing event that triggers payment occurs later than some other ads (i.e., when the first frame of the video plays) and can help avoid the situation where an unreliable ad server fails to serve an ad at all, causing the publisher to lose out on revenue. The second typical scenario is where a publisher has elected to use the revenue-share optimization account setting, which is optional and meant to facilitate sales ("Configure your Ad Exchange revenue share," available at https://support.google.com/admanager/answer/7031785?hl=en). Google is always looking for ways to enhance its product options for publishers and advertisers, including Google Ad Manager, and will continue to do so.

82. Please identify what duties Google Ads has towards publishers when Google engages in brokerage and trading activities in the marketplace for digital ads.

Google Ads is the buying interface Google provides for advertisers to access and purchase Google's owned and operated (O&O) and AdSense inventory; it is not a publisher tool. Furthermore, Google does not engage in "brokerage and trading activities" with respect to digital ads. Rather, Google's ad tech products provide the infrastructure through which advertisers and publishers connect with one another, and execute the buying and selling strategies specified by advertisers and publishers, respectively. Google is always looking for ways to enhance its product options for publishers and advertisers, including Google Ads, and will continue to do so.

83. Please identify what duties Google Ads has towards advertisers when Google engages in brokerage and trading activities in the marketplace for digital ads.

Google Ads is the buying interface through which advertisers can purchase Google's owned and operated (O&O) and represented inventory. Google Ads is, primarily, Google's storefront for this inventory, not a demand-side platform that facilitates real-time bidding and optimization across different sources of supply.

Google does not engage in "brokerage and trading activities" with respect to digital ads. Rather, Google's ad tech products provide the infrastructure through which advertisers and publishers connect with one another, and execute the buying and selling strategies specified by advertisers and publishers, respectively.

84. Please identify and describe any contractual limitations or legal requirements that prevent Google Ads from buying ads for the minimum amount possible and selling them for the maximum amount possible.

Google Ads does not buy ads or ad space; it is the interface Google provides for advertisers to buy Google's owned-and-operated and AdSense inventory. That is, at no point does Google Ads hold third-party inventory it has purchased from publishers and then sell that ad space to advertisers. Google's advertising technology solutions connect publishers with advertisers, with Google charging a fee to buyers, and taking a revenue share percentage from the amount paid to publishers. Google's advertising technology solutions are designed to allow advertisers and publishers of all sizes to choose the right solutions for their businesses, making it even easier for them to deliver valuable, trustworthy ads and the right experiences for consumers across devices and channels.

85. Are Google Search ad inventories available to advertisers that do not participate in Google Ads? If no, please explain why.

Advertisers who wish to use Google Ads start by creating a free Google Ads account. After creating that account, advertisers can manage their search ads campaigns on Google's platforms either directly on Google Ads or by using their choice of advertising management platform, including Google's Search Ads 360 product or third-party services (e.g., Kenshoo). Google Ads is fully interoperable with such third-party services.

86. Has Google ever threatened to remove a producer's video content from YouTube if the producer did not permit YouTube to sell ads on the producer's video? If yes, please describe the relevant circumstances.

YouTube content creators have a variety of ways they can earn money on YouTube, including by selling advertising, channel memberships, merchandise, messaging features, and by sharing in YouTube Premium subscriber fees. Whether a YouTube creator chooses to display ads, or monetize their content, is completely up to them. By default, YouTube channels are not monetized. Instead, a creator must apply to join our YouTube Partners Program, which has specific requirements for participation. For more information, please see https://support.google.com/youtube/topic/9153567?hl=en&ref_topic=9257986,32308111,3256124. After a creator has opted in to monetization, YouTube permits content creators to turn off ads for any video they have uploaded or for their entire channel. For more information, please see https://support.google.com/youtube/answer/6332943?hl=en.

87. Is the YouTube ad inventory available to advertisers that do not participate in DV360? If no, please explain why.

Yes, YouTube ad inventory is available to these advertisers through:

- **Direct Reservation**: A direct contract is negotiated between the advertiser and Google. These can be booked directly through the YouTube sales team.
- **YouTube Partner Sales Program**: Certain YouTube partners work directly with advertisers to sell and serve ads on content they own and show on YouTube.
- **Google Ads**: Advertisers can purchase YouTube inventory through Google Display Ads. Advertisers can also display search ads on YouTube search results.

In addition to serving video ads on YouTube, an advertiser has a multitude of other options for serving video ads to users, as video ads are shown on many news websites, social media sites, mobile applications, streaming services, connected TVs, and more.

88. Does Google Ads ever purchase third-party ad inventory through non-Google platforms? If yes, please describe the relevant circumstances.

Google Ads does not itself purchase third-party ad inventory; however, advertisers can use Google Ads to purchase third-party ad inventory through the Google Display Network or through third-party exchanges.

89. Please identify if and describe how the level of interoperability between AdX and Google Ads differs from the level of interoperability between AdX and non-Google demand-side platforms.

Google Ads is the buying interface through which advertisers can purchase Google's owned and operated (O&O) and represented inventory. Google Ads is, primarily, Google's storefront for this inventory, not a demand-side platform that facilitates real-time bidding and optimization across different sources of supply.

Google's demand-side platform is known as DV360. DV360 helps advertisers and agencies bid on ad impressions in real time across ad exchanges and provides them with various campaign management, audience targeting, ads measurement, and reporting tools. Numerous advertisers have utilized DV360 with great success (examples can be found at: https://marketingplatform.google.com/about/resources/success-stories/). While both Google Ads and DV360 are able to pass bids into Google Ad Manager's ad exchange feature alongside bids from third party buyers, Google Ads and DV360 serve different purposes.

90. Please identify if and describe how the level of interoperability between AdX and DV360 differs from the level of interoperability between AdX and non-Google demand-side platforms.

Google Ad Manager's ad exchange feature (formerly a stand-alone product known as DoubleClick Ad Exchange or "AdX") is designed to help publishers optimize revenue from their ad sales through real-time bidding for ad impressions on their sites. Many third-party demand-side platforms can purchase ad inventory through Google Ad Manager's ad exchange. In practice, there are very limited differences in interoperability when Google Ad Manager is used with DV360 versus third-party demand-side platforms. Google uses industry-standard protocols designed to make it straightforward for demand-side platforms to integrate with Google Ad Manager's ad exchange feature in a similar way to how they integrate with other exchanges.

While the level of interoperability does not differ by design, there are some differences that can result from technical realities. The main potential differences are an improved cookie matching rate and decreased latency. Any such differences are due to Google's products sharing the same technical infrastructure and would be the natural and beneficial result of vertical integration, though we don't believe any such differences have meaningfully affected the ability of third-parties to compete, in part because Google Ad Manager's ad exchange offers buyers a cookie matching service and the auction window remains open long enough to account for any such latency differences.

91. Please describe how Google Ads allocates bids from "Display Network only" and "Search Network with Display Select" campaigns between Google's display inventory and third-party inventory.

The Display Network is Google's advertiser-facing name for Google's ad network, which helps third-party publishers monetize and efficiently sell ad space on their sites (the publisher-facing name for this product is "AdSense"). When a Google Ads advertiser enables a "Search Network with Display Expansion" campaign (formerly known as "Search Network with Display Select"), the advertiser's ads still primarily appear on the Search Network. However, when Google Ads projects that the advertiser will have funds remaining in its daily budget, the ad may show on relevant pages within the Display Network. Advertisers can control the sites on which their ads are placed by adding targeting settings, including by identifying audiences of interest or expressly including or excluding particular websites. Using those settings, an advertiser could, if desired, either limit its ads to or prevent its ads from showing on particular Google-owned display inventory.

92. Please describe how Google Ads allocates bids between AdSense inventory and AdX inventory.

AdSense, Google's ad network, helps third-party publishers monetize and efficiently sell ad space on their sites. Google Ads does not pre-allocate bids between AdSense and Google Ad Manager's ad exchange; instead, where Google Ads-sourced ads are shown is determined by whether the Google Ads advertiser opts to show its ads on the Display Network, the (essentially random) order in which impressions come up for auction, and the results of those auctions run within Google Ads and Google Ad Manager's ad exchange. As long as an advertiser using Google Ads has targeted the Display Network for its campaign, its ads can appear on inventory that is sold via

Google Ad Manager's ad exchange in addition to inventory that is sold through Google AdSense. While the amount of potential inventory expands by including the Display Network as a target, the Google Ads reporting and other account processes remain the same.

93. Please explain all the reasons why Google switched to a unified price auction.

We believe that this question's reference to a "unified price auction" refers to the "unified first-price auction" to which Google is currently transitioning Ad Manager. Historically, Ad Manager often ran two different auctions for a given ad impression: a second-price, real-time bidding auction followed by a first-price auction that compares the winning price from the second-price auction with the publisher's direct and indirect options, as well as bids from Exchange Bidding buyers.

In an effort to reduce complexity and provide value to its partners, Google is transitioning Ad Manager to a unified first-price auction. The first-price auction will allow Google's publisher partners to maximize yield from their ad auctions, while also allowing its advertiser partners to maximize return-on-ad-spend.

The unified first-price auction will provide a more straightforward process as all integrated demand sources will be providing the same type of bid at the same time and therefore will have the same opportunity to compete for ad inventory. It also will increase transparency for advertisers and publishers as Ad Manager partners will share and receive bid data that, in turn, permits Google to provide more granular reports. For example, Google will be able to report to advertisers how much they would have needed to bid to have won an auction.

Finally, Google is also moving to a unified first-price auction to be in line with the broader industry, as many other auctions are now first-price.

94. Please explain how the switch to a unified price auction has affected Google's business, including but not limited to how the switch to a unified price auction has affected AdX and/or any other platform for real-time bidding.

We believe that this question's reference to a "unified price auction" refers to the "unified first-price auction" to which Google is currently transitioning Ad Manager. Because the change will, among other things, reduce complexity, increase

transparency, and decrease auction inefficiencies, Google expects that it will benefit the entire ecosystem and will, as a result, make Ad Manager more attractive for publishers. Indeed, several publishers and industry participants, including Trusted Media Brands, MailOnline, MediaMath, VICE Media, and Rubicon Project, have publicly applauded the transition. For more information, please see "An update on first price auctions for Google Ad Manager," available at https://www.blog.google/products/admanager/update-first-price-auctions-google-ad-manager.

Google has conducted preliminary tests of the change that showed that first-price auctions have a neutral to positive impact on a publisher's total revenue — revenue from all their advertising sources — when compared to second price-auctions. Google also found evidence that first-price auctions have created a more competitive market, resulting in third parties (Demand Side Platforms and Ad Networks outside of Google) and indirect line items (like those from Header Bidding implementations) winning an increased share of impressions.

95. Does AdX provide access to real-time bids to non-Google ad servers? If no, please explain why.

Google Ad Manager's ad exchange (AdX) feature operates in combination with third party ad servers through Google Publisher Tag (GPT) passbacks and AdX direct tags. The third party ad server can make a call to AdX, using a GPT passback or AdX direct tag, to serve an ad matching specified targeting criteria. The Ad Manager ad server will then return an ad that matches the specified targeting criteria.

Google Ad Manager's ad exchange feature does not directly bid into auctions run by third party ad servers. A publisher using a third party ad server would have to assign a static CPM price or serving priority to the Google ad exchange demand. The third party ad server can then integrate that demand dynamically in to their creative selection decisions. That said, most demand sources (ad networks, ad exchanges and demand-side platforms) that submit real-time bids on AdX (including DV360 and Google Ads), also submit real-time bids on third-party SSPs.

96. Does AdX participate in header-bidding? Please explain why or why not.

No. Google Ad Manager's ad exchange feature does not participate in header bidding auctions. Google Ad Manager's ad exchange feature is designed to help publishers

optimize revenue from their ad sales while still providing a great experience for the end user. Header bidding uses complex custom code that causes latency for websites or apps and is a suboptimal user experience. Google introduced Open Bidding to solve these issues, which is described at https://support.google.com/admanager/answer/7128453?hl=en.

97. Please identify all types of data that Google collects on users who visit websites that use Google Ad Manager.

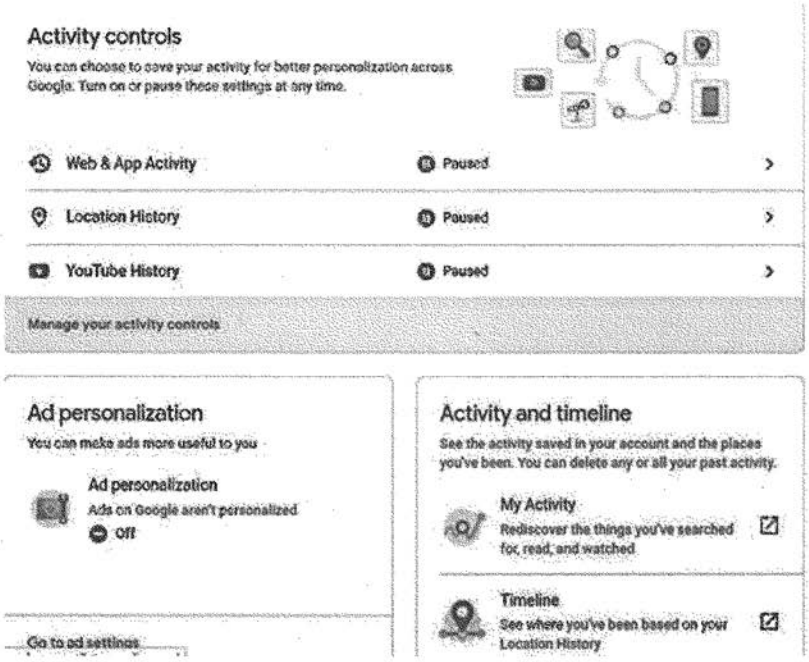
Google's Privacy Policy explains what information Google collects, why Google collects it, and how users can update, manage, export, and delete their information (https://policies.google.com/privacy). We also have invested significantly to give users access and control over their data and would encourage Google users to visit Google Account (https://myaccount.google.com/). As with all of our user privacy controls, our goal is to make things as simple as possible while ensuring that users have meaningful control over their data.

The types of data Google collects or stores may be different for users based on various settings the user has selected and what products they use. But we make it easy for users to review their data, change their settings, and delete data, and offer a series of tools to enable users to make informed decisions about their data. In fact, we were one of the first companies to offer users a centralized portal to see and manage their data through easy-to-use tools with the launch of MyAccount in 2015 (now Google Account). For instance:

- The Data and Personalization section of Google Account allows users to turn on or off features, like Location History, and to opt in or out of ads personalization (https://myaccount.google.com/data-and-personalization).

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- The Privacy Checkup tool also makes it easy for users to review and change their privacy settings (https://myaccount.google.com/privacycheckup).

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Privacy Checkup

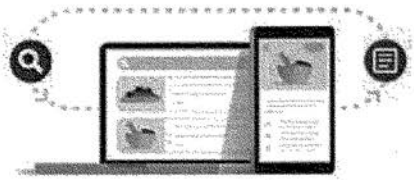
Review key settings & the data Google uses to personalize your experience

- Activity controls reviewed
- Phone numbers reviewed
- About you reviewed
- Ad settings reviewed

When you're done, also consider reviewing your settings in the products you use most, like Maps, YouTube, and Gmail

Personalize your Google experience

Choose whether to save activity data in your Google Account for faster and more useful Google services, like better commute options in Maps and quicker results in Search



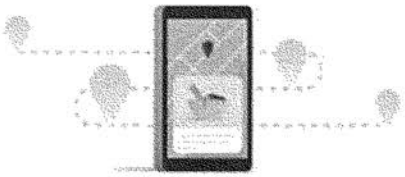
Web & App Activity (Paused)

Used by Assistant, Google Maps, and others

If you turn this setting on, Google will save your activity on Google sites and apps in your Google Account, including searches and associated info like location. You can also choose to save which apps you use, your Chrome history, and which sites you visit on the web.

This can help Google to give you faster results by autocompleting searches, as well as personalized experiences in Maps, Assistant, and other Google services. Learn more

Manage Web & App Activity



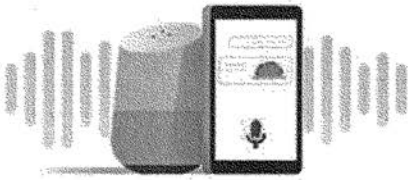
Location History (Paused)

Used by the Google app, Google Maps, and others

If you turn this setting on, Google will create a private map of where you go with your signed-in devices, including how long and how often you visit and how you travel between places, even when you aren't using a specific Google service. This map is only visible to you.

This gives you improved map searches and commute routes, as well as helping you to rediscover the places you've been and the routes you've travelled. Learn more

Manage Location History



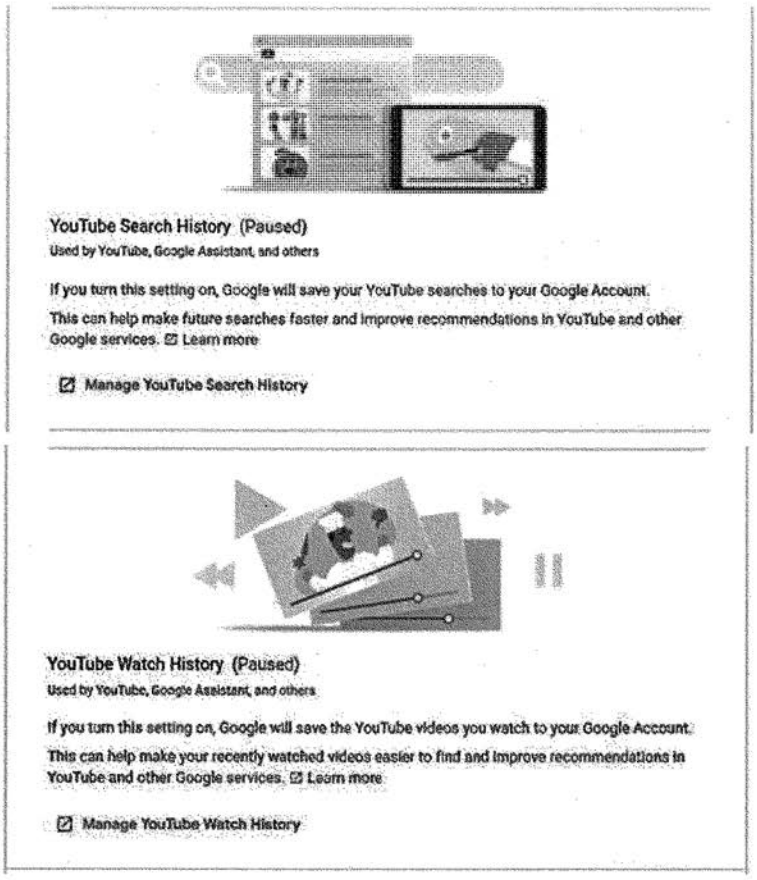
Voice and audio recordings (Paused)

Used by Assistant, Google Maps, and others

If you turn this setting on and use voice commands (such as "Ok Google") or touch the microphone icon, Google will save a recording of your voice and other audio inputs.

Google can use this data to improve its speech recognition so it can understand you better.
Learn more

Manage voice and audio recordings



- Google's Security Checkup helps users make informed decisions about security and privacy, including by identifying the apps that have access to their data and letting them revoke access to those apps (https://myaccount.google.com/security-checkup).

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- We also recently launched "Your Data in Search," which enables users to browse and delete their Search activity directly for the past hour (or even entirely) without navigating away from what they're doing (https://myactivity.google.com/privacyadvisor/search).



- Finally, Google's in-product disclosures and help center pages, as well as Google Help Forum, provide users with further resources to learn more about exercising granular control over settings that affect the collection and sharing of their data.

As to websites that use AdManager, Google collects certain user data when its advertising servers receive a request from a user's device (General User Data). This request is triggered by the user interacting with a third party website or app that uses a Google advertising service. Depending on the publisher's settings, the user's preferences and the device in question, the collected data may include:

- The request itself, such as the browser's request for an ad to be served on a non-Google website and the ad slot to be filled;
- System and device information, such as the device, browser version, operating system version, default language and screen size;
- IP address;
- Location;
- The date and time of the request;
- In the case of web browsers, the full URL of the page being visited together with the referrer URL;
- In the case of mobile devices, mobile network information;
- In the case of mobile applications, an identifier for the application and a resettable mobile advertising identifier (such as IDFA for iOS or AdID for Android);
- In the case of web browsers, any cookie IDs that Google has previously set on the user's device; and
- Event data such as impression, click, or conversion data.

Google Ad Manager may also collect such data through tags on the publisher's property or the Google Mobile Ads software development kit (SDK) on the user's app. It can also collect publisher-provided IDs. In addition, Google Ad Manager allows publishers to integrate audience data, such as audience lists and lists of cookie IDs with inferred interests, from their own data management platform.

98. Please describe how Google uses any user data that it collects through Google Ad Manager including but not limited to identifying whether any of this data is used by Google Ads.

At Google, we design our products to collect and use data commensurate with their purpose and to keep that data no longer than necessary. These principles are reflected in all of our products. Google believes strongly in building products that make it easy for individuals to control the use of their personal information, and we provide extensive tools to give our users choice and control over their data, as explained above in response to Question No. 97. Maintaining user trust is extremely important to us, and we will continue to work hard to ensure that we only collect and use data required to provide our users with the services that they want.

In line with those principles, Google Ad Manager collects data to provide the relevant services, including:

- To serve and personalize ads (including remarketing) subject to the user's settings;
- To maximize publisher yield through optimizations and real time bidding;
- To enable frequency capping (i.e., to ensure that users are not served the same ad multiple times);
- To enable sequential creative rotation (i.e., to show a set of ads to users in a specific sequence);
- To apply publisher configurations and rules, such as protections, blocks and minimum prices;
- To forecast available traffic (e.g., the number of potential ad impressions available to an ad campaign targeted to a specific country or device type); and
- To measure ad performance (e.g., how many ads were served and how many

clicks those ads received) and provide reporting.

Google uses common protocols to ensure all buyers receive broadly the same information as Google Ads and respond to a uniform bid request. Google's RTB technology is underpinned by two frameworks: IAB's OpenRTB protocol (an industry-standard protocol) and Google's Authorized Buyers RTB protocol. Buyers can elect to use either protocol.

99. Please indicate whether Google has the ability to collect user data and/or use first-party identifiers on non-Google websites after users opt to remove the use of third-party cookies on:

a. Safari 12; or

b. Chrome.

In addition to the information provided in response to Question Nos. 97 and 98, above, if a publisher chooses to use Ad Manager, the ad request it sends to Ad Manager may make first-party cookie data available to Google Ad Manager if a user is using either browser, but such first-party cookie data is not used to track users across websites.

100. When Google purchased DoubleClick in 2007, Sergey Brin stated that privacy would be Google's "number one priority when we contemplate new kinds of advertising products." Yet in 2016, Google began combining DoubleClick cookie information with personally identifiable information collected through Gmail and other tools. How does Google reconcile Mr. Brin's claimed support for privacy with Google's decision to combine forms of data in ways that undermine user privacy?

Google strongly believes in protecting user privacy and security and strives to be a leader in this area. This goal is central to how we design and build our products: to ensure that our products are safe, invest in technologies that allow us to do more for users with less data, and empower users with clear, meaningful choices around their data. That is why no Google product that involves personal data can launch without the approval of our privacy team.

Google has not combined unauthenticated data from our ads products with users' personally identifiable information. Rather, in 2016 we updated our ads system, and

the associated user controls, to allow users the opt-in choice to save their visits to websites and apps that use Google ad services to their account history. This allowed better transparency and controls for users, and better ad measurement and personalization for Google. Before we launched this update, we tested it around the world with the goal of understanding how to provide users with clear choice and transparency. If users did not opt-in to these changes, their Google experience remained unchanged. We also provided prominent user notifications about this change in easy-to-understand language as well as simple tools that let users control or delete their data.

We also have invested significantly to give users access and control over their data and encourage Google users to visit Google Account (https://myaccount.google.com/). Users can access all their account controls by visiting Google Account, which had over 2.5 billion visits in 2018. As with all of our user privacy controls, our goal is to make things as simple as possible while ensuring that users have meaningful control over their data.

101. Please describe how Google's decision to combine DoubleClick cookie information with personally identifiable information has affected Google's business, including but not limited to its effects on any changes in Google's ad revenue.

As discussed above in Question No. 100, Google strongly believes in protecting user privacy and security and strives to be a leader in this area. Our investment in privacy and security is evident in every product we build, including the powerful tools we provide to help our users make decisions about their data.

With respect to Doubleclick, Google has not combined its unauthenticated ads data, whether from DoubleClick products or otherwise, with any personally identifiable information. Google's only step in this regard, taken in the beginning in 2016, was to seek the express, opt-in consent of its users to enable certain web and app browsing information to be associated with a user's account. Existing users were expressly prompted to make an election, while new users were presented an additional choice in their new account setup flow. Existing data was not moved or consolidated, and Google's Privacy Policy was updated to reflect that "depending on your account settings your activity on other sites and apps may be associated with your personal information in order to improve Google's services and the ads delivered by Google."

For more information, please see our Privacy Policy, available at https://policies.google.com/privacy?hl=en-US.

102. Please identify what specific steps a user can take to prevent Google from combining the user's DoubleClick data from the user's personally identifiable information. Please identify the exact number of clicks that a user must make in order to achieve this setting.

Google's users have long entrusted us to be responsible with their data, and we take that trust and responsibility very seriously. Google's goal is to help users enjoy the benefits of technology, while remaining in control of their privacy. Google works to build controls that are easy to use, so users can choose the privacy settings that are right for them. As discussed above in Question Nos. 100-101, in 2016 we added an additional opt-in to user settings to enable certain information to be associated with a user's account, such that if any user who took no action or declined the opt-in would not need to take any further steps. For users who accepted the opt-in, or for users who established a new account after the change, turning off this feature would require only that they visit their Google Account page, and un-check the ads personalization control or the box next to "Include Chrome history and activity from websites and apps that use Google services" in the Web & App Activity panel. Every day, nearly nearly 20 million people visit the Google Account page.

103. Please share all findings and reports issued by the Media Ratings Council about Google's products since 2017.

We are aware of the following Media Ratings Council (MRC) reports, which have been issued since 2017 and mention at least one Google product:

- *Media Rating Council Accreditation Status Updates, October 2016 Through December 2016*, issued January 4, 2017, http://mediaratingcouncil.org/010417%20MRC%20Accreditation%20Status%20Communication.pdf

- *Media Rating Council Accreditation Status Updates, January 2017 Through March 2017*, issued April 6, 2017, http://mediaratingcouncil.org/040617%20MRC%20Accreditation%20Status%20Communication.pdf

- *Status Update: MRC Auditing of Google's YouTube Measurement Platform*, issued June 28, 2017, http://mediaratingcouncil.org/062817_MRC%20Statement%20on%20Status%20of%20Google%20YT%20audit_FINAL.pdf

- *MRC Update on General Invalid Traffic (GIVT) Compliance Status of Accredited Digital Vendors*, issued June 30, 2017, http://mediaratingcouncil.org/June%202017%20MRC%20GIVT%20Status%20Report%20for%20Accredited%20Digital%20Vendors.pdf

- *Media Rating Council Accreditation Status Updates, April 2018 Through June 2018*, issued July 9, 2018, http://mediaratingcouncil.org/070918%20MRC%20Accreditation%20Status%20Communication.pdf

- *Media Rating Council Accreditation Status Updates, July 2018 Through September 2018*, issued October 9, 2018, http://mediaratingcouncil.org/100918%20MRC%20Accreditation%20Status%20Communication.pdf

- *Media Rating Council Issues an Update on the Begin to Render (BTR) Compliance Status of Each Vendor Accredited for Display Served Ad Impressions*, issued June 18, 2019, http://mediaratingcouncil.org/MRC%20Render%20Status%20Report.pdf

- *Media Rating Council Accreditation Status Updates, July 2019 Through September 2019*, issued October 8, 2019, http://mediaratingcouncil.org/100819%20MRC%20Accreditation%20Status%20Communication.pdf

104. What is the prevalence of ad fraud in digital advertising markets?

Every day, we invest significant team hours and technological resources in protecting the users, advertisers, and publishers that make the internet so useful. For example, we took down 2.3 billion bad ads in 2018 for violations of both new and existing policies or more than six million bad ads each day.

Ad fraud can take many forms, but essentially, it is any ad interaction that is meant to increase ad traffic while pretending to be genuine, but does not come from real people with real interest in an ad. Ad fraud includes, but is not limited to, the following examples:

- a publisher paying users to manually click on ads, watch videos, or view content the user would not normally engage with (i.e., a "click farm");
- software that hijacks computers to create non-human traffic and clicks;
- running hidden browsers on a user's computer to automatically visit ad sites;
- software that can be purchased or programmed to automate click activity; and
- hiding invisible ads on a website or manipulating their position to cause users to click them unintentionally.

While ad fraud is a serious problem affecting all participants in the digital advertising space and Google is steadfast in its efforts to combat it, Google does not systematically collect industry-wide statistics relating to prevalence.

Google does, however, provide other statistics that point to the scale of the problem of invalid traffic and publisher policy violations on Google services. Google details its efforts in 2018 and shares some of this data in its annual Bad Ads Report, which was published most recently in March 2019 at https://www.blog.google/products/ads/enabling-safe-digital-advertising-ecosystem/. As discussed in that report, in 2018 Google terminated nearly a million bad advertiser accounts (double the amount from 2017) and worked with law enforcement agencies, including the Federal Bureau of Investigation, to take down one of the biggest ad fraud operations ever.

105. What specific steps does Google take to detect ad fraud?

106. What specific steps does Google take to prevent ad fraud?

Because the answers to these questions are related, we've grouped together our response to Question Nos. 105-106.

Detecting and preventing ad fraud are issues Google takes very seriously. Google has a crucial stake in a healthy and sustainable digital advertising ecosystem — something we've worked to enable for nearly 20 years. Google relies on a combination of real-time (pre-bid) and after-the-fact (post-serve) automated filters, complex algorithms, and manual analysis by Google's team of data scientists, engineers, and analysts to protect advertisers and to detect and prevent ad fraud:

- **Pre-bid filtering:** This relies on real-time analysis of ad traffic to determine whether that traffic is valid or not.

- **Post-serve filtering:** This relies on analysis of ad traffic after an ad event occurs (e.g., an impression or click). Post-serve filtering is necessary to detect some types of invalid traffic that cannot be detected through pre-bid filtering.

- **Manual review:** There is also manual review of issues flagged by advertisers, publishers, and automated systems, and periodic review of the automated filters. When invalid traffic is identified, the data is generally used to update and improve the automated filters.

107. In what instances does Google inform advertisers that their ad spend has been affected by ad fraud? Please describe the relevant circumstances.

Google takes this issue seriously and strives to protect advertisers from ad fraud. Our work to protect users and enable a safe advertising ecosystem that works well for legitimate advertisers and publishers continues to be a top priority. To that end, Google employs a large array of automatic and manual ad fraud detection and elimination techniques. Some of these tools eliminate ad fraud before an ad is even served, while others make automatic adjustments to user billing accounts where Google detects that an ad fraud attempt has made it past Google's filters. Advertisers can then access reports that explain the adjustments made by Google. Should the advertiser suspect that ad fraud went undetected by Google's systems, advertisers can request further ad fraud investigations via Google's online forms or reach out to their account teams directly.

108. What processes does Google have in place to provide refunds to advertisers affected by ad fraud through Google?

As we continue to protect users from bad ads, we also work to make it easier to support advertisers. Google helps protect advertisers from invalid traffic by working to isolate and filter out potentially invalid interactions before they ever reach advertisers' account reports. To minimize the negative impact, Google removes invalid clicks and impressions produced both by automated services (non-human users) and human traffic that does not arise from genuine user interest. Depending on when the traffic is identified as invalid, Google will filter it either before inventory is bid on, or after an event occurs (like a click or impression). Traffic that is filtered pre-bid is never bought because it was not bid on, and so does not require a refund, and traffic that is filtered post-serve is not paid for because it is credited back to the advertiser's account. In the event that an advertiser suspects that invalid traffic was not detected by Google, the advertiser can request an investigation from Google. Google will then investigate the request, and issue credits for invalid traffic as appropriate.

109. Please identify the non-Alphabet services that advertisers can use to:

a. Assess the success of their ad campaigns on Google; and

Consistent with our efforts to promote interoperability in balance with privacy, ad fraud prevention, and security, we have partnered with many third-party providers to support measurement offerings that are independent from Google. Supporting these third-party offerings promotes user choice — a key to Google's success — as to which tools they choose to use in verifying their advertising campaigns' success. Advertisers' third-party measurement offering options include:

1. Adjust
2. Adways
3. Analytic Partners
4. Appsflyer
5. comScore
6. CyberZ
7. Data2Decisions
8. DoubleVerify
9. Dynata
10. Ekimetrics
11. Innovid
12. Integral Ad Science

13. IRI
14. Kantar
15. Kochava
16. Marketing Management Analytics
17. Meetrics
18. Moat (Oracle)
19. Neustar
20. Nielsen
21. Nielsen Catalina Solutions
22. Oracle Data Cloud
23. Singular
24. Sizmek (Amazon)
25. Tune

Google's integrations with some of the above third-party measurement partners are currently undergoing or will soon undergo a stringent, independent audit by the Media Ratings Council, an independent body that oversees the process of developing standards in line with industry best practices, ensures compliance with those standards, and works with its membership to enhance compliance tools and collaborate on continually improving standards and practices. Media Ratings Council accreditation will promote transparency by confirming for advertisers that Google's integrations provide accurate information to the measurement partners' systems, align with industry standards, and can be compared across providers. For more information, please see Google Ads Blog, *New MRC accreditations and partners for Google and YouTube ads measurement*, https://www.blog.google/products/ads/transparency-choice-ads-measurement/.

b. Identify ad fraud on Google.

Google knows that working together with industry participants is the best way to reduce fraud—no individual business can single-handedly eliminate ad fraud across the entire web. The best way to tackle common problems across a highly interconnected web, and to move the whole web forward, is for the industry to work together, build best practices and systems, and make information sharing simple. Google does not monitor or otherwise track in its ordinary course of business third-party services advertisers might use to detect ad fraud; however, we can provide the following non-exhaustive list of third-party ad fraud detection services Google is aware of at this time:

1. Integral Ad Science
2. DoubleVerify
3. White Ops
4. Oracle/Moat
5. Pixalate
6. Kochava
7. Forensiq
8. Adjust
9. AdProv
10. ClickCease
11. ClickGuard
12. ClickShield
13. Clixtell

110. Please identify the specific steps that an advertiser can take to report suspected ad fraud to Google.

Google takes ad fraud seriously and strives to protect advertisers by tackling issues threatening a safe advertising ecosystem. If an advertiser suspects that its account is being affected by invalid clicks, impressions, or other traffic, the advertiser has a series of steps it can take, including requesting an investigation. Google first directs Google Ads users to a troubleshooting guide that covers issues such as discrepancies in Google Ads click data, fluctuations in traffic, suspiciously brief visits to sites, clicks from unexpected locations/IP addresses, fake form submissions, and quick budget depletion (Google, *Troubleshooting Invalid Clicks*, https://support.google.com/google-ads/troubleshooter/2557048?rd=1). If the troubleshooting guide does not resolve the advertiser's concern, Google encourages its customers to contact us and provides advertisers with a "Click Quality Form" where they can initiate an investigation (Google, *Click Quality Form*, https://support.google.com/google-ads/contact/click_quality). The form asks for basic information such as contact information, circumstances surrounding the suspicious activity, affected keywords and campaigns, recent account activity, and a summary of the issue. Advertisers who have managed accounts can request an investigation of suspected invalid traffic by contacting their account team directly. If Google determines that an advertiser has been charged for invalid clicks or impressions, we would issue credits for invalid traffic as appropriate.

111. Does Google permit non-Google companies that provide competing ad servers, ad networks, or demand-side platforms to place ads on YouTube? Please explain why or why not.

It is important to note that competing ad servers, networks, and demand-side platforms have a multitude of options for buying and serving ads, including video ads that are shown on virtually every website and mobile application, including news websites and social media sites, as well as on streaming services, connected TVs, and more. YouTube is only one of a diverse array of distribution options for video ads.

For YouTube specifically, YouTube supports certified third-party ad servers. YouTube inventory is not available for purchase on third-party ad networks and demand-side platforms. YouTube has chosen to invest in its innovative (skippable) TrueView ad format and making it programmatically available on Google's Display & Video 360 in a way that optimizes the advertiser and user experience. This is a common approach to distribution, including in the sale of online ad space; several online companies sell their own ad space through internal rather than external sales channels.

112. Does Google permit non-Google companies that provide competing ad servers, ad networks, or demand-side platforms to participate in Google's ad auctions? Please explain why or why not.

Yes. Auctions within Google Ad Manager's ad exchange feature currently support hundreds of third-party demand-side platforms and third-party ad networks. This interoperability is integral to the success of Google Ad Manager.

113. In the sale of its ad services, does Google offer different terms or services to companies that compete with Google's servers, ad networks, or demand-side platforms and those that do not? If yes, please describe the relevant circumstances.

No. Google does not offer different terms or services to companies that compete with Google's servers, ad networks, or demand-side platforms than those that do not.

114. In the sale of its ad services, does Google offer differential terms of services to companies that exclusively use Google's ad services and companies that use both Google and non-Google ad services? If yes, please describe the relevant circumstances.

No. Google does not offer differential terms of service to companies that use Google's ad tech services exclusively and companies that use both Google and non-Google ad tech services.

115. What types of data does Google provide to companies participating in Google ads? If Google's provision of data varies by type of market participant, please identify and explain any differences.

Google Ads is Google's advertiser-facing interface and Google therefore understands this question to be directed to the types of data Google provides to advertisers. As a general matter, Google strives to provide advertisers with useful information so that they can optimize their return on ad spend while respecting the privacy expectations of users, data sharing regulations, and the reasonable expectations for confidentiality by other market participants.

More specifically, Google Ads provides a dashboard that allows advertisers to review predefined reports or custom-built data exports and graphics in a customizable grid. Among other things, the dashboard allows for advertisers to see scorecards showing the performance of key metrics, charts and tables related to certain visual data reports, and notes that allow collaborators to see some of the context from the dashboard. The dashboard includes a variety of metrics including some relating to performance, conversions, attribution, and more. ("Dashboard: Definition," https://support.google.com/google-ads/answer/7069876).

Dozens of different types of reports are also available through the Google Ads API. The "Account Performance" report, for example, includes all statistics aggregated by default at the account level. And the "Ad Performance" report includes all statistics aggregated at the ad level. Other reports are available through additional sources, such as the Google Ads user interface. For a list of the reports available through the Google Ads API, please see "Report Types," https://developers.google.com/adwords/api/docs/appendix/reports#available-reports .

Additionally, Google Ads integrates with Analytics to provide even more sophisticated data and analysis, for example:

- How users are acquired, their behavior on the app or site after acquisition, and

their conversion patterns;

- What outcomes occurred as a result of users clicking on an ad; and
- Best times of day to target a campaign ("About the Google Ads reports," https://support.google.com/analytics/answer/4355493?hl=en&ref_topic=1308583).

116. Please provide a complete list of Alphabet products, features, and services that collect personally identifiable data.

At Google, we design our products to collect and use data commensurate with their purpose and to keep that data no longer than necessary. These principles are reflected in all of our products. We take pride in being a leader in both transparency in the data we collect and in giving users control over their data. Google was one of the first companies to offer a centralized data portal for account information when we launched My Account (now Google Account) in 2015 (https://account.google.com/). Google Account provides easy-to-use tools to help our users manage privacy and security for their account. That includes our Privacy Checkup tool (https://account.google.com/privacycheckup) that lets our users review and change certain key privacy settings. Google users can view and delete the data stored in their account using Google Account, and they can also export their data using Google Takeout. Users can also choose whether to turn on (or off) ad personalization. Google remains committed to ensuring users have control and choice over their data and its uses.

117. Please describe how Alphabet handles a user's data after that user has deleted its Alphabet account including but not limited to identifying whether Alphabet deletes the user's data or retains its data in any identifiable or de-associated form.

Google cares deeply about giving users transparency, choice, and control in our products and services, and we design our products to collect and use data commensurate with their purpose and to keep that data no longer than necessary. When a user deletes data from their Google account, Google immediately starts the process of removing it from the product and our systems. We then begin a process designed to safely and completely delete the data from our storage systems. This process generally takes around two months from the time of deletion. This often

includes up to a month-long recovery period in case the data was removed unintentionally. Our services also use encrypted backup storage as another layer of protection to help recover from potential disasters. Data can remain on these systems for a period of time.

As with any deletion process, things like routine maintenance, unexpected outages, bugs, or failures in our protocols may cause delays in the processes and timeframes.

Additionally, sometimes business and legal requirements oblige us to retain certain information, for specific purposes, for an extended period of time. Reasons Google might retain some data for longer periods of time include complying with legal or regulatory requirements. More information about Google's retention policies is available at https://policies.google.com/technologies/retention.

118. Please indicate whether Alphabet is able to link user data anonymized by Google to a user's device or account.

The anonymization process is a critical component of Google's commitment to privacy, and Google works to ensure that its anonymization process results in data that cannot be reassociated with an individual user. As we describe in our policies, anonymization is a data processing technique that removes or modifies personally identifiable information, resulting in data that cannot be associated with any one individual. We will continue to find ways to further protect the privacy of our users' data.

119. Does Google permit Android users to download apps from the Google Play Store without using a Gmail or other Google-based account? If Google requires Android users to have a Gmail or any other Google-based account in order to download apps from the Play Store, please explain why.

Android users have many options from which to download apps aside from the Google Play Store, including downloading directly from developers, using pre-installed third-party app stores, or downloading third party app stores of their choosing to their phones. If users choose to download apps from the Google Play Store, they must have a Google account, which is necessary for, among other things, facilitating users to purchase apps (and keeping a record of what apps are purchased such that they can be downloaded again) and enabling parental controls.

120. Please provide a complete list of user data that Android collects.

Android is an open-source platform that is used by thousands of manufacturers around the world. Android devices are not necessarily associated with Google, and, depending on the manufacturer, the apps on the device, and other features, may not transmit data to Google at all. Whether an Android device transmits data to Google, and how often it transmits data, depends on a number of factors, including what apps and services exist on the device and the users' settings.

121. Please provide a complete list of user data that Android collects when an Android user has turned off all location-tracking on the Android device.

Google provides users with robust tools to control their privacy. The type of data that Google may collect from a user's Android device depends on a number of factors, including the product or service being used and an individual user's settings. On Android devices, users can turn off the device location setting. When the device location setting is turned off, Google and third-party apps no longer receive the device location based on GPS and device sensor information. Note that apps and websites connecting to the Internet may continue to use other signals like IP addresses, or other information the user provides (such as a billing address), to infer some information relevant to a user's location.

122. Does Alphabet track a user through the user's IP address, even if that user has turned off all location-tracking on the Android device?

Google strongly believes in building products that make it easy for individuals to control the use of their personal information, through device level settings or otherwise. All Google-licensed Android phones have a device location toggle that is accessible in device settings. When users turn this toggle off, the phone does not transmit device-based location information. Users can also deny access to device-based location information on an app-by-app basis via the device settings. For example, a user could deny Google Maps access to the device-based location information, but allow another app such as a taxi-hailing app to access the device's location.

Note that apps and websites connecting to the Internet may continue to use other signals like Internet Protocol (IP) address, or other information the user provides, to infer some information relevant to a user's location. The transmission of an IP address

is a standard protocol of Internet communications, and its use facilitates several user benefits. For example, we may use IP-based location estimation to prevent abuse, provide users with the correct language for search queries, or to ensure that users get results that are relevant to their general location (for example, users searching for "football" in England likely want different results than users searching for "football" in the US). We describe our use of IP addresses in our user disclosures — including, for example, in our account creation flow, in our Privacy Policy (https://policies.google.com/privacy), and in product when users conduct a Google search. We are always working to provide users greater choice, transparency, and control, and will continue to do so.

123. What types of Android-collected user data does Google use for advertising purposes?

Data Google collects, regardless of whether it is through the Android platform or other platforms, are described in our Privacy Policy, available at https://policies.google.com/privacy. Whether the users' Google account data is used for personalized advertising purposes depends upon the users' settings. A user can change their advertising settings at https://adssettings.google.com/.

124. For each of the past five years, please identify, to the nearest terabyte, the average amount of data that Google collects from Android devices in the U.S. (excluding photo and video data actively submitted by Android users).

Google is committed to giving users transparency, choice, and control in our products and services. We offer a number of resources to help users better understand the products and services we provide. These resources include plain-English and easy-to-understand instructions about how users can make meaningful privacy and security choices on Google products and more generally, online.

For example, Google's Privacy Policy (https://policies.google.com/privacy) includes short, educational videos about the type of data Google collects, including location information.

We also were one of the first companies to offer users a centralized portal to see and manage their data with the launch of MyAccount in 2015 (https://myaccount.google.com/). Now referred to as Google Account, the portal provides easy-to-use tools for users to manage their Google Account privacy and

security. The Data and Personalization section of Google Account (https://myaccount.google.com/data-and-personalization) allows users to turn on or off features, like Location History, and to opt in or out of ads personalization.

In addition, Privacy Checkup (https://myaccount.google.com/privacycheckup) makes it easier for users to review and change their privacy settings. These tools enable users to make informed decisions about their data.

While we do not have metrics tracking the amount of data collected from Android devices in the U.S., we can tell you that the amount of data transmitted by an Android device to Google depends heavily upon the apps the user has downloaded, the users' settings, and even the phone. For example, if the user has a phone with a large amount of storage and opts into backing up their phone to Google, they could transmit a large amount of data to Google every day. Alternatively, if the user is using an Android device that is not a Google-licensed Android device, and has not installed any Google apps, the user may not transmit any information to Google.

125. Has Alphabet entered any agreements with original equipment manufacturers (OEMs) that provide Google exclusive rights to collect data from the OEM's devices? If yes, please identify the OEMs with which Google has any such agreement and describe the relevant provisions.

No. Our agreements with OEMs do not grant us exclusive rights to collect data from the devices.

126. Does Google restrict any OEMs from receiving, storing, or monetizing consumer data collected by the OEM's devices as a condition of using Android or having Google Play services on the device? If yes, please describe these restrictions and all the reasons why Google imposes them.

Google's priority is to protect users' privacy and to work to ensure they can trust our products. OEMs are subject to certain obligations and requirements that are designed to protect users. For example, apps installed by OEMs on Google certified devices with Google Play Services running on the devices are subject to our Unwanted Software Policy, available at https://www.google.com/about/unwanted-software-policy.html. That policy states that "[s]oftware that collects and/or transmits users' personal information must be transparent about it by providing an explanation in clear and straightforward language

that describes what information would be collected or transmitted and for what purpose" and requires that certain sensitive information like banking details, be transmitted using encryption. If OEMs also develop apps for the device that are distributed through the Play Store, they are also subject to our Play developer policies, available at https://play.google.com/about/privacy-security-deception/user-data/, which also restrict how user data may be collected and stored.

127. Please provide a full list of the apps that Google has suspended from the Google Play Store over the past five years and all the reasons for each suspension.

Google invests heavily to ensure that Google Play provides a safe and high-quality platform for app developers to distribute their apps and for billions of Android users to download and use the apps they enjoy. It is important to understand that the risks posed by harmful and malicious apps to users is significant, which is why Google takes significant steps to maintain the integrity of Google Play including by rejecting or suspending harmful apps.

The company's Google Play Protect system now scans over 50 billion apps on users' devices daily to make sure apps installed on devices are not harmful. With such protections in place, apps from Google Play are eight times less likely to harm a user's device than Android apps from other sources. And last year alone, Google Play Protect led to the identification and removal of over 39 million potentially harmful apps from Android devices. Google continues to work diligently to improve abuse detection technologies and systems, and has significantly increased its team of product managers, engineers, policy experts, and operations leaders to fight against bad actors. Google's investments are critical to enforcing its policies against malicious apps, which continue to evolve and become more sophisticated. Google also maintains Developer Program Policies, which, along with the Developer Distribution Agreement, are designed to ensure that users are accessing apps that are trusted, safe, and that protect user data.

In 2018, Google also introduced a series of new policies to protect users from new abuse trends, detected and removed malicious developers faster, and stopped more malicious apps from entering the Google Play Store than ever before. Google's continued efforts to tighten policies to reduce the number of harmful apps on the Play Store, as well as its investments in automated protections and human review processes played critical roles in identification and enforcement efforts related to bad apps. In line with these efforts, the number of rejected app submissions increased by

more than 55%, and Google increased app suspensions by more than 66%. For more information, please see https://android-developers.googleblog.com/2019/02/how-we-fought-bad-apps-and-malicious.html.

128. Please identify which of these suspended apps, if any, competed with Google's own app or service offerings.

Google policies apply to all apps, whether to a third party app or a Google owned app. We do not track whether apps that are suspended for a violation of our policies compete with Google's own apps or services, as such information is not relevant to the enforcement of our policies. Competitors to Google often have many apps available in the Play Store. For example, Amazon and Microsoft each have more than 30 different apps available in the Play Store.

129. Please describe Google's level of access to the user data provided by a user to a non-Google app.

Google is focused on protecting user data, including when provided by a user to a non-Google app. Android is designed to protect user privacy and give users control — from its enhanced User Interface (UI) to stricter permissions and restrictions on what data apps can use. Whether Google has access to data transferred to a third party app depends on a number of factors, including but not limited to whether the user enabled Google's backup and restore service or whether the non-Google app utilizes certain Google services, like our Maps Platform.

130. Please describe all steps that Google takes when it suspects that a developer is in violation of the Google Play Store policies, including whether Google communicates the specific policy violation to the developer.

Google Play provides third-party app developers with an open and free platform to distribute apps. App developers do not pay any fees for the distribution of the apps they make available through Play. Beyond Play, developers have the ability to reach users through numerous other platforms, such as iOS, a multitude of other Android app stores, smart devices, gaming platforms, and messaging and social media platforms.

Google strives to provide a safe and robust platform where millions of developers can distribute their apps and games to billions of users in a manner that protects both the user (e.g., from unwanted, illegal and potentially harmful content) and the developer (e.g., from illegal or unfair use of their apps), in an ever-evolving and fast changing environment. A secure and high-quality app store environment increases consumer trust and, in turn, use of developers' apps and games. Google maintains Developer Program Policies, which, along with the Developer Distribution Agreement, ensure that users are accessing apps that are trusted, safe, and that protect user data.

When Google Play detects a policy violation, it will take action and notify the developer in accordance with our policies available at https://play.google.com/intl/en-US/about/enforcement/enforcement-process/. The notification includes a statement regarding the relevant violation and instructions on how the developer can appeal the enforcement action and/or resubmit a compliant app.

From that email, or directly from the Help Center, the developer can easily contact the Policy Support Team (Appeals) in order to challenge the enforcement decision or receive additional clarification on the infraction.

Developers also may submit an appeal form, where they can explain why they think their app does not violate a policy, why their app should not have been rejected or removed, or why their account should be reinstated. Google Play reviews the appeal request and communicates appeal decisions to the developer. If the enforcement is found to have been made in error, the app or account will be reinstated on the Google Play store.

For more information, please see the Google Play Developer Distribution Agreement available at https://play.google.com/about/developer-distribution-agreement.html; Developer Policy Center information available at https://play.google.com/about/developer-content-policy/; and additional information at Play Console Help, https://support.google.com/googleplay/android-developer/answer/2477981?hl=en.

131. Please identify the minimum level of information that a Google employee is required to share with an app developer when communicating that the developer's app has been suspended from the Google Play Store.

When Google Play detects a policy violation, it will take action and notify the developer, generally via email, in accordance with our policies available at https://play.google.com/intl/en-US/about/enforcement/enforcement-process/. The notification includes a statement regarding the relevant violation and instructions on how the developer can appeal the enforcement action and/or re-submit a compliant app.

132. If Google suspends an app without detailing the precise basis for the suspension, how does Google expect the app to remedy the violation and bring itself in compliance with Google's policies?

Google only suspends apps from the Google Play Store if it finds the app in violation of Google Play Program Policies (https://play.google.com/about/developer-content-policy/), or in violation of the Developer Distribution Agreement (https://play.google.com/about/developer-distribution-agreement.html). We also process legal removals like copyright infringement or other legal removal requests. Egregious or multiple policy violations or repeated app rejections or removals can also result in suspension or termination. Please see our policy center summary of our enforcement process, available at https://play.google.com/intl/en-US/about/enforcement/enforcement-process/.

When Google Play detects a policy violation, it will take action and notify the developer, generally via email, in accordance with our policies available at https://play.google.com/intl/en-US/about/enforcement/enforcement-process/. From that email, or directly from the Help Center, the developer can easily contact the Policy Support Team (Appeals) in order to challenge the enforcement decision or receive additional clarification on the infraction.

Developers also may submit an appeal form, in which they can explain why they think their app does not violate a policy, why their app should not have been rejected or removed, or why their account should be reinstated.

133. Does Google give apps an opportunity to address alleged-violations of Google Play Store policies before Google suspends the app from the Google Play Store?

Google strives to provide a safe and robust platform where millions of developers can distribute their apps and games to billions of users in a manner that protects both the user (e.g., from unwanted, illegal, and potentially harmful content) and the developer (e.g., from illegal or unfair use of their apps), in an ever-evolving and fast changing environment. A secure and high-quality app store environment increases consumer trust and, in turn, use of developers' apps and games. Google maintains Developer Program Policies, which, along with the Developer Distribution Agreement, ensure that users are accessing apps that are trusted, safe, and that protect user data.

When Google Play detects a policy violation, it will take action and notify the developer, generally via email, in accordance with our policies: https://play.google.com/intl/en-US/about/enforcement/enforcement-process/. The notification includes a statement regarding the relevant violation and instructions on how the developer can appeal the enforcement action and/or re-submit a compliant app. From that email, or directly from the Help Center, the developer can easily contact the Policy Support Team (Appeals) in order to challenge the enforcement decision or receive additional clarification on the infraction. Developers may submit an appeal form, in which they can explain why they think their app does not violate a policy, why their app should not have been rejected or removed, or why their account should be reinstated. Google Play reviews the appeal request and communicates appeal decisions to the developer. If the enforcement is found to have been made in error, the app or account will be reinstated on the Google Play store.

134. What appeal processes does Google have in place for app developers who believe their apps have been wrongly suspended from the Play Store?

Providing a safe and robust platform for all developers at times requires suspensions of developers for violating our policies or for legal reasons, such as copyright infringement. App developers who believe their apps may have been wrongly suspended may file appeals. Developers may submit an appeal form, in which they can explain why they think their app does not violate a policy, why their app should not have been rejected or removed, or why their account should be reinstated. Google Play reviews the appeal request and communicates appeal decisions to the developer. If the enforcement is found to have been made in error, the app or account will be reinstated on the Google Play store.

135. Has Google ever represented to app developers that their AdMob account manager can help them resolve any issues developers are having with Play Store suspensions? If yes, please describe the relevant circumstances.

Google adheres to a clear and transparent mechanism for the suspension of apps in its Play Store and appeals regarding suspensions as described in prior responses above. That mechanism is not controlled by and does not provide for any specific role for an individual AdMob account manager.

136. Does the Google Play Store differentiate its treatment of non-Google apps based on whether an app has chosen to integrate with adjacent Google product offerings? If yes, please describe the relevant circumstances.

No. Google's algorithms for app discovery within its Play Store do not take into account whether an app has chosen to integrate with adjacent Google product offerings. Google Play Store facilitates the distribution of a wide variety of over one million apps, including apps that compete with Google's apps. Google uses an algorithm to determine placement of apps within search and discovery results to ensure that users are directed to safe, high-quality, relevant, and useful apps. Google's algorithms consider app quality and user engagement by taking into account high retention rates, low crash rates, low uninstalls, and many other factors.

137. How does Google determine which categories of apps are required to use Google's in-app payment or purchasing services?

Our full policies for monetization strategies can be found on our developer support page at "Developer Policy Center - Monetization and Ads," available at https://play.google.com/about/monetization-ads/payments/. Developers offering products within a game downloaded on Google Play, or providing access to game content, must use Google Play In-App Billing as the method of payment. Developers offering products within another category of app downloaded on Google Play must use In-App Billing unless: 1) payment is solely for physical products, or 2) payment is for digital content that may be consumed outside of the app itself (e.g., songs that can be played on other music players). The second exception relates to instances where the user is able to purchase and own downloadable, portable file formats which can then be played on other players.

138. Over the last five years, has Google changed its method for determining which apps must use Google's in-app payment or purchasing services? If yes, please describe each of these changes and all the reasons for each change.

No. Google's policy has remained consistent with regard to this issue over the past five years.

139. Please identify how much it costs Google to produce a Google Home device.

Google tracks and reports costs on a company-wide basis. Those figures are available in our Forms 10-K and 10-Q. Recent filings are available at https://abc.xyz/investor/.

140. Please identify what types of data Google collects through its Google Home products and explain how each type of data is used.

Google cares deeply about giving users transparency, choice and control over their data in our products and services. Google Home and Google Home Mini are two hardware devices that Google designed to further enable users to interact with the Google Assistant in their homes. The data a user shares with Google via Assistant on the Google Home or Google Home Mini is highly dependent upon the user's settings and the types of services and devices that the user has linked to their account. Users have control over the data they share with Assistant, as described at https://support.google.com/assistant/answer/7126196. Users can also go to Google Account to change their settings and view and delete their Assistant activity — every day, nearly 20 million people visit Google Account.

In addition, Google has published FAQs on Privacy for Google Nest, which are available at https://support.google.com/googlenest/answer/9415830?hl=en&ref_topic=7173611, to describe and provide more details about how Google collects and uses user data for its Nest products and services, including its Google Home devices.

141. Does Google allow developers to make a skill available through and/or compatible with Google Home without sharing user skill data with Google? Please explain why or why not.

Google allows third-party developers to create Actions for the Google Assistant through Actions on Google (AOG). The AOG ecosystem offers a rich source of content, connecting users to the apps and services they use as part of daily life. The Assistant has also been built with developers in mind, so that when a user talks to the Google Assistant, the user can access content and services beyond just Google's products, like Search. Because Assistant is part of Google, interactions that the user has through Assistant are saved in the user's Google account, subject to the user's settings. A user has control over what data they share with Google or save in their Google Account.

142. Please identify which categories or teams of Alphabet employees have access to data or information that Google collects through Google Home products, specify the types of data to which each has access, and describe where in Alphabet's organization chart the teams or employees are located.

Google is a leader in security, and cares deeply about protecting users data. We have strict policies governing and limiting employee access to users' information. Our policies require that access to user data is only granted for authorized, valid Google business purposes. Our policies further provide that authorizations are granted only for a specific purpose and a specific type of access to meet the needs of the authorization request. Google employee access to user data can be logged and monitored, and Google's security team actively monitors access patterns and investigates unusual events.

Google reinforces these access limitation policies with its employees, who undergo security and privacy training at the start of their employment and annually thereafter. Additional, specialized training and policies apply to employees who have access to user data. Any employee with access to user data is subject to strict contractual confidentiality obligations. Violations of these policies and other privacy policies may result in disciplinary action, including termination of employment.

143. Google Home can offer local search solutions. How does Google determine which local service is returned to the consumer?

Google's results on Home are provided by Google based on its own search indices. For local services, providers that have been pre-screened and verified may be identified for users in response to relevant voice search queries.

144. Has Google entered any marketing deals or arrangements with merchants to guarantee those merchants referrals through Google Home? If yes, identify and describe these deals or arrangements.

No. Google does not guarantee that a certain merchant will be "referred," that is, advertised during Assistant responses on Google Home, by virtue of Google's partnership with that merchant.

145. Has Google ever demanded, as a condition for entering into a business partnership with another company, access to any data collected by that company, including the company's own proprietary data? If yes, please describe the relevant circumstances.

It is not uncommon for companies to include, as part of a contract, access to another company's data, and Google is no exception. For example, data security terms often require that one company provide logs, audits, or other proprietary or confidential information relevant to analyzing the impact of a security incident on the other company. In other cases, the sharing of confidential or proprietary data is necessary to engage in a joint venture or other projects that require the integration of products. Google has likely entered into these types of contracts over the years and to the extent that such terms exist for either or both parties, they are the product of good faith negotiations by sophisticated parties.

146. Has Google ever used information gathered as a result of a business partnership with another company to guide its product strategy? If yes, has Google ever used this information to introduce Google products that directly compete with the business partner's product?

Google constantly seeks to improve and expand its product offerings based on user feedback, technological developments, and input from other companies, including companies with which it partners, among other sources of information. For example, Google's partners voluntarily provide input to help improve future releases of the Android open source operating system, from which all Android users may benefit. Google's partners also provide input to improve the Chromium open source browser, which underlies not only Google Chrome, but also a large number of competing browsers.

Google also voluntarily provides its own technology to rivals to support their users. For example, Google offers for free to rival browsers our Safe Browsing technology, which examines billions of websites per day looking for unsafe sites. Every day, we discover thousands of new unsafe sites, many of which are legitimate websites that have been compromised. When we detect unsafe sites, we show warnings on Google Search and in web browsers. Apple and Mozilla use this Safe Browsing information for free to protect millions of Safari and Firefox users.

We deeply value our relationships with our partners and, as we do throughout our business, Google complies with any contractual or other legal requirements regarding the use of intellectual property, trade secrets, or other confidential business information that business partners provide to Google.

147. Has Google ever threatened to remove a company from Google Search due to a business dispute with that company in one of Google's other areas of business?

No. Search results are based on our algorithms and designed to provide our users the most useful information to their queries. Google does not remove companies from Search as part of business disputes with such companies in other areas of Google's business.

148. Does Google include or has it ever included in any contract with business partners a waiver of some or all intellectual property rights whereby a business partner agrees not to bring some or all intellectual property infringement claims with regard to a Google product or service? If yes, please describe the relevant circumstances.

It is not uncommon for companies to grant each other licenses in contracts that would result in essentially a waiver of some or all intellectual property claims. In addition, companies also enter into settlement agreements regarding claims related to intellectual property infringement claims. Google regularly engages in licensing exchanges with other companies and may have entered into settlement agreements as well. To the extent that such terms exist for either or both parties, they are the product of good faith negotiations by sophisticated parties.

149. Does Google include or has it ever included in any contract with business partners a termination clause maintaining the right to end a business partnership

if the business partner asserts any intellectual property infringement claims against Google? If yes, please describe the relevant circumstances.

It is not uncommon for companies to include a wide variety of termination clauses applicable to both parties to a contract. Google may have entered into these types of contracts over the years and to the extent that such terms exist for either or both parties, they are the product of good faith negotiations by sophisticated parties.

150. Does Google include or has it ever included, in any contract with business partners a waiver of some or all antitrust claims whereby a business partner agrees not to bring some or all antitrust claims with regards to Google's conduct? If yes, please describe the relevant circumstances.

It is not uncommon for companies to include waivers of claims in contracts or agreements to settle pending or threatened litigation. Google may have entered into these types of contracts over the years and to the extent that such terms exist for either or both parties, they are the product of good faith negotiations by sophisticated parties.

151. Please describe how Google's algorithm determines the tab in which a sender's email is slotted in Gmail.

Our goal for Gmail is to give users control over their email, and to make their email useful, productive, and functional. Gmail users have always been able to set up filters in Gmail to automatically move emails from their inbox into other folders, based on factors such as the sender or the subject of the email, which is a common feature provided by many email providers. In 2013, Google introduced tabs that allowed users to choose to sort their email by various topics, such as Promotions, Social, and Updates. Users can choose any or none of these categories, or they can create their own.

Whether email is directed into one of these tabs is dependent upon a number of factors, including the users' selection of the tabs and the users' own settings. Our algorithms learn from aggregated user behavior to determine to which tab an email should be directed; for example, if users are generally moving a type of email to the Promotions tab, the system reflects aggregate user preferences and directs messages from that sender to the Promotions tab. Similarly, if users are moving their email to the Primary tab, our algorithm will learn from that action as well.

Because our users have many different options in terms of email providers, Google has consistently developed other new innovative features in Gmail, such as the recently launched Smart Compose, Confidential Mode, and the ability to schedule when emails are sent.

152. Please identify the primary factors that impact a mass sender's e-mail open rates, where a "mass-sender" is defined as an entity that regularly sends e-mails to more than 50,000 users.

Whether a mass-sender's email is regularly opened by recipients depends on a number of factors, including whether the recipients are appropriately targeted for the email, the topic and timeliness of the email, and subjective factors, including whether recipients have found such emails helpful in the past. We would defer to experts regarding email marketing trade practices and top factors that increase open rates. We do, however, provide tools to bulk email senders to help them ensure that their email is appropriately delivered to Gmail users and not marked as spam, available at https://support.google.com/mail/topic/7279058?hl=en&ref_topic=3394151, including instructions on how to provide recipients an option to unsubscribe from the emails.

153. How do open rates vary based on the type of Gmail tab that is assigned to an e-mail? Please identify the average open rates for e-mails in 2018, broken down by the tab that Google assigned to the e-mail.

Google introduced tabs back in 2013 to provide users with an efficient way to sort their email by various topics, such as Promotions, Social, and Updates. Google has not examined open rates based on the tab that is assigned to a given email. In order to properly assess whether an email is more likely to be opened in one tab versus when it is routed to another tab, we would need to conduct a test to determine if delivering the same message to the same user is more likely to be opened than when the same email is delivered to the same user via another tab. We have not conducted such tests and therefore do not have these metrics.

154. If a sender's e-mails are consistently delivered to the "Primary" inbox tab, but—pursuant to an algorithmic change—are later shifted to the "Promotions" tab, how would this change affect the rate at which the sender's e-mails are opened?

Because we strive to give users control over their email, and to make their email useful, productive, and functional, our algorithms are highly dependent upon users' actions. So, for example, if an email was redirected to the Promotions tab, it may generally be because users in aggregate were redirecting the email to the Promotions Tab. As discussed above, we have not conducted tests that would allow us to determine whether a particular email's open rate was affected by the tab in which it appears.

155. If the Gmail algorithm is changed such that a given sender's e-mails will be delivered into a new tab, does Google inform the sender of this change before or after implementing it? Please describe any processes in place to alert e-mail senders of this type of change.

Google designs Gmail to respond to the interests of our users. If users want an email to be directed to a different tab, like their Primary inbox, they can choose to direct the email to be delivered to that inbox by dragging the email to the Primary Inbox. Gmail will then ask if they wish to deliver all future emails from that sender to the same Inbox. Because where an email is delivered is highly dependent upon users' actions, Google is not in a position to provide notice to marketers about the change.

156. When and why did Google implement the e-mail tab structure?

We announced our changes to Gmail in 2013 in a blog post, located at https://www.blog.google/products/gmail/a-new-inbox-that-puts-you-back-in/. As described in that blog, we designed this to help users take control of their email and make their use of Gmail more productive. Because our users have many different options in terms of email providers, Google consistently develops new innovative features in Gmail such as these inbox tabs.

157. Please describe how Google's ad revenues on a per-email basis compare one year before and one year after the tab structure was implemented.

Gmail-related revenue from advertising is accounted for in Google properties revenues, which also incorporates advertising revenues from Google search properties, and other Google owned and operated properties, such as Google Maps, Google Play, and YouTube. Google does not, however, track revenue on a per-email basis in the ordinary course of its business.

For additional information regarding Google properties revenues, please see our Forms 10-K. Recent filings are available at https://abc.xyz/investor/.

158. How does Google advise organizations who seek to change the tab in which their emails are slotted?

Google aims to provide our users a broad range of information and choices to foster and continuously improve a diverse Internet ecosystem. Email is an important part of that ecosystem. Google provide tools to bulk email senders to help them ensure that their email is appropriately delivered and not marked as spam. More information about these tools are available at https://support.google.com/mail/topic/7279058?hl=en&ref_topic=3394151. These tools, however, do not change to which tab an email may be delivered. Where an email is delivered is largely dependent upon individual users' direction and aggregated user actions.

159. Has Google ever recommended that organizations seeking to change their tab designation purchase ads in order to achieve higher open rates? If yes, please describe the relevant circumstances.

No. An organization cannot change the tab designation of their emails by purchasing ads. Google offers Gmail Ads, but these ads still appear in the Promotions or Social tabs of Gmail. Gmail Ads are only shown if the user has opted to use those tabs, and those Gmail Ads are not personalized based on the user's Gmail content.

160. Please identify what types of data Google collects through Google Cloud and explain how each type of data is used.

Google Cloud Platform (GCP) is an enterprise cloud offering consisting of storage, compute, and data management services. When enterprise customers submit their data to GCP, Google stores, manages, and protects the customer data in accordance with the contract terms entered into with its customers, available at https://cloud.google.com/terms/. Google considers itself a service provider with regard to this customer data, and would not consider itself to have "collected" such data.

Google logs information about an enterprise customer's interactions with the GCP admin console, APIs, and command line tool. This activity data may include a unique

identifier associated with the enterprise customer or its administrator, date and time of the activity, IP address, and information about a customer's or administrator's actions, for example, when a user logged into the GCP console.

161. Please identify all types of information Google tracks on a Google Cloud user or customer that are not made available to the Google Cloud user or customer.

Google enables its GCP customers to access, export, and delete their own customer data in GCP. For many of the GCP services, we also provide the customer with access to logs containing activity data (described above). Information about the audit logs related to a customer's use of the GCP services, which customers can access, is available at https://cloud.google.com/logging/docs/audit/. In addition, administrators can access certain activity data related to their interactions in the GCP console. To the extent that users cannot access personally identifiable information via Google services, they may submit a request to Google or the other customer, as appropriate. There may be other categories of data which enterprise customers or users cannot access and which we do not typically make available, such as the anonymized data described in response to Question No. 163.

162. Has Google ever used a Google Cloud customer's usage patterns or any other Google Cloud data to inform Google's investment decisions? If yes, please describe the relevant circumstances.

As described in response to Question No. 163 below, Google uses aggregated activity data to make decisions about managing its resources and infrastructure, but we do not make investment decisions based on a GCP customer's activity data or their customer data.

163. Has Google ever used aggregate forms of Google Cloud usage data to inform Google's investment decisions? If yes, please describe the relevant circumstances.

Google uses aggregated activity data for business planning and to make decisions about managing its resources and infrastructure. For example, Google might use aggregated data about storage and compute resource usage to plan for capacity in our data centers or aggregated data about service utilization to prioritize technical support. Google does not use this data to inform decisions about unrelated investments in other companies or sectors.

164. Has Google ever used a Google Cloud customer's usage patterns or any other Google Cloud data growth to inform Google's product strategy? If yes, please describe the relevant circumstances.

As described below in response to Question No. 165, Google may use aggregated GCP activity data to improve, promote or develop GCP services, but it does not make product strategy decisions based on a GCP customer's activity data. Google processes customer data only in accordance with the GCP Terms and processes a GCP customer's activity data to provide and promote the GCP services, to enforce Google's Acceptable Use Policy (https://cloud.google.com/terms/aup), and for legal reasons.

165. Has Google ever used aggregate forms of Google Cloud usage data to inform Google's product strategy? If yes, please describe the relevant circumstances.

Google may use aggregated GCP activity data to improve, promote, or develop GCP services. For example, Google may review statistical data about file types stored in GCP to make a decision on what file types GCP services should support.

166. Google has publicly announced that it intends to implement DNS over HTTPS (DoH) as the default setting in its Chrome browser. Please explain the effects that implementing DoH will have on domain name traffic.

The privacy and security of users is Google's utmost concern. Traditional DNS services introduce privacy concerns because the DNS system, which determines the server destination of a user query, has vulnerabilities that expose a user to bad actors. For example, the connection is not private and requests can be redirected — both issues over which privacy experts have expressed concern. DNS over HTTPS (DoH) encrypts DNS requests, preventing third parties from seeing sites users access, thus making users' activity more private and secure. Google is currently conducting a limited experiment, and has not announced any general change to Chrome with respect to DNS lookup requests. The announced experiment does not switch the DNS provider for any Chrome user; instead, Chrome will check if the user's current DNS provider is among a list of DoH-compatible providers that have chosen to participate in the experiment, and if so upgrade to the equivalent DoH service from the same provider. The user's provider for DNS/DoH resolution will remain the same. We are

conducting this experiment to test potential features that will improve user security and privacy. For more information, please see https://blog.chromium.org/2019/10/addressing-some-misconceptions-about.html.

167. Does Google plan to implement DoH as the default option in the Android operating system? If yes, what, effect will implementing DoH by default in the Android operating system have on Google's ability to collect data on Android customers' web browsing habits and app usage?

No, Google currently does not have such a plan.

168. Does Google have any plans to use data collected or processed through DoH for commercial purposes?

a. If yes, please provide a description of each plan, including the expected timing and benefits.

b. If no, please indicate whether Google has considered any such plans and why it rejected them.

The data collected and processed through DoH is controlled by the DNS provider, not the browser (e.g., Chrome) or operating system (e.g., Android). As explained above, the announced experiment in Chrome does not switch the DNS provider for any user.

For the majority of traffic, the DNS provider is the user's Internet service provider (ISP), not Google. Google expects that ISPs will implement DoH, and our plan is to partner with ISPs to support the ISPs' deployment of DoH services for their users.

Some users may choose a different DNS provider than their ISP. One such option is a DoH service that Google offers to the public free-of-charge. This service, Google Public DNS, is opt-in for Chrome users. Google retains two types of data from Google Public DNS queries, temporary logs and permanent logs:

- Temporary logs contain some personal information and are deleted after 48 hours. Temporary log data is used only for security and stability purposes. This data is used to identify and mitigate security threats and/or to fix, maintain, or improve Google DNS services. Temporary log data is never used for targeted advertising or marketing, and Google does not correlate or associate

personally-identifiable information from Google Public DNS logs with any personally-identifiable information from other Google services.

- Permanent log data, which does not contain any personal information, may be used for a variety of purposes, including development of new products and services. We do not share permanent logs outside of Alphabet Inc. and its subsidiaries.

Details regarding our commitment to user security and privacy in providing the Google Public DNS service are available at https://developers.google.com/speed/public-dns/faq#info and https://developers.google.com/speed/public-dns/privacy.

169. Will Google's plan to implement DoH prevent non-Google firms from either accessing data they previously had access to or policing harmful network activity? If yes, please identify all the types of data non-Google firms will no longer be able to access.

Google's plans involve only a limited DOH experiment in Chrome related to upgrading from a given DNS provider's non-DoH service to the same DNS provider's DoH service. As a result, DNS providers, including ISPs, will still have the ability to view the traffic that users send and receive, and to use that information to engage in IP blocking of malicious and/or illegal sites.

170. In partnership with Mozilla, Cloudflare has agreed to collect a minimal amount of information about DNS requests and has agreed to delete that information within twenty-four hours of Cloudflare's receipt. It also has made a commitment not to "retain or sell or transfer to any third party (except as may be required by law) any personal information, IP addresses or other user identifiers from the DNS queries." Has Google agreed to these commitments?

a. If yes, please provide a copy of these commitments.

b. If no, please explain why not.

c. If no, please indicate whether Google has any plans to monetize information collected or processed through DoH and provide a description of any such plans, including the expected timing and benefits.

The data collected and processed through DoH is controlled by the DNS provider, not the browser (e.g., Chrome) or operating system (e.g., Android). As explained above, the announced experiment in Chrome does not switch the DNS provider for any user.

For the majority of traffic, the DNS provider is the user's ISP, not Google. Google expects that ISPs will implement DoH, and our plan is to partner with ISPs to support the ISPs' deployment of DoH services for their users.

Some users may choose a different DNS provider than their ISP. One such option is a DoH service that Google offers to the public free-of-charge. This service, Google Public DNS, is strictly opt-in for Chrome users. Details regarding our commitment to user security and privacy in providing the Google Public DNS service are available at https://developers.google.com/speed/public-dns/faq#info and https://developers.google.com/speed/public-dns/privacy.

171. Please identify which categories or teams of Alphabet employees have access to data or information that Google collects through Google Cloud, specify the types of data and information to which each has access, and describe where in Alphabet's organization chart the teams or employees are located.

We have a long-standing and unwavering commitment to security, and take seriously the security of our systems and data. In addition to other controls, we limit and monitor the activities of employees who have been granted administrative access to company resources. Google follows a formal process to grant and revoke employee access to Google resources. Approvals are managed by workflow tools and logged, and an employee's access authorization is enforced at all relevant layers of our systems. Dedicated security teams actively monitor access patterns and investigate unusual events. As part of our commitment to transparency and security, we provide GCP customers the ability to review and audit logs regarding our own access to their data. For more information about this logging, please see https://cloud.google.com/logging/docs/audit/access-transparency-overview.

172. Please identify the percentage of Google users that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Google, describe the relevant provisions, and identify any types or categories of

Google user contracts that do not contain a mandatory arbitration clause and/or class action waiver.

Our general terms of service for Google products like Gmail, Search, and Maps do not include either an arbitration clause or class action waiver. They are available at https://policies.google.com/terms?hl=en-US.

173. Since 2014, how many Google users have initiated arbitration proceedings to adjudicate a legal claim against Google, in total and broken down by type of legal claim?

Our general terms of service do not contain mandatory arbitration clauses. Some users may choose to initiate arbitration proceedings for a variety of reasons, including to avoid the burdens of civil litigation. We do not maintain information regarding arbitration proceedings initiated by Google users such that it could be easily queried to provide a more detailed response to this question.

174. Please identify the percentage of Google employees that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Google, describe the relevant provisions, and identify any types or categories of Google employee contracts do not contain a mandatory arbitration clause and/or class action waiver.

Google does not require employees to agree to mandatory arbitration or class action waivers.

175. Since 2014, how many current or former Google employees have initiated arbitration proceedings to adjudicate a legal claim against Google, in total and broken down by type of legal claim?

As noted in response to Question No. 174, Google does not currently require employees to agree to mandatory arbitration or class action waivers. From January 1, 2014 to September 1, 2019, current and former Google employees have initiated 11 arbitration proceedings against Google in the United States.

176. Please identify the percentage of Google contractors that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Google, describe the relevant provisions, and identify any types or categories of

Google contractor contracts that do not contain a mandatory arbitration clause and/or class action waiver.

Google does not require members of its extended workforce, who are employed by other companies, to agree to mandatory arbitration or class action waivers.

177. Since 2014, how many current or former Google contractors have initiated arbitration proceedings to adjudicate a legal claim against Google, in total and broken down by type of legal claim?

As noted in response to Question No. 176, Google does not currently require members of its extended workforce, who are employed by other companies, to agree to mandatory arbitration or class action waivers. From January 2, 2014 through September 1, 2019, members of Google's extended workforce have initiated three arbitration proceedings against Google in the United States.

178. Please identify the percentage of Google business partners that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Google, describe the relevant provisions, and identify any types or categories of Google's contracts with business partners that do not contain a mandatory arbitration clause and/or class action waiver.

Google has used arbitration agreements in commercial contracts. For example, we have an arbitration agreement in our U.S. terms of service for Google Ads. Those provisions are available at https://payments.google.com/u/0/paymentsinfofinder. Our records, however, are not stored in a way such that we could produce a percentage of business partners that are subject to these types of agreements.

179. Since 2014, how many current or former Google business partners have initiated arbitration proceedings to adjudicate a legal claim against Google, in total and broken down by type of legal claim?

Businesses frequently choose arbitration to avoid the burdens of civil litigation. We do not maintain information regarding arbitration proceedings initiated by business partners such that it could be easily queried to provide a more detailed response to this question.

180. Please identify the percentage of Google employees and contractors that are subject to a non-compete clause in their agreement with Google, describe the relevant provisions, and identify any types or categories of Google employees and contractors that are not subject to a non-compete clause.

We do not have any post-termination non-compete agreements with Google employees in the United States. As is standard in the industry, there are limited instances where some current employees may have signed non-compete agreements in connection with the sale of their business to Google via a merger or acquisition agreement. Such non-compete agreements are not employment related. Instead, they are related to the employee's prior ownership of stock in the target entity; and, as a former owner of the target entity, he or she agrees not to compete with the business he or she sold to Google for a certain period of time following the closing of the sale of the business.

181. Since 2014, how many former Google employees and contractors has Google sued or initiated arbitration proceedings against in connection with an alleged breach of a non-compete clause? Please break down this number by type of legal relationship (e.g., employee or contractor) and describe the relevant circumstances that gave rise to each suit or arbitration.

As discussed above, we do not use non-compete agreements for our employees or contractors.

Responses to Questions for the Record following the July 16, 2019, Hearing of the Subcommittee on Antitrust, Commercial, and Administrative Law, Committee on the Judiciary, Entitled "Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship"

October 11, 2019

1 **Does Amazon utilize most-favored-nation (MFN) clauses or MFN-like provisions (e.g., provisions that guarantee Amazon the best price) in its contracts with suppliers or merchants? If yes, please (a) describe those provisions; (b) provide a list of the contracts containing each type of MFN or MFN-like provision; and (c) provide the contracts containing those provisions.**

Amazon's standard terms governing the vast majority of its vendors and third party sellers do not include MFN provisions. In some cases, typically in highly negotiated agreements that impose significant obligations on Amazon, such as obligations to carry a vendor's products, Amazon asks vendors and sellers to agree to provisions designed to prevent discrimination against Amazon's store and Amazon's customers. For example, Amazon has an agreement with a specialty pet food vendor that limits Amazon's rights to stop selling the vendor's products, regardless of the pricing and other terms on which the vendor sells them to Amazon. To ensure Amazon can sell those products to customers at a competitive price, the vendor also agreed that those terms will be no less favorable than those it provides to other retailers. As another example, some of Amazon's video content license agreements with major studios also include industry standard MFN provisions related to content parity, packaging, pricing, and content security.

2 **Please describe all the tools and resources that Amazon devotes to tracking the pricing of products on non-Amazon websites (i.e., a website not owned or operated by Amazon).**

Amazon seeks to provide customers with a vast selection of products with great prices and convenient delivery options. In support of those efforts and like most other retailers, Amazon uses software and employees to monitor publicly available information about products offered by other stores, including information about product pricing and availability. This information helps to ensure that customers continue to find a competitive range of selection at great prices in Amazon's store.

3 **Please describe how Amazon responds when it discovers that a product sold by a Marketplace merchant is being sold at a lower price on a non-Amazon website.**

Customers come to Amazon for a vast selection of products with great prices and convenient delivery. If customers are disappointed in the offerings at Amazon, they will quickly turn to other stores to find the best selection, prices, and convenience. To maintain trust with customers that they will find low prices in the Amazon store, Amazon sets the prices on its first party sales to match competitors across all channels of retail. For sales by third parties, who are responsible for setting their own prices in the Amazon store, Amazon may suggest that a seller

lower its price in its store, offer an Amazon-funded discount on the product, or choose not to feature higher-priced offers on a product's detail page.

4 **Please identify whether Amazon modifies its treatment of or relationship with Marketplace merchants if it learns that merchants are selling products on non-Amazon websites at a lower price than on Amazon or on an Amazon-owned or operated website.**

To maintain trust with customers that they will find low prices in the Amazon store, Amazon may take steps to ensure that customers can continue to find great prices in Amazon's store, such as suggesting that a seller lower its price, offering an Amazon-funded discount on the product, or choosing not to feature higher-priced offers on a product's detail page.

5 **Please identify all factors that determine which products are featured in the Buy Box and explain why each is used.**

Amazon developed the single product detail page to provide customers with easy and convenient access to information about a product and to facilitate comparison of available offers. To improve the customer experience further, Amazon predicts the offer customers would choose if they compared all offers in detail and highlights those offers on product detail pages ("Featured Offers"). Amazon identifies a Featured Offer by considering factors including price, fulfillment speed, delivery speed, Prime eligibility, and seller performance. The vast majority of customers who compare available offers ultimately select the offer Amazon features on the product's detail page, which tells Amazon it is accurately predicting the best offer to feature. Amazon also provides information about this process to sellers via Seller Central.

More broadly, Amazon also makes offers easily available for customers to shop from if they want to select a different offer than the featured one. Customers may compare the closest competing offers and add them directly to their shopping cart via the "Other Sellers on Amazon" option, which is displayed on the product detail page directly below the Featured Offer. Customers may also browse all offers via the offer listing page, accessible via a hyperlink below the Featured Offer. There, customers may compare offers, sellers, shipping speeds, and prices.

6 **Please identify all factors that Amazon's algorithm considers when listing and ranking product search results and explain why each is considered.**

Amazon designs its shopping and discovery experience to feature the items customers will want to purchase, regardless of whether they are offered by Amazon or one of its selling partners. Amazon considers many factors when choosing the shopping results featured for customers, including, for example, customer actions (such as how frequently an item was purchased), information about the item (such as title, price, and description), and availability.

Amazon considers customer actions because Amazon believes that they are good indicators of what other customers may want to purchase. Amazon also considers information about items, such as title and description, to identify the products that are a good match for a given shopping

query. For example, an item title including the words "v neck t-shirt" is likely to be a good match for a customer query "v neck t-shirt." Amazon considers item price and availability, because Amazon recognizes that great prices and availability matter to customers.

7 **Does Amazon's algorithm take into account any of the following factors:**

a. Whether a merchant is enrolled in Fulfillment-by-Amazon;

b. Whether a merchant has purchased ads on Amazon; or

c. Whether a product is private label sold by Amazon?

Amazon designs its shopping and discovery experience to feature the items customers will want to purchase, regardless of whether they are offered by Amazon or one of its selling partners. Amazon's algorithms do not take into account the factors described in a, b, and c above when ranking shopping results.

8 **If a product is out of stock at Amazon and that same product is available at the same or a lower price from a Prime-eligible seller with a high-performance rating, are there any circumstances under which Amazon would still give itself the Buy Box? If yes, please describe the relevant circumstances.**

If an Amazon retail offer is out of stock with no outstanding purchase orders and that same product is available at the same or a lower price from a Prime-eligible seller with a high-performance rating, then the Amazon retail offer would not be the Featured Offer.

9 **Please identify the number of private label products offered by Amazon in total and broken down by product category.**

Amazon currently offers approximately 158,000 private brand products (some of which have additional variations, such as color and size) across 45 brands in the Amazon store in addition to some private brand products sold by Amazon Fresh, its online grocery store available in select metro areas.

10 **At the time that Amazon first started selling each of its private label products, identify the number of sellers offering that product, defined as any product sharing the same product category, on Amazon Marketplace.**

Amazon offers customers a broad selection of private brand products in highly competitive categories with many national and other brands. Amazon does not compile data on the number of sellers offering a product in the same category as its private brand products.

11 **Please identify all the ways that Amazon's platform treats Amazon's private label products differently from third-party products that are in the same product category and explain all the reasons for treating them differently.**

Private label products are a common retail practice, frequently recognized by economists and shoppers alike to offer great value to customers because of their strong value proposition and low price, as evidenced by the popularity of these products in many retailers' stores. Amazon generally does not distinguish the treatment of brands based on the selling model or brand owner in Amazon's store. Consistent with the value proposition for private brands generally, Amazon knows from experience that Amazon's private brand products have on average higher customer review ratings, lower return rates, and higher repeat purchase rates than other comparable brands in the Amazon store. As a result, like other retailers, Amazon highlights its private brands in promotions and marketing in the Amazon store when Amazon thinks they will be of interest to customers. Of course, Amazon is the only seller of Amazon private brands in the Amazon store.

12 **Amazon states that its private label sales account for approximately 1% of its total sales. What percentage of sales do Amazon's private label products capture in each of the product categories where Amazon offers a private label product?**

Amazon offers private brand products in highly competitive categories and Amazon's total sales are small as compared to national and other branded and generic products in Amazon's store, lagging far behind the percentage of sales that rival private brand retailers have achieved. Across Amazon's business lines, the percentage of sales in Amazon's stores that its private brand products account for are in the low single digits in North America.

13 **What percentage of Amazon's private label products are sold at-cost and what percentage of Amazon's private label products are sold below-cost? Please provide this information overall and broken down by product category.**

Amazon does not offer its private brand products at a regular price below the cost of goods that Amazon pays to its manufacturers. Like other retailers, Amazon occasionally marks down private brand products and other products for a variety of reasons, including when Amazon has excessive inventory.

14 **Please identify the revenues, costs, and profit margins for Amazon's private label business for each of the past five years, overall and broken down by product category.**

Amazon's audited financial reports do not separately identify private brand-specific revenues, costs, and profit margins. However, private brands are accounted for under Amazon's online stores, physical stores, and retail products revenue categories. Amazon reported $140.2 billion

in net sales in Amazon's stores worldwide in 2018,[1] $114.2 billion in 2017,[2] $91.4 billion in 2016,[3] $76.9 billion in 2015,[4] and $68.5 billion in 2014.[5]

15 **Please identify all types of data that Amazon compiles, maintains, and uses to inform its development of Amazon's private label products and explain how each is used.**

Amazon uses a variety of information commonly employed across the retail industry to inform its private brand strategy. For example, Amazon uses fashion and shopping trends highlighted in the press and on social media, suggestions from its manufacturers for new or complementary product lines, and gaps in the Amazon store's product assortment relative to its competitors. Just like other stores, Amazon uses public and aggregated data from its stores to identify categories and products with high customer demand over a given time period. "Aggregated data" is data that is aggregated across all third party sellers and Amazon's first party sales and is therefore not specific to an individual seller. It includes data such as aggregate sales reports at a product category level. The public data Amazon uses includes, for example, offer data displayed on the public-facing portions of its website. Amazon is transparent about product popularity in its store. Anyone can visit Amazon's product detail pages to learn a product's best seller ranking, in addition to its product reviews and star ratings, and make a determination on all of those bases about whether a product is selling well. As previously noted in Amazon's July 26, 2019 letter to Chairman Cicilline, Amazon prohibits the use of non-public seller-specific data to inform development of private brand products.

16 **Please identify all types of data that Amazon compiles, maintains, and uses to inform its marketing of Amazon's private label products and explain how each is used.**

Amazon uses several types of information to determine its marketing strategy for private brand products. This includes, for example, seasonality of the product (marketing swimsuits and sunscreen in the summer and holiday sweaters in December); inventory on hand (for example, running promotions where Amazon has excess inventory); past sales; age of the brand and product (marketing new products or brands more heavily than older ones); and customer ratings and the number of customer reviews on specific products (to ensure Amazon is marketing products customers rate highly).

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[1] Amazon reported $123.0 billion in net sales in the Online Stores category and $17.2 billion in the Physical Stores category worldwide.
[2] Amazon reported $108.4 billion in net sales in the Online Stores category and $5.8 billion in the Physical Stores category worldwide.
[3] Amazon reported $91.4 billion in net sales in the Online Stores category worldwide.
[4] Amazon reported $76.9 billion in net sales in the Online Stores category worldwide.
[5] Amazon reported $68.5 billion in net sales in the Retail products category worldwide.

17 **Please identify all types of data that Amazon compiles, maintains, and uses to inform its pricing of Amazon's private label products and explain how each is used, including how it uses consumer data that Amazon collects from third-party products.**

Amazon's pricing philosophy is to ensure that customers can find competitive prices in the Amazon store. For private brands, Amazon aims to offer incremental selection at a better price/value ratio than leading brands. Pricing of Amazon's private brand products is informed by a variety of factors, including, for example, the cost of the product and the price of similar, popular products offered in Amazon's store and by competitors.

18 **Please identify all the ways that Amazon uses aggregate sales data that Amazon collects from third-party products distributed on its platform.**

Like every store owner, Amazon uses aggregate data collected from sales in its store to continually improve the shopping experience for its customers, as well as the selling experience for its selling partners. For example, Amazon uses data to power the recommendations and analytics Amazon offers its selling partners though various tools such as Amazon Brand Analytics, Amazon Retail Analytics, Selling Coach, Business Advisor, Business Reports in Seller Central, and others; as an input into Amazon's fraud detection work to protect its customers and selling partners; and to operate and understand the health of its business, develop new tools and services for customers and selling partners, and otherwise make strategic decisions about where to invest resources.

19 **Please identify all the ways that Amazon uses individual behavioral consumer data that Amazon collects on its platform.**

Consistent with its Privacy Notice, Amazon uses individual customer data for limited purposes related to ensuring the proper functioning of its products and services. For example, this data is used to operate, provide, and improve the products and services that Amazon offers its customers, including:

- Take and handle orders, deliver products and services, process payments, and communicate with customers about orders, products and services, and promotional offers.
- Provide functionality, analyze performance, fix errors, and improve usability and effectiveness of Amazon products and services.
- Recommend and advertise features, products, and services that might be of interest to Amazon's customers.
- Prevent and detect fraud and abuse in order to protect the security of Amazon customers.

- Comply with legal obligations (such as calculation and reporting of royalties or taxes).

Amazon's Privacy Notice is available online at: http://www.amazon.com/privacy.

20 **Please identify all the ways that Amazon uses aggregate behavioral consumer data that Amazon collects on its platform.**

Amazon uses data aggregated from customers' interactions with its store to improve the customer experience of nearly every customer-facing feature of the Amazon store.

21 **Is there any distinction between how Amazon uses data it collects from first-party sales and data it collects from third-party sales. If yes, please explain the distinctions.**

Amazon recognizes that third party selling partners trust Amazon with information about their businesses. As a result, Amazon prohibits the internal use of third party sales data in ways that are not applicable to the use of data from its first party sales. For example, Amazon prohibits Amazon's private brand products business from using individual sellers' data to decide which products to launch, and Amazon prohibits the use of individual sellers' data to make sourcing, pricing, or inventory decisions for its private brand products. Amazon employees are permitted to use individual sellers' data only to support that seller or enhance or protect our customers' experience. While internal teams are permitted to examine aggregated selling partner data for business purposes, that is no different from the uses that other retailers make of their store sales data.

22 **Please identify the total number of Marketplace seller accounts, specifying how many are Amazon Individual Seller Accounts and how many are Amazon Pro Merchant Accounts.**

Amazon strives to make it as easy as possible for honest entrepreneurs to sell their products in its store. To that end, third party sellers may choose the selling plan that best meets their needs, and may switch between individual and Professional plans as they see fit (subject to Amazon's anti-fraud controls). Thus, the number of each type of account is constantly changing. As of September 29, 2019, there were approximately 384,000 active[6] individual seller accounts in the U.S. and approximately 514,000 active professional seller accounts in the U.S.

23 **Please describe the pricing of Marketplace fees for each of the past five years. Please identify all pricing changes over that period and describe all the reasons for each change.**

As shown in its publicly available fee schedules, Amazon offers two selling plans, with a different fee structure for each. The individual plan is designed for small sellers who intend to sell fewer than 40 items per month. This plan has no monthly subscription fee, has selling fees of $0.99/item, and has per-item referral and variable closing fees that vary by product category. The professional plan is designed for more active sellers, and has a monthly subscription fee of

[6] A seller is active if they have gross merchandise sales greater than zero in the trailing twelve months.

$39.99, no fixed per-item selling fee, and referral and variable closing fees that vary by product category. Sellers may switch between selling plans at any time. The base plans have not changed over the past five years; historical referral fee information from Amazon's selling plans is included as Appendix A.

24 **Please describe how Amazon determines its pricing for Marketplace services.**

Amazon prices its services so that selling in the Amazon store will be an attractive choice for selling partners compared to their many options in the highly competitive retail environment, while also enabling Amazon to continue to invest in providing more services to sellers and providing a great customer experience, thereby making the store more attractive for both customers and sellers.

25 **When a Marketplace merchant makes a sale on Amazon, how many days on average will it take for the merchant to receive payment through Amazon for that sale?**

On average, sellers are paid within seven days after a customer receives the item.

26 **Please identify Amazon's accounts payable rate for first-party vendors for each month over the past three years.**

Amazon's accounts payable rate is negotiated with and varies among vendors. These rates are generally between Net 30 and Net 90 days.

27 **Please identify what types of information Amazon tracks on Marketplace transactions and explain the reasons why each is tracked.**

Like every store owner, Amazon collects data about sales in its store to constantly improve the shopping experience for its customers, as well as the selling experience for its selling partners. For example, Amazon uses aggregated sales data to power the recommendations and analytics it offers to selling partners though various tools such as Amazon Brand Analytics, Amazon Retail Analytics, Selling Coach, Business Advisor, Business Reports in Seller Central, and others; as an input into its fraud detection models that help protect its customers and selling partners; and to operate and understand the health of its business, develop new tools and services for customers and selling partners, and otherwise make strategic decisions about where to invest resources.

28 **Please identify the types of information Amazon tracks on an individual Marketplace transaction that are not made available to the Marketplace merchant whose product is sold and explain why each is not made available to the merchant.**

When a customer purchases an item offered by a third party seller in Amazon's stores, Amazon records information about that sale, including, for example, when and for how much the product was sold, the quantity ordered, and shipping information. Amazon shares a subset of this information with the seller, including details about the item(s) purchased and destination

address, to enable the seller to complete the transaction, deliver the product(s) to the customer, and fulfill its tax obligations.

To protect customers' privacy consistent with its commitments to customers in its Privacy Notice, Amazon works to limit the customer information that it shares with its selling partners to that which is necessary for the fulfillment of a customer order and the selling partner's tax obligations. For example, Amazon does not provide its selling partners with customers' payment instrument details, phone numbers, and email addresses, and instead provides selling partners with a means to communicate directly with buyers through Amazon's Buyer-Seller Messaging service. Amazon also provides selling partners with anonymized information, including traffic data, about products they offer though Amazon's business reports feature in Seller Central. Additionally, Amazon gives brand owners access to free, anonymized shopping behavior analytics reports in the Amazon Brand Analytics tool, such as an item comparison report that lists other products customers viewed in the same session as the brand owner's product, and a search terms report that lists the search terms customers are using to find that brand's products.

29 **What are all the types of aggregated third-party seller data that Amazon makes available to third-party sellers?**

Amazon invests heavily in supporting third party sellers, including by creating tools to support them and providing them with immense data resources. For example, Amazon provides third party sellers data through dashboards and customizable business reports available through Seller Central; data feeds available through the Marketplace Web Service APIs; and recommendations Amazon makes available through the Selling Coach tool. These tools have proven successful and continue to grow in popularity and sophistication. For example, third party developers build tools and applications to help sellers succeed in Amazon's store—more than 200 of which are available in the Marketplace Appstore or Seller Central at this time—around the functionality and data it makes available. Third party developers have used the data Amazon makes available to create applications for sellers that help with listing, automated pricing, order and inventory management, shipping solutions, advertising, promotions, product research and scouting, feedback and reviews, buyer seller messaging, analytics and reporting, accounting and tax remittance, and e-commerce solution connectors (e.g. multichannel listing management).

30 **Does Amazon grant third-party sellers access to traffic and conversion data aggregated across product categories? Why or why not?**

Like other store owners, Amazon does not publicly reveal certain details of its store's performance. Amazon does not provide category-level traffic and conversion data to external parties, as this information would provide competitors detailed insight into the performance of its business. While not provided by Amazon, business intelligence firms such as Nielsen, Comscore, and NPD provide insights into category performance across multiple stores. Some of

these reports are based on data from sales and trends across multiple stores, and give broader business insights than Amazon is able to develop based on data solely from its store.

31 **Please identify which categories or teams of Amazon employees have access to data or information that Amazon collects on individual Marketplace searches and transactions, specify the types of data or information to which each has access, and describe where in Amazon's organization chart the teams or employees are located (e.g., the individuals to whom they report).**

Amazon recognizes that third party selling partners trust Amazon with information about their businesses. As a result, Amazon prohibits the use of individual sellers' non-public data to compete with them through Amazon's first party offerings, including through Amazon's private brand product development, or retail sourcing, pricing, or inventory decisions. Amazon employees are permitted to use seller-specific data only to support that seller or to enhance or protect Amazon's customers' experience. For example, Amazon's teams responsible for building tools and services to help its selling partners succeed provide data driven pricing recommendations in Selling Coach; the teams responsible for detecting fraud and abuse use seller-specific information to detect bad actors; and the teams responsible for allocating inventory space among sellers within a fulfillment center use information about sellers' inventory to do so.

Amazon's policy on sellers' non-public data is based on the purpose for which data is used, rather than the individuals to whom an employee reports. Amazon trains employees on these policies, and regularly audits its systems and processes for compliance. Amazon is also continually improving its technical controls to automatically enforce this policy, and many tools in use today are already configured to omit seller data or have strict permissioning requirements. Unlike sales data related to customer purchases from individual third party selling partners, data about customer searches in Amazon's store is not seller-specific and may be used for legitimate business purposes. Amazon also gives brand owners access to free, anonymized shopping behavior analytics reports in the Amazon Brand Analytics tool, such as an item comparison report that lists other products customers viewed in the same session as the brand owner's product, and a search terms report that lists the search terms customers are using to find that brand's products.

32 **Please identify which categories or teams of Amazon employees have access to data or information that Amazon collects on aggregate searches and transactions on Amazon, specify the types of data or information to which each has access, and describe where in Amazon's organization chart the teams or employees are located.**

Like any other store owner, Amazon uses the aggregate data that it collects from sales in Amazon's store to improve customers' experiences and the store's performance. Employees may use aggregated data about activities in Amazon's store consistent with their responsibilities. "Aggregated data" is not specific to an individual seller, such as offer data

displayed on the public-facing portions of Amazon's website, or aggregate sales reports at a product category level. Numerous Amazon teams have access to such aggregated data, including Amazon's retail team, private brand team, and the teams that build tools and services to help Amazon's selling partners succeed and to help prevent fraud and abuse in Amazon's store. As noted previously, anyone can visit Amazon's product detail pages to learn a product's best seller ranking, in addition to its product reviews and star ratings, and make a determination on all of those bases about whether a product is selling well in its store.

33 **Please identify which categories or teams of Amazon employees have access to sales data and other information about a Marketplace merchant's account and describe where in Amazon's organization chart the teams or employees are located.**

Amazon recognizes that third party selling partners trust Amazon with information about their businesses. As a result, Amazon prohibits the use of individual sellers' non-public data to compete with them through Amazon's first party offerings, including through Amazon's private brand product development, or retail sourcing, pricing, or inventory decisions. Amazon employees are permitted to use seller-specific data only to support that seller (e.g., providing data driven pricing recommendations in Selling Coach); protect Amazon's customers (e.g., detecting fraud and abuse); or run Amazon's store (e.g., deciding how to allocate inventory space among sellers within a fulfillment center). This policy is based on the purpose for which data is used, rather than the individuals to whom an employee reports. Amazon trains employees on these policies and regularly audits its systems and processes for compliance. Amazon is also continually improving its technical controls to automatically enforce this policy, and many tools in use today are already configured to omit seller data or have strict permissioning requirements.

34 **When detailing certain requirements on Amazon Seller Central, Amazon states, "Failure to comply with these requirements may cause a product to be suppressed from Amazon search results." Is suppressing a product from search results the same as de-listing it? If not, please describe what it means for Amazon to suppress a product from Amazon search results.**

Suppressing a product from shopping results is different from removing the listing from Amazon's store, although Amazon uses both processes to protect the experience of its customers and prevent fraud and abuse in its store. Suppressing a product from shopping results has the result of hiding the listing from search and personalization, yet the product remains buyable in Amazon's store. Amazon may suppress a listing from shopping results when a listing risks impairing the customer shopping experience for reasons such as missing or incorrect information. Listings may be un-suppressed and reappear in shopping results when flaws are corrected. Sellers are able to run suppression reports and correct or manage suppressed listings through the "Manage Inventory" tab in Seller Central. For the vast majority of Amazon sellers, simple errors like missing images and or category fields can be updated in as little as 24–48 hours. In contrast, Amazon may remove or "de-list" a product from its store where the product is illegal, prohibited by Amazon's policies, or otherwise presents a risk of

fraud and abuse. Once removed from Amazon's store, such products cannot be purchased by Amazon's customers.

35 **What are the character limits Amazon sets for the listing titles and descriptions on Marketplace?**

To simplify the shopping experience for customers in the Amazon store, each product receives a single entry in Amazon's catalog, including its title and detail page content, regardless of whether it is offered by Amazon retail or one or more third party sellers in Amazon's store. The precise limits vary by locale and product type, but Amazon generally permits titles up to 200 characters and descriptions up to 2,000 characters.

36 **Are these character limits uniform across all seller accounts and product categories? If not, please describe any differences and explain all the reasons for each difference.**

To simplify the shopping experience for customers in Amazon's stores, product details, including titles and descriptions, are specific to the product rather than the party offering it. As a result, character limits may vary by product category—for example there may be a higher character limit for over-the-counter medication compared to home goods like lamps given how much information a customer needs to make an informed purchasing decision—but do not vary based on the type of seller account.

37 **Do the catalog listing rules and product ingredient rules that Amazon applies to Marketplace sellers also apply to Amazon's private label products? If no, please describe any differences and explain all the reasons for each difference.**

Because Amazon seeks to offer its customers the best quality products under its own brands, Amazon generally holds its private brand products to even higher standards for customer experience.

38 **Has Amazon ever prevented reviews from being posted to a seller's account because that seller's product was competing with an Amazon product? If yes, please describe the relevant circumstances.**

Amazon is not aware of any instance in which a review has been prevented from being posted to a seller account because that seller's product was competing with an Amazon product. There are many reasons why a review may not be posted, including failure to comply with Amazon's review guidelines such as when the review is submitted by, or paid for by, the seller.

39 **Please describe all steps Amazon takes to generate product reviews for its private label products.**

Amazon generally relies on customers who purchase products to leave reviews for private brand products as they do for any other products in Amazon's stores. In addition, for private brand

fashion items, Amazon at times includes a hang tag that invites customers to leave a review, without specifically requesting the review be positive or negative. The hang tag says "We'd love to hear from you! Please leave us a review." As with numerous other products, Amazon's private brand products also participate in its broader Vine and Early Reviewer programs.

40 **Please identify how Amazon's efforts to generate product reviews for its private label products differ from the processes and practices that Amazon requires third-party sellers to abide by when seeking to generate product reviews for their products and explain all the reasons for each difference.**

Amazon solicits product reviews for private brand products using Amazon's Early Reviewer and Vine programs. Amazon's Early Reviewer program is available to third party sellers, and its Vine program is available to vendors and will also be available to third party sellers by 2020.

41 **Please identify the revenues, costs, and profit margin of Amazon Advertising for each of the past five years.**

Amazon's audited financial reports do not separately identify Amazon Advertising-specific revenues, costs, and profit margins. However, beginning in 2018, Amazon has provided additional disclosure about sales of advertising services in the "Other" revenue category. Amazon reported $10.1 billion in net sales in "Other" revenue worldwide in 2018.

42 **For each month since July 2018, please identify the average number of listings within the top-10 search result listings that were paid listings.**

Amazon maintains records listing the number of sponsored listings per page rather than the number of sponsored listings within the first ten shopping results. The number of shopping results Amazon returns on the first page of discovery depends on several factors, including whether the customer is accessing Amazon on a desktop or mobile device. Shopping results on mobile may include 14 to 20 products per page, excluding sponsored listings. In each month since July 2018, Amazon showed three to four sponsored listings in the first page of shopping results on mobile. Shopping results on desktop may include 16 to 60 products per page, excluding sponsored listings. In each month since July 2018, Amazon showed an average of 7 to 11 sponsored listings on the first page of shopping results on desktop.

43 **For each month since July 2018, please identify the percentage of all "editorial recommendations" on Amazon that recommend Amazon's private label products.**

Editorial Recommendations brings product-related content onto Amazon to help customers research and discover products they might be interested in. For each month since July 2018, the number of Amazon private brand products featured within Editorial Recommendations has been less than 2.5%.

44 **For each month since July 2018, please identify the percentage of all space eligible for advertising on Amazon that has been devoted to Amazon's private label products.**

There is no advertising space reserved for Amazon's private brand products. The type and amount of ads or merchandising shown to a customer depends on many factors, including the customer's query, the product the customer is shopping for, and whether the customer is shopping on desktop, mobile, or in Amazon's app.

In each month since July 2018, only 2–3% of space eligible for Sponsored Products and Sponsored Brands impressions has highlighted Amazon's private brand products. Amazon's display and video programs only show merchandising for private brand products on Amazon when no third party ad is available.

45 **How does Amazon determine when to make any ad space unavailable for non-Amazon products in order to allow Amazon to promote its private label products?**

There is no advertising space reserved for Amazon's private brand products. Like all retailers, Amazon regularly makes decisions about how to use the space in Amazon stores based on a variety of factors, centered on what customers will find most helpful. Whether to show ads or merchandising placements, and how many, depends on many variables, including, for example, the customer's query, what type of product the customer is shopping for, and whether the customer is shopping on desktop, mobile, or in Amazon's app.

46 **Given that Amazon's decision to use ad space to promote its private label products reduces the available inventory of ad space on Amazon for other products, by how much does the cost of advertising increase for brands who are competing with Amazon for ad space for products in the same product category?**

There is no advertising space reserved for Amazon's private brand products. Like all retailers, Amazon regularly makes decisions about how to use the space in Amazon stores based on a variety of factors, centered on what customers will find most helpful. Whether to show ads from third parties or merchandising placements highlighting Amazon's private brand products, and how many, depends on many variables, including, for example, the customer's query, what type of product the customer is shopping for, and whether the customer is shopping on desktop, mobile, or in Amazon's app.

47 **In categories where Amazon has a private label product, what portion of ad inventory is not available for first-party or third-party sellers because of ads for Amazon's private label products?**

Amazon Advertising does not restrict vendors or third party sellers from accessing ad inventory in categories where Amazon has a private brand product.

48 **When Amazon lists Sponsored Ads for its private label products does Amazon's private label business pay for the ads or does Amazon allocate free ad space to its private label products?**

Like all retailers, Amazon makes decisions about how to use the space in its stores based on a variety of factors, centered on what customers will find most helpful. Of course, when the company chooses not to use space for advertising by third parties, Amazon foregoes the advertising fees it could have earned from that space. Deciding whether Amazon should use its store space to show ads from third parties or for merchandising placements highlighting Amazon's private brand products depends on many variables, including, for example, the customer's query, what type of product the customer is shopping for, and whether the customer is shopping on desktop, mobile, or in Amazon's app.

49 **What types of ads and ad space does Amazon reserve exclusively for Amazon's private label products?**

There is no advertising space reserved for Amazon's private brand products. Like all retailers, Amazon regularly makes decisions about how to use the space in its stores based on a variety of factors, centered on what customers will find most helpful. Whether to show ads or merchandising placements, and how many, depends on many variables, including, for example, the customer's query, what type of product the customer is shopping for, and whether the customer is shopping on desktop, mobile, or in Amazon's app.

50 **In some instances, Amazon promotes its private label products on the listings of third-party party brands (see below). Does Amazon make the space above the Buy Box that lists "Similar items to consider" available for non-Amazon brands, or can only Amazon list ads in that space?**

This merchandising placement displays both Amazon and non-Amazon brands.

51 **What marketing and/or promotion services does Amazon offer suppliers or merchants? Please describe the pricing for any such services.**

Amazon strives to create a shopping experience that helps customers easily find products and services they are looking for. Promotion, marketing, and advertising are inherent parts of that shopping experience, just as they are in other online and brick-and-mortar stores. These services highlight brands, offers, and products, and help brands draw attention to the products and services they offer. Most marketing and promotional opportunities are available to all sellers and vendors as a function of a product being for sale on Amazon (e.g., Amazon pays to advertise products from both vendors and sellers on search engines such as Google, and Amazon merchandises products from both vendors and sellers through in-store product recommendations and widgets such as "Recommended for You" or "Customers Who Viewed This Also Viewed").

Amazon offers a variety of promotional tools to help third party sellers and vendors highlight their products to customers, including several deal types for publicizing price changes, coupons, and promotional codes. These include: 24-hour deep discounts on high-demand products ("Deal of the Day"), six-hour discounts of limited quantities of products ("Lightning Deals"), extended time discounts ("7-Day Deals"), Coupons, and Buy X Get Y Promotions (e.g., "Buy 3, save 20%"). Pricing for these tools ranges from a fixed-price fee (e.g., $300 for "7-Day Deals") to per-clip and per-usage fees for coupons.

Like other retailers, Amazon also enters into cooperative advertising or marketing arrangements with vendors at negotiated prices under which vendors provide Amazon funding in exchange for merchandising of their products in the Amazon store.

Amazon also offers a range of advertising products and services to help third party sellers and vendors find, attract, and engage with new and existing customers. These products and services include display and video ads, which appear on websites and applications owned and operated by Amazon or third parties, and Sponsored Products and Sponsored Brands, which appear in the Amazon store's shopping results pages and promote products sold in the Amazon store.

Amazon prices its digital advertising services through a variety of industry-standard fee structures, including fees based on how many times the ad is displayed or viewed, flat fees, and fees based on a percentage of an advertiser's media spend. In general, display and video ads are priced either by a real time bidding auction or a cost per one thousand impressions. Advertisers are charged for Sponsored Products and Sponsored Brands when a customer clicks on the advertiser's ad, and the price per click is set in an auction based on advertisers' bids, how relevant the advertised product is in the context which it will appear, the likelihood of the ad being clicked on in that context, and other similar factors.

52 **What factors does Amazon use to determine pricing for its marketing and/or promotion services? Please explain why each factor is used.**

For promotion services, as with other services for third party sellers and vendors, pricing is designed to align incentives between Amazon and its selling partners to create a great experience for customers. Amazon balances its selling partners' ability to invest in selection and great customer prices with Amazon's ability to invest in creating customer demand and a great shopping experience. Amazon also enters into cooperative advertising and marketing arrangements with some vendors at negotiated prices.

For display advertising, last year most of the display ads bought from Amazon were purchased via real-time bidding, where the advertiser sets a maximum price that it is willing to pay for ad impressions and an auction determines the actual price paid for any specific impression. The rest were sold at a fixed price pre-agreed with the advertiser.

Nearly all Sponsored Products and Sponsored Brands are sold through real-time bidding

processes. However, for Sponsored Products and Sponsored Brands, advertisers are only charged when a customer clicks on the advertiser's ad. The price per click is set in an auction based on advertisers' bids, how relevant the advertised product is in the context in which it will appear, the likelihood of the ad being clicked on in that context, and other similar factors.

53 **Does Amazon bundle any marketing and/or promotion services with its distribution services? If yes, please describe the terms and pricing for any such bundles.**

Amazon does not bundle marketing and/or promotion services with Amazon's services for the fulfillment of physical goods sold by third party sellers (including Fulfillment By Amazon ("FBA") and multi-channel fulfillment). Sellers may purchase Amazon's fulfillment services without purchasing marketing or promotional services, and may purchase marketing or promotional services without purchasing fulfillment services. Amazon's publicly available fee schedule for sellers is available at https://services.amazon.com/selling/pricing.html.

54 **If Amazon does bundle its marketing and/or promotion services with its distribution services, are suppliers able to purchase those services à la carte? If yes, please describe the terms and pricing for any à la carte offerings.**

Amazon does not bundle marketing and/or promotion services with Amazon's services for the fulfillment of physical goods sold by third party sellers (including FBA and multi-channel fulfillment). Sellers may purchase Amazon's fulfillment services without purchasing marketing or promotional services, and may purchase marketing or promotional services without purchasing fulfillment services. Amazon's publicly available fee schedule for sellers is available at https://services.amazon.com/selling/pricing.html.

55 **Does Amazon bundle any of its subscription services with its distribution services? If yes, please describe the terms and pricing for any such bundles.**

Amazon does not offer fulfillment services to individual end-customers. Third party sellers in Amazon's stores may open and maintain subscriptions to professional or individual selling accounts without purchasing Amazon's services for the fulfillment of physical goods sold by third party sellers, including FBA and multi-channel fulfillment (although some specific products may require use of Amazon's fulfillment services, e.g., textbook rentals). Likewise, sellers with professional selling accounts may use Amazon's fulfillment services without selling their products through Amazon. Amazon's publicly available fee schedule for sellers is available at https://services.amazon.com/selling/pricing.html.

56 **If Amazon does bundle its subscription services with its distribution services, are suppliers able to purchase those services à la carte? If yes, please describe the terms and pricing for any à la carte offerings.**

Amazon does not offer fulfillment services to individual end-customers. Third party sellers in Amazon's stores may open and maintain subscriptions to professional or individual selling

accounts without purchasing Amazon's services for the fulfillment of physical goods sold by third party sellers, including FBA and multi-channel fulfillment (although some specific products may require use of Amazon's fulfillment services, e.g., textbook rentals). Likewise, sellers with professional selling accounts may use Amazon's fulfillment services without selling their products through Amazon. Amazon's publicly available fee schedule for sellers is available at https://services.amazon.com/selling/pricing.html.

57 **Has any supplier or merchant ever complained about Amazon's bundling its distribution services with either Amazon's marketing or promotion services or Amazon's subscription services? If yes, please identify which suppliers or merchants have complained and describe the nature of each complaint.**

As stated in response to Question 53, Amazon does not bundle marketing and/or promotion services with the services for the fulfillment of physical goods sold by third party sellers (including FBA and multi-channel fulfillment). Sellers may purchase Amazon's fulfillment services without purchasing marketing or promotional services, and may purchase marketing or promotional services without purchasing fulfillment services. Amazon is aware that the Association of American Publishers has alleged that some "digital platforms" are tying distribution services to advertising services. Amazon does not engage in this practice. Amazon's negotiations with vendors (including publishers) involve a variety of terms, and in the context of these negotiations, Amazon may agree to provide certain marketing or promotional services as part of a package of terms that are acceptable to both parties.

58 **Please describe all the ways that suppliers or merchants that do not purchase Amazon's marketing and/or promotion services are treated differently by Amazon from suppliers or merchants that do purchase Amazon's marketing and/or promotion services and explain all the reasons for treating them differently.**

Amazon strives to create a shopping experience that helps customers easily find products and services they are looking for. Marketing, promotion, and advertising are inherent parts of that shopping experience, so Amazon offers marketing, promotional, and advertising services to help merchants and suppliers succeed within its store. Many marketing and promotional opportunities are available to suppliers and merchants at no cost. Merchants and suppliers can choose to purchase promotional or advertising services, and some may also have access to marketing and promotional opportunities specific to the products they offer to customers or the programs in which they participate. Some vendors who supply Amazon with products negotiate promotional allowances and marketing funds as part of their overall terms of sale with Amazon, which may be applied toward to the promotion and marketing of those vendors' products. Other than providing the specific promotional and marketing placements purchased or negotiated, Amazon does not treat suppliers or merchants differently based on whether or not they purchase marketing or promotional packages it offers.

59 **Please identify the revenues, costs, and profit margins of Fulfillment by Amazon (FBA) for each of the past five years.**

Amazon's audited financial reports do not separately identify Fulfillment by Amazon-specific revenues, costs, and profit margins. However, Amazon provides a third party seller services revenue category, which includes FBA. Amazon reported $42.7 billion in net sales in this category worldwide in 2018, $31.9 billion in 2017, $23.0 billion in 2016, $16.1 billion in 2015, and $11.7 billion in 2014.

60 **Please describe the pricing of FBA fees for each of the past five years. Please identify all pricing changes over that period and explain all the reasons for each change.**

Amazon sets its FBA fees to help its selling partners succeed by reaching millions of customers with Prime-eligible shipping, while covering Amazon's costs of: storing its selling partners' products in Amazon's fulfillment centers; picking, packing, and shipping their orders; and providing customer service for products sold. Amazon's FBA fees have consistently been lower than the cost of its selling partners' comparable alternatives. Amazon adjusts the fees for the services it provides in order to reflect the cost of providing those services (including what Amazon's logistics partners charge the company) and the competing alternatives available to sellers. FBA pricing for the past five years is attached as Appendix B.

61 **Please describe all the ways that suppliers or merchants that do not purchase Amazon's distribution services through FBA are treated differently by Amazon from suppliers or merchants that do purchase Amazon's distribution services through FBA and explain all the reasons for treating them differently.**

As Amazon explained in its July 26, 2019 letter to Chairman Cicilline, Amazon has invested tens of billions of dollars in developing a world-class fulfillment network and offers that network to its selling partners through its FBA program. As a result of these investments, selling partners who choose FBA enjoy high-quality fulfillment services that customers want, including fulfillment and delivery speed, Prime eligibility, and seller performance. The featured offer is based on factors affecting customer experience, and FBA generally provides a better and more reliable experience for Amazon's customers than fulfillment through other means; accordingly, that difference may be reflected in the offer that is featured.

62 **Please describe Amazon's investments in logistics operations, including ownership of any ships or planes, and involvement in freight forwarding.**

Amazon relies on a wide range of carrier partners to transport freight and packages in the United States. After experiencing third party capacity constraints during peak season in 2013, Amazon started building complementary ground transportation capabilities and has since invested in trucks, trailers, intermodal containers, and delivery vehicles. In 2016, Amazon also began to lease and contract for the operation of a small fleet of around 50 aircraft. Amazon's

own air and ground capacity supplements what the company buys from third parties, enabling Amazon to offer its customers fast, free delivery.

Amazon has several entities with for-hire motor carrier, freight forwarder, and brokerage Operating Authority, and is also a licensed non-vessel operating common carrier and customs broker in the United States. Amazon does not own ships.

63 **Has Amazon ever demanded, as a condition for entering into a business partnership with another company, access to any data collected by that company including the company's own proprietary data? If yes, please describe the relevant circumstances.**

Amazon does not demand data collected by its selling partners as a condition of doing business in Amazon's store. Amazon takes substantial steps to protect its customers, however, and accordingly requires selling partners to provide information about their identity, location, payment methods, and products as part of Amazon's registration and product listing processes. For certain products, Amazon may require additional information, such as safety-testing data or commercial invoices, to ensure that products are safe and authentic. Amazon does not otherwise require disclosure of commercially sensitive information, such as customer lists, as a condition of registration.

Like other stores, Amazon routinely contracts with a variety of external parties to operate or improve its business, and in many of these instances may request and receive information about or compiled by those parties. For example, Amazon may request data when considering whether to extend a line of credit or make an equity investment to an external party, or use a party's products or services (e.g., to assess reliability, security, or performance). Amazon may also enter into a business relationship for the specific purpose of obtaining data compiled by a company, such as market research.

64 **Has Amazon ever received commercial data collected by an Amazon business partner? If yes, please describe what type of commercial data and how each type of data has been used.**

As described in the answer to Question 63, Amazon—like other stores—routinely contracts with a variety of external parties to operate or improve its business, and in many of these instances will request and receive information about or compiled by those parties.

65 **Has Amazon ever received data about individual consumers from its business partnerships? If yes, please describe what type of consumer data and how each type of data has been used.**

As the owner and operator of the Amazon store, Amazon obtains information about consumers when they create Amazon customer accounts, including their names, email and shipping addresses, and payment information. However, Amazon does not obtain such information from its selling partners.

In addition, to complete a customer's transactions in the Amazon store, Amazon obtains information about those transactions. While the transactions may involve products sold by third party sellers, Amazon obtains that information through its customers' use of its store. Amazon does not obtain such information from its selling partners.

In addition to data generated through customer transactions, Amazon relies on business relationships for a diverse array of ancillary services that may involve customer data, such as logistics and delivery, payment processing, identity verification, marketing and advertising, and customer service. All of the data exchanged in the course of these relationships derives from Amazon's customers' use of its store; it does not come from Amazon's selling partners or other service providers.

Separately, selling partners who voluntarily opt to use Amazon's fulfillment services to fulfill their orders placed through channels other than Amazon's store provide information about those customer orders to Amazon for the sole purpose of fulfillment. Amazon does not use that information for any other purpose.

66 **Has Amazon ever received personally identifiable information or sensitive personal information from its business partnerships? If yes, please describe what type of personal information and how each type of information has been used.**

As described in the responses to Questions 63–65, Amazon—like other stores—routinely contracts with a variety of external parties to operate or improve its business. Certain of these functions, such as identity verification and fraud prevention, will necessarily involve personally identifiable information about customers or selling partners. Apart from the fulfillment services discussed in the response to Question 65, Amazon does not obtain personally identifiable information or other sensitive personal information relating to consumers from selling partners offering products through Amazon's store.

Amazon does offer features that allow customers to link certain third party services to their Amazon account for specific purposes. For instance, customers can link a third party calendar or email service to Alexa in order to access information from their calendar or email via Alexa. When customers link a third party service to their Amazon account, Amazon may receive personal information from the third party that it uses to provide the relevant feature or service to customers.

As is industry standard, Amazon may use third party audience information in its advertising programs to improve the relevance of its advertising for customers and advertisers. The information Amazon receives is anonymized or pseudonymized before Amazon receives it. All information used for interest-based advertising is pseudonymized, secured, used, and maintained in dedicated and distinct systems.

67 **Has Amazon ever used information gathered as a result of a business partnership with another company to guide its product strategy? If yes, has Amazon ever used this information to introduce Amazon products that directly compete with the business partner's product?**

As explained in response to Question 63, Amazon requires its selling partners to provide information about their identity, location, payment methods, and products as part of its registration and product listing processes. For certain products, Amazon may require additional information, such as safety-testing data or commercial invoices, to ensure that products are safe and authentic. Amazon prohibits the use of such information and other non-public, seller-specific information to introduce Amazon products that directly compete with its selling partners. Amazon does not otherwise require disclosure of sensitive information, such as customer or manufacturer lists, as a condition of registration.

68 **Has Amazon ever threatened to either remove a seller from the Amazon Marketplace or prohibit the third-party sale of a product on Amazon due to a business dispute with that seller in one of Amazon's other areas of business? If yes, please describe the relevant circumstances.**

Like all store owners, Amazon regularly makes decisions as to what products to carry in its store. Amazon seeks to offer the broadest possible selection and generally does not prohibit third party sales of safe and authentic products. As described in the Standards for Brands Selling in the Amazon Store, since the inception of its store, one way that Amazon has ensured a great customer experience is by sourcing products directly from brand owners and selling them to customers in Amazon's store. For a limited number of national brands that supply their products to other major retailers for sale by those retailers, Amazon has elected to source the brand's products for sale by Amazon only. This ensures Amazon can provide competitive prices, availability, and fast delivery for the most popular products in Amazon's store, and avoids customer confusion and operational complexity. As part of business agreements, Amazon has in certain circumstances chosen not to list third party products for sale in Amazon's store if those products do not allow customers to access Amazon services, such as Amazon Prime Video.

69 **Has Amazon ever removed a seller from the Amazon Marketplace or prohibited the third-party sale of a product on Amazon due to a business dispute with that seller in one of Amazon's other areas of business? If yes, please describe the relevant circumstances.**

Like all store owners, Amazon regularly makes decisions as to what products to carry in its store. Amazon seeks to offer the broadest possible selection and generally does not prohibit third party sales of safe and authentic products. As described in the Standards for Brands Selling in the Amazon Store, since the inception of its store, one way that Amazon has ensured a great customer experience is by sourcing products directly from brand owners and selling them to customers in Amazon's store. For a limited number of national brands that supply their products to other major retailers for sale by those retailers, Amazon has elected to source the brand's products for sale by Amazon only. This ensures Amazon can provide competitive prices, availability, and fast delivery for the most popular products in Amazon's store, and avoids

customer confusion and operational complexity. As part of business agreements, Amazon has in certain circumstances chosen not to list third party products for sale in its store if those products do not allow customers to access Amazon services, such as Amazon Prime Video.

70 **Does Amazon prevent any third parties from incorporating Amazon's services on third-party products and enabling those services to interoperate? If yes, please describe the relevant circumstances.**

Amazon supports and encourages interoperability of Amazon services with third party products. For example, Alexa Voice Services program is focused on enabling third party device manufacturers and developers to include access to Alexa in their products; the Prime Video app and content are available on a range of televisions, devices, mobile devices, Blu-ray players, games consoles and streaming media devices, including, Roku, Chromecast, and Xbox; and the apps and content for Kindle, Amazon Music, and Audible are available on a variety of devices.

71 **Has Amazon ever removed the "Buy Box" or "Buy Button" for products sold by a third party on Amazon? If yes, please describe the circumstances that resulted in this removal.**

To enhance Amazon customers' shopping experience, Amazon features offers that reflect compelling value and convenience for customers. Since Amazon seeks to highlight only offers that it is confident will present a great experience for its customers, there may be circumstances in which a third party offer would be ineligible to be displayed as the Featured Offer. For example, an offer would be ineligible if the third party has a history of providing a poor customer experience or presents a high risk of fraud or abuse. Similarly, an offer at a price that is uncompetitive, for a product that is not available or cannot ship to a customer's location, or for a product about which there may be product-quality or customer-experience concerns may be ineligible to be displayed as the Featured Offer.

72 **Has Amazon ever removed the "Buy Box" or "Buy Button" for products sold by a third party during the course of negotiations with that third party? If yes, please describe the circumstances that resulted in this removal.**

In general, Amazon does not negotiate terms with third parties that sell in the Amazon store. The vast majority of third party sellers selling in Amazon's store do so under standard terms. In the rare cases when Amazon does negotiate specific selling terms with large or strategic sellers, it generally does so before the third party commences sales in the Amazon store. It is not Amazon's practice to remove the featured offer for products sold by third parties during the course of such negotiations.

In 2014, protracted negotiations with Hachette resulted in an impasse between the parties on terms. While all then-currently available Hachette titles remained available for sale, Amazon discontinued availability to "preorder" titles (books to be released at a future date). Once a book hit its release date, it was made available to customers.

73 Please identify the total number of Prime members in the United States.

Amazon Prime has over 100 million paid members worldwide.

74 Please identify all price changes to Prime membership since Amazon introduced the Prime program and explain all the reasons for each change.

Prime Pricing Schedule		
Date of Pricing Change	Price of Amazon Prime (monthly)	Price of Amazon Prime (annual)
February 2005	N/A	$79/year
March 2014	N/A	$99/year
April 2016	$10.99/month	$99/year
January 2018	$12.99/month	$99/year
May 2018	$12.99/month	$119/year

Amazon Prime was first offered in 2005, providing members with free, unlimited two-day shipping on eligible items. Over the years, Prime has expanded to offer digital benefits such as an e-book lending library for Kindle users (2011), Prime Video (2011), Prime Music (2014), and Twitch Prime (2016). Prime members also now enjoy additional shopping benefits including access to special pricing and deals, discounts for video game pre-orders (2016), and Prime Wardrobe (2018). Other benefits have evolved over time to deliver greater value to members. For example, while members were previously offered discounted one-day shipping, members now receive free one-day shipping on over 10 million products. Over the years, the price of Prime has reflected both the value to members and the cost to Amazon of delivering Prime's benefits.

75 Please identify the revenues, costs, and profit margin for Prime for each of the past five years.

Amazon's audited financial reports do not separately identify Prime-specific revenues, costs, and profit margins. However, Amazon provides a Subscription services revenue category, which includes Prime. Amazon reported $14.2 billion in net sales in this category worldwide in 2018, $9.7 billion in 2017, $6.4 billion in 2016, $4.5 billion in 2015, and $2.8 billion in 2014.

76 Has Amazon ever requested or recommended that vendors lower or increase consumer prices? If yes, please explain the relevant circumstances and describe the data that Amazon used to inform any such requests or recommendations.

Amazon's vendors—who sell inventory to Amazon at wholesale, which Amazon then sells to customers at retail—do not set consumer prices in Amazon's stores. Therefore, Amazon does not request or recommend that such vendors lower or increase consumer prices. Amazon does negotiate its terms of purchase with those vendors to offer its customers competitive prices.

Third party sellers in Amazon's store set their own prices for their offers to customers. Amazon may recommend that third party selling partners lower prices in certain circumstances, for example when Amazon determines that a third party selling partner's offer is higher than the price offered for that product by another store. Amazon does not request or recommend that third party sellers raise consumer prices. Amazon has provided pricing suggestions to a small number of large publishers who are on the agency model for e-book sales, in which they set the customer price. The publishers who received the suggestions remained responsible for setting their customer prices.

77 **Although Marketplace merchants generally set the price at which their products are sold on Amazon, in some instances Amazon has lowered prices on products sold by Marketplace merchants, stating "This item is sold by a third-party seller. The discount is provided by Amazon." Please describe how Amazon determines when to alter the consumer-facing price on a Marketplace product.**

As part of its efforts to ensure that Amazon's customers pay competitive prices for products offered in Amazon's store, Amazon may on occasion choose to fund a discount to its customers when the prices set by third party sellers are higher than the prices offered by other stores for the same product. In these instances, third party sellers receive payment for the order and pay referral fees based on the item price they set. Amazon pays for the full discount, which appears as a credit to Amazon's customers.

78 **Does Amazon obtain permission from or consult Marketplace merchants before discounting their products? If no, please explain why.**

Amazon explains this program to third party sellers in Seller Central and provides an easy means for sellers to opt out at any time. In Amazon's experience, most sellers choose not to opt out because this program increases their sales at no cost to the seller.

79 **Please describe any instances in which the discount Amazon applied to a Marketplace product exceeded the Marketplace commission that Amazon earned on the sale of that product.**

Under the discounts provided by the Amazon program referenced in the response to Question 77, discounts do not exceed Amazon's referral fee on the item being discounted.

80 **Has Amazon ever prohibited a producer from listing its product on Amazon's Marketplace while permitting the producer to sell that same product as a first-party vendor to Amazon? If yes, please identify the circumstances under which Amazon imposes this type of limitation and explain all the reasons it is imposed.**

As described in the Standards for Brands Selling in the Amazon Store, since the inception of its store, one way Amazon has ensured a great customer experience is by sourcing products directly from brand owners and selling them to customers in Amazon's store. For a limited number of national brands that supply their products to other major retailers for sale by those

retailers, Amazon has elected to source the brand's products for sale by Amazon only. This ensures Amazon can provide competitive prices, availability, and fast delivery for the most popular products in Amazon's store, and avoids customer confusion and operational complexity.

81 **One email from Amazon to a brand stated: "[W]e have made the decision to source your products for sale by Amazon only and your existing Seller Central account will be closed within 30 days of this email." Please identify the number of merchants to whom Amazon has sent this message or a substantially similar message. For each instance, please describe the relevant circumstances, including the recipient of the message and all the reasons for sending it.**

Consistent with the Standards for Brands Selling in the Amazon Store, for a limited number of national brands that supply their products to other major retailers for sale by those retailers, Amazon has elected to source the brand's products for sale by Amazon only. These are brands with which Amazon has had longstanding relationships as vendors to its retail business, and Amazon works closely with them to make their products available for Amazon customers through that business model. This ensures that Amazon can provide competitive prices, availability, and fast delivery for the most popular products in Amazon's store, and avoids customer confusion and operational complexity. As a result, a small number of brands have received similar emails under these circumstances.

82 **If a producer that received this message from Amazon decided not to become an Amazon vendor, thereby ending its product sales on Amazon, would Amazon permit other merchants to continue selling that producer's products on Amazon's Marketplace? Please explain why or why not.**

As noted in response to Question 81, the major national brands affected by this change have had longstanding vendor relationships with Amazon. These brands can choose whether to continue to work with Amazon as vendors, and this decision would not impact the ability of resellers to sell the brand's products in Amazon's stores.

83 **Given that selling as a third-party merchant enables a brand to maintain consistent inventory levels, maintain listing quality, and use advertising to improve its branding, why does Amazon deprive certain brands of this opportunity?**

As noted above, for a limited number of national brands that supply their products to other major retailers for sale by those retailers, Amazon has elected to source the brand's products for sale by Amazon only. This ensures that Amazon can provide competitive prices, availability, and fast delivery for the most popular products in Amazon's store, and avoids customer confusion and operational complexity. Amazon works closely with all its vendor partners to maintain consistent inventory levels, maintain listing quality, and use advertising to promote their brands, and Amazon provides vendors with access to a variety of tools, services, and resources to do so.

84 **Please describe the "Sold By Amazon" program, identifying which sellers are eligible to join and how Amazon determines what price sellers will receive for their sales.**

As part of Amazon's efforts to ensure its customers are offered competitive prices in Amazon's store, Amazon launched the "Sold By Amazon" (SBA) program in 2019. This invite-only pilot is testing an opt-in consignment program for brand owners. In SBA, brand owners choose which products to enroll in SBA, and once enrolled, these products are priced and sold by Amazon. SBA provides for a guaranteed minimum dollar amount that participants will receive for each item regardless of its selling price. When a customer purchases an item that is being sold through SBA, Amazon purchases the inventory from the selling partner and then sells it to the customer.

85 **Please identify the minimum level of information that a Seller Performance employee is required to share with a merchant when communicating that the merchant's Amazon account has been or will be suspended.**

As Amazon explained in its July 26, 2019 letter to Chairman Cicilline, where the company takes action against suspected violations of Amazon policies, its goal is to provide clear and actionable communications to sellers, describe the policy violation that led to the action, and offer an appeals process where sellers can explain how they will prevent the violation from happening in the future or let Amazon know if they believe it made a mistake. Amazon regularly evaluates these communications to make sure they are clear, actionable, and empathetic.

Amazon also strives to help sellers avoid and correct mistakes that may lead to policy violations. Amazon makes its policies available to selling partners, provides a seller education series called Seller University, and displays real-time account health dashboards and alerts to help selling partners track their performance and get warning of issues as they arise. Amazon offers self-service resolution for many issues, enabling sellers to edit their listings or fix other common problems instantaneously. Similarly, Amazon proactively calls certain selling partners when their accounts are at risk, and provides individualized support and a path to address any outstanding concerns before taking action against their account.

86 **If Amazon suspends a seller without detailing the precise basis for the suspension, how does Amazon expect the seller to remedy the violation and bring itself in compliance with Amazon's policies?**

As explained in Amazon's July 26, 2019 letter to Chairman Cicilline, where Amazon takes action against suspected violations of Amazon policies, its goal is to provide clear and actionable communications to sellers, describe the policy violation that led to the suspension, and offer an appeals process where sellers can explain how they will prevent the violation from happening in the future or let Amazon know if they believe it made a mistake. Amazon regularly evaluates these communications to make sure they are clear, actionable, and empathetic.

Amazon also strives to help sellers avoid and correct mistakes that may lead to policy violations. Amazon makes its policies available to selling partners, provides an entire educational series

called Seller University, and displays real-time account health dashboards and alerts to help selling partners track their performance and get warning of issues as they arise. Amazon offers self-service resolution for many issues, enabling sellers to edit their listings or fix other common problems instantaneously. Similarly, Amazon proactively calls certain selling partners when their accounts are at risk, and Amazon provides individualized support and a path to address any outstanding concerns before taking action against their account.

In some cases, however, Amazon is required to take swift action to suspend selling accounts that have violated its selling policies to protect both its customers and its other selling partners from fraud, counterfeits, and other forms of abuse. Further, to prevent bad actors from abusing Amazon's systems, Amazon may limit details about what it specifically found to be in violation—but will still provide the seller with an appeal option. This is generally limited to a set of egregious violations (e.g., stolen identity, credit card fraud, efforts to defraud customers, etc.).

To ensure that it takes these steps only where appropriate, Amazon regularly audits these account-level enforcement actions and adjusts its approaches where it identifies mistakes or opportunities to help honest sellers that may have inadvertently violated its policies.

87 **Please identify the revenues, costs, and profit margin of Amazon Brand Registry.**

Amazon Brand Registry powers proactive intellectual property protection in Amazon's store. Brand Registry is offered at no charge to brands, and does not generate revenue or profit. In 2018, Amazon spent over $400 million to prevent counterfeiting and abuse on Amazon, and this investment includes the cost of building and supporting Brand Registry.

88 **Please identify what Amazon charges brands for participation in Amazon Brand Registry.**

Enrollment in Amazon Brand Registry is free to any rights owner with a registered trademark.

Amazon is expanding enrollment to brands that may have pending trademarks, and enrollment continues to be free.

89 **Does Amazon enable Marketplace merchants to view a full list of the brands that participate in Amazon Brand Registry? If yes, please describe how a merchant can access this list.**

Amazon does not make a list of the over 200,000 brands enrolled in Brand Registry publicly available or available to any subset of selling partners, both to respect the privacy of the enrollees and to discourage bad actors from using this information to target brands that have not yet enrolled.

90 **If a brand enrolled in Amazon Brand Registry designates as "unauthorized" any merchant that sells below a certain minimum price, will Amazon follow the brand's request to prohibit sales by merchants selling below that price?**

Amazon does not use Brand Registry to enforce authorized distribution agreements or brands' minimum pricing rules. In line with that, there is no capability for brands in Brand Registry to designate a merchant as unauthorized, nor can a brand specify minimum prices for other sellers.

91 **Please describe all steps that Amazon takes to enable Amazon Brand Registry participants to protect their brand.**

Through Brand Registry, brands gain access to powerful tools, including automated brand protections that use predictive modeling to protect brands' intellectual property proactively. These tools grow more effective over time, and in 2019, Amazon has already blocked over 400% more listings suspected of violating intellectual property rights than during the same period in 2018. Brand Registry also provides enrollees a powerful "Report a Violation" tool that increases the accuracy of brands' notices of claimed infringement and allows brands to search for potentially infringing products using state-of-the-art text and image search technology. More than 200,000 brands around the world are enrolled in Brand Registry, and they are finding and reporting 99% fewer suspected infringements than before the launch of Brand Registry.

Brands enrolled in Brand Registry also have access to additional services that help protect their rights on and off Amazon.

Transparency is a product serialization service that effectively eliminates counterfeits on enrolled products. Amazon provides participating brands unique, 2D Data Matrix codes that brands place on every unit they manufacture of an enrolled product. Those codes allow Amazon, other retailers, law enforcement, and customers to determine the authenticity of each individual unit of that product in the supply chain, simply by scanning the codes with a mobile app. Since Transparency's launch in 2018, over 4,000 brands have enrolled, enabling Amazon to protect brands and its customers by detecting and preventing over 260,000 counterfeit products from being sold. To date, brands have not reported a single counterfeit notice of infringement for Transparency-enabled products.

Project Zero adds a self-service counterfeit removal tool to the automated protections and unit serialization to help brands partner with Amazon to drive the number of counterfeits in Amazon's stores to zero. Project Zero is available to brands in the United States, the European Union, and Japan. Since Project Zero launched in the U.S. earlier this year, over 5,700 brands have enrolled. For every one self-service takedown by the brands, the automated protections Amazon has put in place for participating brands have proactively removed more than 500 listings. While it is the combination of these tools that helps drive counterfeits to zero, the 500-to-1 ratio demonstrates the importance of Amazon's substantial ongoing investments in

proactive efforts to prevent counterfeits at scale, dramatically reducing the burden on rights owners to find and take down suspected counterfeits.

92 **Please identify any protections that Amazon's private label products receive that are not available to brands participating in Amazon Brand Registry and explain all the reasons each is not made available to those brands.**

Amazon is the only seller of Amazon private brand products. Amazon may extend similar limitations to brands (including brands in Brand Registry) when necessary to ensure the safety or authenticity of their products or obtain additional selection for Amazon's customers. Amazon is not aware of any other limitations that are not available to brands participating in Amazon Brand Registry.

93 **In November 2018, Amazon announced that a new agreement with Apple would lead it to prohibit subsequent sales by any seller of Apple goods that was not designated by Apple as an "authorized" reseller. How many sellers and seller listings have been removed from Amazon as a result of this new agreement?**

Amazon's agreement with Apple enables Amazon's customers to receive a much wider selection of Apple products at competitive prices. Under the terms of that agreement, Apple designates sellers who may list and sell Apple products in Amazon's store, and Amazon welcomes as many as Apple designates. Sellers not selected by Apple were not removed from Amazon's store—they simply could no longer sell Apple products in it. Those sellers remain free to offer non-Apple products and sellers participating in Amazon's Renewed program are also able to offer refurbished, pre-owned or open box Apple products in Amazon's store.

94 **As of August 2019, how many authorized resellers of Apple products does Amazon host?**

Amazon welcomes as many authorized resellers of Apple products as Apple will approve to sell in Amazon's store. As of August 2019, Apple has authorized seven resellers of new Apple products. Through Amazon's Renewed program, hundreds of other resellers of Apple products meet the criteria to list and sell refurbished Apple products in Amazon's store.

95 **Please describe how Amazon determines which brands to brand-gate (i.e., to limit the merchants who can sell that brand).**

Amazon's seller qualification decisions, including limitations on third party selling partners' ability to offer certain products in Amazon's store, may be made for a number of reasons including safety, authenticity, and selection. Such decisions are generally made when the data available to Amazon shows that customers will benefit from the imposition of additional restrictions or qualification requirements on third party selling partners. For example, Amazon may limit the sellers permitted to sell a certain branded item when Amazon's data shows that a substantial number of different sellers were found to be selling counterfeits of that item. In other, limited circumstances, based on considerations relevant to a specific agreement with a

brand, Amazon may agree to limit the merchants that can sell that brand to gain access to additional selection for customers.

96 **Please explain how enabling brand-gating benefits Amazon consumers, given that brand gating reduces competition on Amazon's Marketplace.**

As described above, Amazon's seller qualifications help customers by ensuring a wide selection of safe, authentic, and available products. Limiting the third party sellers permitted to sell certain products due to safety or authenticity concerns benefits consumers by protecting them from unsafe or inauthentic products. In certain circumstances, where brand owners decline to sell their products to Amazon's customers and prevent other sellers from selling those products in Amazon's store, Amazon's customers suffer from poor selection and higher prices; by limiting the third party sellers permitted to sell those brands, Amazon may be able to gain greater selection.

97 **Please describe how Amazon determines which non-brand entities receive Vendor Central invitations to sell products to Amazon as first-party vendors.**

Amazon seeks to provide its customers with the widest possible selection of authentic goods at competitive prices. Amazon works with both brand owners and distributors to source branded selection. Amazon sources products from distributors when unable to source the products from the brand owner, or when the brand owner is not able to offer competitive terms for Amazon's customers, including on price, selection, and shipping speed.

98 **Has Amazon ever recruited unauthorized resellers of merchandise? If yes, please describe the relevant circumstances.**

Amazon seeks to provide its customers with the widest possible selection of products at competitive prices. One way Amazon has sought to provide this selection is by making it easy for sellers of authentic products to open selling accounts and sell a wide variety of products directly to Amazon's customers in Amazon's store. Brands often conflate the question of whether goods are authentic (not counterfeit) with whether a particular seller is "authorized" (meaning they have a contract with the manufacturer). There are many legal sources of authentic supply in addition to resellers specifically authorized by the brand. These include liquidation or sale by authorized retailers, and supply from other wholesalers and distributors—who are sometimes also used by brands themselves to move merchandise. Amazon goes to great lengths to assure the authenticity of products, preventing bad actors from opening selling accounts or selling counterfeit products in its store. But, we do not require that sellers have a direct contractual relationship with a product's manufacturer, as doing so could prevent sellers—many of whom are small and medium sized businesses—from legally selling these products in our store at competitive prices.

99 **Please identify any steps Amazon takes to assess whether any third-party sellers recruited by Amazon are unauthorized distributors of brands that do not sell on Amazon.**

Amazon seeks to provide its customers with the widest possible selection of products at competitive prices. One way Amazon has sought to provide this selection is by making it easy for sellers of authentic products to open selling accounts and sell a wide variety of products directly to Amazon's customers in Amazon's store. Brands often conflate the question of whether goods are authentic (not counterfeit) with whether a particular seller is "authorized" (meaning they have a contract with the manufacturer). There are many legal sources of authentic supply in addition to resellers specifically authorized by the brand. These include liquidation or sale by authorized retailers, and supply from other wholesalers and distributors—who are sometimes also used by brands themselves to move merchandise. Amazon goes to great lengths to assure the authenticity of products, preventing bad actors from opening selling accounts or selling counterfeit products in its store. But, we do not require that sellers have a direct contractual relationship with a product's manufacturer, as doing so could prevent sellers—many of whom are small and medium sized businesses—from legally selling these products in our store at competitive prices.

100 **Has Amazon ever knowingly recruited merchants that sell counterfeit goods to its Marketplace platform? If yes, please describe the relevant circumstances.**

Amazon does not and would not knowingly recruit sellers that sell counterfeit goods. Amazon strictly prohibits the sale of counterfeit products and in 2018 alone spent more than $400 million preventing the sale of counterfeits and other forms of abuse. When Amazon learns that a customer has received a counterfeit product, Amazon proactively notifies that customer of the issue and refunds their purchase price, even when unable to recover the cost for doing so.

101 **In instances when brands have decided not to sell wholesale to Amazon, has Amazon ever then purchased or sought to purchase goods directly from the brand's manufacturers? If yes, please describe the relevant circumstances.**

Amazon seeks to offer its customers a broad selection of brands. When Amazon seeks to do business with a brand owner, it is the brand owner's branded selection that Amazon wants to source, and Amazon does not view unbranded product from a manufacturer of branded product the same as the branded product. Manufacturers frequently supply many brands and offer their own house brands, so Amazon may also source products directly from manufacturers.

102 **Does Amazon Advertising allow first-party and/or third-party sellers to bid on branded keywords of competitor brands? Please explain why or why not and the precise circumstances under which Amazon allows this.**

When customers shop in Amazon's store, Amazon's goal is to help them discover products in the Amazon catalog that may be relevant to their shopping interests. Consistent with common

practices across advertising and the policies of providers of advertising services, Amazon Advertising permits advertisers to bid on branded keywords of their brands and other brands.

103 **Does Amazon Advertising allow first-party and/or third-party sellers to bid on branded keywords of competitor brands, even when those brands do not sell on Amazon? If yes, please explain why Amazon does this.**

As noted above, consistent with common practices across advertising and the policies of providers of advertising services, Amazon Advertising permits advertisers to bid on branded keywords of their brands and other brands.

104 **Does Amazon ever bid on a brand's keywords on an Amazon or non-Amazon property if that brand does not sell its products on Amazon? If yes, please explain why Amazon does this.**

Amazon's goal is to help customers discover products in the Amazon catalog that may be relevant to their shopping interests. Consistent with common practices across advertising and the policies of providers of advertising services, Amazon bids on branded keywords of other brands, including brands that do not sell in the Amazon store.

105 **Please describe all the steps that Amazon takes when Amazon receives a complaint about an intellectual property violation by a third-party seller, including any steps it takes to verify the legitimacy of the claim.**

Amazon respects the intellectual property rights of others and requires third party selling partners to do the same when listing items for sale in Amazon's store. This is essential to maintaining customer trust. When Amazon's customers make a purchase through an Amazon store, customers expect to receive authentic and non-infringing products. At the same time, it is important to customers to minimize disruption of selling partners' sales. Stated simply, if customers lose trust in Amazon, they can and will shop elsewhere. And if selling partners lose trust in Amazon, they can and will sell elsewhere.

For this reason, Amazon invests heavily to ensure that its decisions concerning intellectual property infringement claims are accurate. In 2018 alone, Amazon invested more than $400 million, and employed more than 5,000 employees, to address intellectual property claims and other forms of abuse.

When an intellectual property claim is submitted, Amazon verifies the submitter's identification and compares the asserted intellectual property right to the accused product or content. Some types of intellectual property claims are given customized treatment. For example, copyright claims are handled according to the procedures prescribed by the Digital Millennium Copyright Act ("DMCA"). Utility patent claims are enforced pursuant to court and agency orders, or, in the absence of such orders, resolved by the affected parties or resolved through Amazon's Neutral Utility Patent Evaluation Process. The Neutral Utility Patent Evaluation Process is a new,

innovative, and entirely voluntary dispute resolution procedure that enables fast, inexpensive, and accurate disposition of utility patent claims as an alternative to federal litigation.

If a violation is found, Amazon removes the infringing content or, in some circumstances, such as in cases of repeated violations, suspends the offending selling partner's account. Where Amazon takes action with respect to a violation, the goal is to provide clear communications to sellers, describe the policy violation that led to the suspension, and offer an appeals process where selling partners can tell Amazon if they believe that a mistake was made. Those appeals are handled by specialized teams, and selling partners are able to submit information to support their case. Selling partners are often contacted before suspensions occur to try to address the underlying issue and prevent account suspension in the first instance. When selling partners provide information that leads to a reversal of an initial removal or suspension, Amazon promptly reverses the takedown or suspension at issue. Even when selling partners are suspended for verified policy violations, Amazon realizes that selling partners can make mistakes and should have a chance to try again if they can implement controls to prevent past issues from reoccurring. Amazon works hard to be responsive to inquiries from selling partners. In 2018, for example, more than 90% of emails from selling partners were responded to in under 12 hours; more than 90% of phone calls from selling partners were answered in under 90 seconds; more than 90% of chats from selling partners were answered in under 90 seconds; and more than 80% of all selling partner issues were fully resolved in under 24 hours.

106 **How many U.S. sellers are enrolled in Seller Fulfilled Prime?**

More than 25,000 seller partner accounts are enrolled in Seller Fulfilled Prime.

107 **Amazon's website states that "Seller Fulfilled Prime is not accepting new registrations at this time." When did Amazon stop accepting new registrations for Seller Fulfilled Prime?**

Amazon stopped accepting new registrations for Seller Fulfilled Prime on February 18, 2019.

108 **Why did Amazon stop accepting new registrations for Seller Fulfilled Prime?**

Amazon is focused on working with existing sellers in the program to improve the experience of their customers and to meet Prime customer standards for delivery speed and reliability.

109 **What factors will determine if and when Amazon reopens registration for Seller Fulfilled Prime?**

Amazon's decisions with respect to Seller Fulfilled Prime will be guided by its focus on the customer and the Prime customer experience, including delivery speed and reliability.

110 **Please identify all the factors that Amazon considers when placing products on its "best sellers" lists and describe why each factor is considered. If Amazon considers different factors for different product categories, please describe those differences and explain all the reasons for each difference.**

Products are placed on the "best sellers" lists based on the number of sales, downloads, or qualifying borrows in the Amazon store. Amazon applies fraud checks and weighs recent sales or borrows more heavily than older sales or borrows.

111 **For the purposes of Amazon's list of best seller books, how does Amazon account for books borrowed through Kindle Unlimited? How does this accounting of books borrowed through Kindle Unlimited compare to Amazon's accounting of à la carte purchases of books? Please explain all the reasons for each difference.**

To accurately reflect customer activity, a Kindle Unlimited borrow is treated the same as an à la carte purchase for the purpose of Amazon's list of best seller books.

112 **How are producers that provide products or content for Amazon's subscription services compensated for providing those products or content? If the compensation scheme differs by product or content, please describe those differences.**

Amazon seeks productive relationships with producers of products and content. Compensation for providers of content for Amazon's subscription services varies. For example, for participation in Kindle Unlimited and Kindle Owners' Lending Library, Amazon pays Kindle Direct Publishing (i.e., self-published) authors and publishers a share of a monthly, publicly announced fund established by Amazon based on the number of pages read by customers. All other authors and publishers are paid the amount they negotiate with Amazon for participation in these programs. For participation in Prime Book Box (Amazon's physical subscription program), Amazon purchases copies from the publisher of each book included in the program based on Amazon's terms with that publisher.

113 **Please identify the number of print books sold on Amazon's Marketplace on a monthly basis in 2010, 2011, and 2012.**

While exact sales figures are sensitive confidential information, during the period in question, millions (and in some months, tens of millions) of new and used print books were sold each month by Amazon and by sellers in the Amazon store.

114 **Please identify all the ways in which the Amazon platform treats Amazon-published books (both imprints and self-published books) differently from books published by non-Amazon publishers and explain all the reasons for treating them differently.**

Amazon publishes books through its Amazon Publishing business, negotiating and purchasing publication rights from authors and providing traditional publishing services such as editorial

review and marketing services. Authors and publishers using Amazon's Kindle Direct Publishing service to self-publish books are not "Amazon-published" books as these authors and publishers retain control of rights to their content. Books from traditional publishers/distributors, self-published authors using Amazon's Kindle Direct Publishing service, and Amazon Publishing generally have the same standard store experience. For example, they utilize the same search and discovery functionality and there is a single detail page for each book (irrespective of source or format). Books from each source have access to features like Author Follow and can be displayed in advertising or merchandising purchased by the content provider. Like all retailers, Amazon looks for opportunities to merchandize its products, such as Amazon Publishing titles, in its store, but the amount and location varies.

115 **For each year since 2014, please identify the percentage of book sales on Amazon captured by Amazon-published books (both imprints and self-published books)**

Amazon Publishing is the only part of Amazon's book business in which Amazon publishes books (i.e., negotiates and purchases publication rights from authors and provides traditional publishing services, such as editorial review and marketing services). Authors and publishers using Amazon's Kindle Direct Publishing service to self-publish books are not "Amazon-published" books as these authors and publishers retain control of rights to their content.

For each year since 2014, the percentage of book sales in the United States that comes from titles published by Amazon Publishing has been 0.5%. Over that same period, the percentage that comes from authors and publishers who use KDP has been between 8.5% and 11%.

116 **Does Amazon sell non-Kindle e-books on its platform? If no, please explain why.**

Amazon, like other e-book retailers, must render books properly on screens and protect e-book files from piracy with digital rights management technology, which is accomplished through the Kindle format. Therefore, Amazon does not sell books in its store that are not Kindle format. However, recognizing that customers like to read across many different surfaces, Amazon makes reading Kindle e-books possible on other devices without the need to purchase Kindle hardware. The free Kindle app is available for customers to download on a variety of devices, including Android phones, Android tablets, iPhone, iPad, Windows (versions 7, 8 and 10) and Mac OS X (version 10.10 or later). Amazon also offers a web reader that allows customers to access their Kindle e-book library and read through their web browser on other devices.

117 **Does Amazon distribute Kindle e-books on non-Kindle readers and non-Kindle applications? If no, please explain why.**

Yes, Amazon makes Kindle e-books available on almost any device without the need to purchase a Kindle reader. The Kindle app is free and available for customers to download on a variety of devices, including Android phones, Android tablets, iPhone, iPad, Windows (versions 7, 8 and 10) and Mac OS X (version 10.10 or later). Amazon also offers a free web reader application that allows customers to access their Kindle e-book library and read through their web browser.

In order to render books properly and to protect e-book files from piracy with digital rights management measures, either a Kindle reader or free Kindle application is required to read a Kindle book.

118 Has Amazon ever used consumer data collected from third-party products distributed through Amazon's platform to inform Amazon's bidding on author publishing rights? If yes, please describe the relevant circumstances, including how this data has informed Amazon's bidding strategy.

Amazon Publishing editors rely on various data sources, including for example third parties like NPD Bookscan, to inform its bidding on author publishing rights. Like other publishers, when Amazon Publishing bids to acquire publishing rights, its editors create a sales forecast for the title they are bidding on. This sales forecast is one data point Amazon Publishing uses when considering how much it should bid for publishing rights. Like editors at other publishers, editors from Amazon Publishing develop the sales forecast in part by reviewing data for books they think are comparable to the title they are bidding on. Editors select comparable books based on their judgment and knowledge of books. Comparable titles may be other titles sold by Amazon Publishing or titles sold by third parties. Examples of data that can be reviewed for comparable books include sales or downloads through Amazon retail channels, average number of customer reviews, the average customer rating, and data Amazon Publishing sources from third parties like NPD Bookscan.

119 Are Amazon-published books (both imprints and self-published books) the only books that are eligible to be part of the Amazon "First Reads" program?

119a If yes, please explain why.

119b If no, please identify books not published by Amazon that Amazon has selected to be part of Amazon "First Reads."

No. While Amazon First Reads is available to them, to date traditional publishers have declined to participate.

120 For each year since 2014, what percentage of Kindle Unlimited content read by consumers is content produced by Amazon publishing (including imprints and self-published books)?

Amazon Publishing is the only part of Amazon's book business in which Amazon publishes books (i.e., negotiates and purchases publication rights from authors and provides traditional publishing services, such as editorial review and marketing services). Authors and publishers using Amazon's Kindle Direct Publishing service to self-publish books are not "Amazon-published" books as these authors and publishers retain control of rights to their content. For each year since 2014, the percentage of Kindle Unlimited content read by consumers in the United States that comes from titles published by Amazon Publishing has been approximately 10%. The percentage that comes from authors and publishers who use KDP is in the mid 80's.

Please note that most large traditional publishers have elected not to participate in Kindle Unlimited—if they chose to participate in the future, the mix of content borrowed by subscribers would likely also change.

121 Please explain how Amazon calculates payments to authors whose books are part of Kindle Unlimited.

For participation in Kindle Unlimited and Kindle Owners' Lending Library, Amazon pays Kindle Direct Publishing (i.e., self-published) authors and publishers a share of a monthly, publicly announced fund established by Amazon based on the number of pages read by customers in the author or publisher's self-published title. All other authors and publishers are paid the amount they negotiate with Amazon. Traditional publishers independently decide how to pay their own authors for participation in Kindle Unlimited, and Amazon does not have visibility into those amounts.

122 Please identify when and explain why Amazon shifted from a "pay-per-borrow" model to a "pay-per-page-read" model.

Amazon shifted from a pay-per-borrow to a pay-per-page-read model for self-publishing Kindle Direct Publishing authors and publishers in August 2015 to increase the accuracy and fairness of the allocation of KDP author payments to reward KDP authors and publishers whose books are most engaging to customers.

123 Please identify the average payment that this "pay-per-page-read" payment model generates for authors enrolled in Kindle Unlimited since Amazon implemented the payment model.

The payment that the "pay-per-page-read" model generates varies greatly by author depending on the pages read. The payment-per-page-read for books self-published through Kindle Direct Publishing and read in Kindle Unlimited in the United States is approximately $0.005.

124 Please identify the average payment per-page-read that this payment method generates for authors enrolled in Kindle Unlimited for each of the last five years.

Over the past five years, the average payments-per-page-read for books self-published through Kindle Direct Publishing and read in Kindle Unlimited and Kindle Owners' Lending Library in the United States have been approximately $0.005.

125 Does Amazon require any exclusivity commitments from authors who publish through Kindle Direct Publishing?

No.

KDP offers an optional program called KDP Select. KDP Select provides authors and publishers access to unique promotional tools including participation in Kindle Unlimited, in exchange for a 90-day exclusivity commitment.

125a If yes, please describe these exclusivity provisions.

125b If yes, please explain why Amazon requires these exclusivity commitments from self-publishing authors.

126 Does Amazon permit authors who publish through Kindle Direct Publishing to opt out of Kindle Unlimited? If no, please explain why Amazon imposes this restriction.

Yes. Every 90 days, Kindle Direct Publishing authors who are enrolled in Kindle Unlimited by virtue of having enrolled in its optional program (KDP Select) may choose not to re-enroll in KDP Select.

127 Please identify how much it costs Amazon to produce an Echo Dot.

Costs to produce an Echo Dot fluctuate during its product lifespan. Amazon strives at all times to minimize costs for components, labor, shipping, etc., so that it can offer Echo Dot to customers at an appealing price point.

128 What percentage of consumers purchase the product that Amazon recommends when a consumer is voice shopping through Alexa?

There are a variety of ways to shop using Alexa, and Amazon is still in the early stages of learning what is most helpful to customers. Most Alexa shopping interactions provide product suggestions customers can review later on their phone or computer, rather than purchasing directly through Alexa. Customers only complete the purchase of a product suggested by Alexa on Alexa a low single digit percent of the time.

129 Please describe what types of data Amazon collects through its Alexa and Echo products and explain how each is used.

Alexa is Amazon's voice service that allows customers to ask questions and make requests using only their voices. For example, customers can use the Alexa service to play music, obtain information, such as news, sports scores, and weather, communicate with others, control their smart home devices, and use a wide range of "skills" created by third party developers. The Alexa service is available through a range of products, including Amazon's Echo products and devices developed by third party manufacturers.

From the beginning, Amazon built privacy deeply into the design of Echo devices and the Alexa service. By default, Echo devices are designed to detect only the wake word (e.g., when a customer says, "Alexa"). Echo devices detect the wake word using on-device "keyword spotting" technology to identify acoustic patterns that match the wake word. No audio is stored or sent to the cloud unless the device detects the wake word or the customer presses a button to activate Alexa. When a customer speaks to the Alexa service, a recording of the customer's request is sent to the Amazon cloud, where Amazon's systems for automatic speech recognition and natural language understanding convert the audio recording to text and interpret the meaning

of the text. Based on the nature of the request, Alexa then sends information about the request to an Amazon service or third party skill capable of responding to the request. If the customer's request requires a verbal response, the Amazon service or third party skill handling the request sends the text of that response to Alexa, where it is converted to audio of Alexa's voice using Amazon's text-to-speech system. In order to help the Alexa service interpret customers' requests and understand which skills are capable of responding to which requests, Amazon receives information from skill developers about the functionality and capabilities of their skills.

Amazon may also receive additional types of information based on the specific Alexa functionality and skills a customer uses and the type of device a customer uses to access the Alexa service. For instance, if a customer accesses Alexa from a mobile phone, Alexa may receive information about the customer's location in order to provide more relevant responses (e.g., if the customer asks for the location of the nearest coffee shop). If a customer connects Alexa to their smart home devices, Alexa may receive information about the use of those smart home devices (e.g., whether a light is on or off). Or, if a customer links Alexa to a third party calendar skill, Alexa may receive information about the events on the customer's calendar.

Amazon uses the information received through Alexa and its Echo devices to provide, personalize, and improve its products and services. This includes responding to customers' requests, allowing customers to review their requests to Alexa and Alexa's responses, and training Alexa to better understand, interpret, and respond to customers' requests.

More detail about the information Amazon collects from customers in connection with Alexa and Echo and how it is used can be found in the Alexa Terms of Use (www.amazon.com/alexaterms) and on the Alexa Privacy Hub (www.amazon.com/alexaprivacy).

130 Does Amazon allow developers to make a skill available through Echo and/or compatible with Alexa without sharing user skill data with Amazon? Please explain why or why not.

As explained in response to Question 129, when a customer uses Alexa to interact with a third party skill, information about that interaction is processed by Amazon. For instance, Alexa's automatic speech recognition and natural language understanding systems process and interpret the customer's request to determine that the request should be sent to the skill. If the skill provides a response to the customer using Alexa's voice, Alexa's text-to-speech system processes the text of that response to speak the response in Alexa's voice.

131 Please identify which categories or teams of Amazon employees have access to data or information that Amazon collects through Alexa and Echo products, specify the types of data to which each has access, and describe where in Amazon's organization chart the teams or employees are located.

1. Teams responsible for core Alexa functionality. These include the teams responsible for Alexa's automatic speech recognition systems, natural language understanding systems,

text-to-speech systems, and the infrastructure and services responsible for processing, routing, transmitting, and storing customers' interactions with Alexa.

2. Teams responsible for features and services made available through Alexa. Alexa provides customers access to Alexa-specific features (e.g., weather, news, sports scores, timers, alarms, jokes, calendar, calling and messaging, smart home functionality), to other Amazon services (e.g., music, shopping, video), and to third party skills. There are separate teams dedicated to ensuring each of these features and services work well on Alexa, continue to improve over time, and meet Amazon customers' needs.

3. Teams responsible for products and services that incorporate Alexa or Alexa technology. Alexa is available through a range of products, including Amazon's family of Echo devices, other Amazon devices such as FireTV and Fire tablets, the Alexa mobile app, and numerous products from third party manufacturers. Alexa functionality is also included in other services Amazon makes available, such as the Alexa for Business service offered by AWS. Again, there are separate teams responsible for ensuring Alexa works well in each of these products and services.

4. Teams responsible for administrative and support functions. These include teams from finance, tax, accounting, customer service, and legal.

132 Please describe what types of data Amazon collects through Eero.

Information about the types of data collected from customers as part of their purchase or use of eero devices can be found in the company's relevant privacy policies at https://eero.com/legal/privacy-website and https://eero.com/legal/privacy, as well as in Amazon's support pages for customers, such as https://support.eero.com/hc/en-us/articles/207957013-What-type-of-data-does-eero-collect-and-why-.

133 Does Eero enable Amazon to track a user's usage of non-Amazon smart home products that the user connects to Eero? If yes, please describe what types of information Amazon collects on non-Amazon smart home products that a user connects to Eero and explain how each type of information is used.

Like any wireless router, in order to route internet data from the internet router to the device making the request, devices like eero must continually understand which devices are connected to the network, including the IP addresses of those devices. This information is used to improve the performance of customers' systems and to support customers. The data is not linked to a person's Amazon account.

134 **Please identify which categories or teams of Amazon employees have access to data or information that Amazon collects through Eero, specify the types of data to which each has access, and describe where in Amazon's organization chart the teams or employees are located.**

These teams fall into three general categories:

1) Teams responsible for core eero functionality. These include the teams responsible for developing and improving eero hardware and device software and integration with services provided through eero Secure and Secure+ services.

2) Teams responsible for the functionality and services made available through eero. eero provides customers access to eero-specific features (e.g., wireless connectivity), to other Amazon services (e.g., Alexa skills to pause WiFi user profiles, frustration-free setup), and to third party security features (e.g. password locker, VPN, malware protection). There are separate teams dedicated to ensuring each of these features and services work well through eero, continue to improve over time, and meet Amazon's customers' needs.

3) Teams responsible for administrative and support functions. These include teams from finance, tax, accounting, customer service, and legal.

135 **Does Amazon include or has it ever included in any contract with business partners a waiver of some or all intellectual property rights whereby a business partner agrees not to bring some or all intellectual property infringement claims with regards to an Amazon product? If yes, please describe the relevant circumstances.**

It is not Amazon's practice to require third party selling partners who list products in Amazon's store to waive some or all intellectual property rights or otherwise agree not to bring some or all intellectual property infringement claims with regards to an Amazon product. However, in order to provide a dispute resolution process for utility patent infringement claims asserted against Amazon's selling partners, Amazon requires utility patent owners (who may also be selling partners) who agree to participate in the process, not to sue Amazon based on sales of the products under evaluation. This process was launched in 2018 to provide a voluntary, fast, inexpensive, and accurate alternative to slow and costly federal court litigation. In this way, the Utility Patent Neutral Evaluation Process functions like any other binding alternative dispute resolution procedure, where parties voluntarily elect to abide by the result of a procedure that is different from and, in their sole judgment, superior to federal litigation.

When Amazon is developing or sharing device technology with third parties—such as when Amazon procures component parts for an Amazon device, or supplies Amazon technology to third parties for use in their own products, or for resale—Amazon has required that third parties not assert IP claims against the Amazon product or service that incorporates the third party component or against the Amazon technology supplied to those third parties.

Prior to June 2017, Amazon required that AWS customers agree not to assert any intellectual property claim against any AWS service actually used by that customer. That condition was removed from the AWS online customer agreement on June 28, 2017. AWS customers were not required to take any action to benefit from that change, which today applies to all AWS customers who use AWS services under the online customer agreement.

136 **Does Amazon include or has it ever included in any contract with business partners a waiver of some or all antitrust claims whereby a business partner agrees not to bring some or all antitrust claims with regards to Amazon's conduct? If yes, please describe the relevant circumstances.**

It is not Amazon's practice to include in a contract with a business partner such a waiver of antitrust claims.

137 **Please identify any egress fees charged by Amazon Web Services (AWS) and describe how Amazon determines these fees.**

AWS makes it easy for customers to leave AWS and does not charge customers an egress fee to stop using AWS's services. AWS charges fees based on the use its services. For example, transfer fees are the same irrespective of the reason for the data transfer.

To transfer data, customers use services including Amazon S3 Data Transfer, Amazon EC2 Data Transfer, AWS Direct Connect, and AWS Snowball. The rates AWS charges for data transfer services depend on factors including AWS's bandwidth costs, the distance and infrastructure required to provide the services, regulations and taxes, as well as fees paid to third party providers. Changes in those factors may cause changes in data transfer prices. Rates for specific AWS data transfer services are described at https://aws.amazon.com/s3/pricing/ (Amazon S3 Data Transfer), https://aws.amazon.com/ec2/pricing/on-demand/ (Amazon EC2 Data Transfer), https://aws.amazon.com/directconnect/pricing/ (AWS Direct Connect), and https://aws.amazon.com/snowball/pricing/ (AWS Snowball).

138 **Please describe the pricing of AWS egress fees for each of the past five years. Please identify all pricing changes over that period and explain all the reasons for each change.**

As noted above, AWS makes it easy for customers to leave AWS and does not charge customers an egress fee to stop using AWS's services. AWS charges fees to the extent customers use its services, including fees for service to move data and any such fees are calculated irrespective of the reason for the data transfer. AWS has not increased data transfer fees, but has on occasion decreased data transfer fees. These price reductions are described here: https://aws.amazon.com/blogs/aws/aws-data-transfer-price-reductions-up-to-34-japan-and-28-australia/ and https://aws.amazon.com/blogs/aws/aws-data-transfer-price-reduction/.

139 Please identify what services and/or software AWS makes available for free and the costs to Amazon of providing these services and/or software for free.

AWS offers a "free tier"—providing customers with hands-on experience using AWS with limited services without incurring charges—for over 60 services as of September 25, 2019. The free tier offers consist of "always free" offers (for limited free usage per account), 12-months free offers, and trial offers. More information about the AWS free tier can be found here: http://aws.amazon.com/free. AWS's financial accounting does not track the total cost to AWS of providing the free tier.

In addition, AWS provides certain services at no additional cost that aid customers in using paid AWS services like Amazon EC2 and Amazon S3. For example, AWS provides AWS Identity and Access Management, AWS Organizations, Service Quotas and AWS Single Sign-On to customers at no additional cost because they allow customers to securely access and manage access to their AWS resources.

AWS also provides certain software at no additional cost, or as open source software, that is necessary to use AWS services, or improves customers' use of AWS services. The cost of AWS software cannot be extricated from the cost of the associated AWS services.

140 Please describe what types of data Amazon collects through AWS and how each is used.

AWS collects and uses data on AWS users including: (1) information related to users' access to AWS, (2) metrics including AWS offering usage, technical errors, diagnostic reports, API calls, and other logs, and (3) information to bill for services, provide security, and create audit trails. AWS uses the information it collects to provide, measure, support, and develop AWS's services, as well as to prevent and detect fraud and abuse. AWS discloses how AWS collects and uses data on AWS users in the AWS Privacy Notice, available online at https://aws.amazon.com/privacy/, and the AWS Service Terms (for specific services), available online at https://aws.amazon.com/service-terms/.

Non-AWS Amazon employees are not permitted to have access to data and information that AWS collects for non-AWS business purposes. In limited circumstances, as necessary to perform shared operational functions, non-AWS Amazon personnel in organizations such as Finance and Accounting, Legal, Corporate Affairs, and Facilities have access to certain metadata and personal information to support the AWS business.

141 Please identify any types of information Amazon tracks on an AWS user that are not made available to the AWS user and explain how each type of information is used.

AWS fully discloses how AWS collects and uses data on AWS users including: (1) information related to users' access to AWS, (2) metrics including AWS offering usage, technical errors, diagnostic reports, API calls, and other logs, and (3) information to bill for services, provide security, and create audit trail. AWS uses the information it collects to provide, measure,

support, and develop AWS's services, as well as to prevent and detect fraud and abuse. AWS discloses how AWS collects and uses data on AWS users in the AWS Privacy Notice, available online at https://aws.amazon.com/privacy/, and the AWS Service Terms (for specific services), available online at https://aws.amazon.com/service-terms/.

The actual data AWS collects on users is also generally made available to users through the individual AWS services, or through management and governance services such as AWS CloudTrail (to track user activity), AWS CloudWatch (to monitor resources and applications). In some instances, the actual data on AWS users collected and used by AWS, and AWS's analysis of that data, may not be made available to customers, either because the data is not useful to customers, similar data is provided to customers, or sharing the data would hurt its ability to detect and prevent fraud and abuse.

142 **Has Amazon ever used a company's AWS usage patterns or any other AWS data to inform Amazon's investment decisions? If yes, please describe the relevant circumstances.**

AWS uses data on individual customers' use of AWS to provide or improve the AWS services and grow the business relationship with that customer. This data may inform AWS's decisions about how AWS invests in infrastructure, such as data centers, edge networks, hardware, and related software solutions in order improve the customer experience. AWS has policies that prohibit sharing an individual customer's data or content with any other Amazon businesses, except as necessary to provide operational functions like accounting and finance.

143 **Has Amazon ever used aggregate forms of AWS usage data to inform Amazon's investment decisions? If yes, please describe the relevant circumstances.**

AWS uses aggregated AWS usage data to improve the AWS customer experience and develop new AWS features and services. In some cases, AWS will improve its features and services by partnering with another company, which sometimes results in an equity investment or acquisition. For example, AWS decided to optimize the performance and reduce the cost of Amazon Elastic Cloud Compute (EC2) by developing purpose-built hardware and software after having discussions with customers about their Amazon EC2 needs and evaluating aggregated usage of Amazon EC2. AWS discussed options with numerous vendors and selected Annapurna Labs, an integrated circuit design company, to create new solutions for customers. The promise of this relationship led AWS to acquire Annapurna Labs in 2015 to continue expanding AWS's capability to offer more choices, better performance, and lower costs for Amazon EC2. It is not Amazon's practice to use aggregated AWS usage data in non-AWS related investment decisions made by Amazon. Non-AWS Amazon employees are not permitted to have access to customer data and information that AWS collects for non-AWS business purposes.

144 **Has Amazon ever used a company's AWS usage patterns or any other AWS data to inform Amazon's product strategy? If yes, please describe the relevant circumstances.**

AWS has policies that prohibit sharing an individual customer's data or content with any other Amazon businesses except as necessary to provide operational functions like accounting and finance. AWS uses data on individual customers' use of AWS to provide or improve the AWS services and grow the business relationship with that customer. AWS has policies that prohibit using any data regarding an individual customer's use of AWS for any purpose other than providing or improving the AWS services or growing AWS's business relationship with that customer. This includes prohibiting using an individual customer's data or content to compete with that customer. We have been unable to identify any case in which Amazon has used AWS data to inform Amazon's product strategy.

145 **Has Amazon ever used aggregate forms of AWS usage data to inform Amazon's product strategy? If yes, please describe the relevant circumstances.**

Non-AWS Amazon employees are not permitted to have access to customer data and information that AWS collects for non-AWS business purposes. AWS uses aggregated usage data to improve the AWS customer experience and develop new AWS features and services. For example, AWS looks at aggregated AWS usage data to understand the regions its customers are located in to help determine where AWS should build new AWS data centers so that AWS can offer customers faster access to their content on AWS. We have been unable to identify any case in which Amazon has used aggregate AWS usage data to inform Amazon's product strategy.

146 **Please identify which categories or teams of Amazon employees have access to data or information that Amazon collects through AWS, specify the types of data and information to which each has access, and describe where in Amazon's organization chart the teams or employees are located.**

Non-AWS Amazon employees are not permitted to have access to customer data and information that AWS collects for non-AWS business purposes. In limited circumstances, as necessary to perform shared operational functions, non-AWS Amazon personnel in organizations such as Finance and Accounting, Legal, Corporate Affairs, and Facilities have access to certain metadata and personal information to support the AWS business. The Amazon retail business, as well as other Amazon businesses, are AWS customers and must comply with the same terms of service that its other customers must comply with. They have access to the same types of data and information that are available to other customers. Within AWS, data and information is shared on a need-to-know basis, to the extent necessary for AWS personnel to perform their job responsibilities.

147 Please identify the percentage of Amazon consumers that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon consumer contracts that do not contain a mandatory arbitration clause and/or class action waiver.

To enjoy Amazon's products and services, all Amazon customers agree to Amazon's Conditions of Use (COU). Among other provisions, the COU includes provisions governing disputes. The customer agrees that any dispute or claim related to Amazon's products or services will be resolved through binding arbitration with the American Arbitration Association. The COU informs the customer that while there is no judge or jury in arbitration, the arbitrator has the power to award the same damages and relief that a court could order, including injunctive and declaratory relief and statutory damages. The COU also provides that any dispute resolution proceedings will be conducted only on an individual basis and not in a class, consolidated, or representative action. The COU provides further that a customer may pursue in small claims court, rather than in arbitration, any claims that qualify for small claims treatment, and either party may go to court to enjoin infringement or other misuse of intellectual property rights.

148 Since 2014, how many Amazon consumers have initiated arbitration proceedings to adjudicate a legal claim against Amazon, in total and broken down by type of legal claim?

The vast majority of customer complaints and disputes are resolved amicably and informally by Amazon's customer service teams, due in large measure to Amazon's generous customer concessions policies and Amazon's A-to-Z guarantee (which provides refunds for items sold by third parties). For those disputes that cannot be informally resolved, most customers choose to pursue claims in small claims court rather than arbitration. Amazon's records reflect that 24 customers have initiated arbitration proceedings since 2014. Those arbitrations involved the following types of claims:

- Product refund or return dispute (9)
- Gift card use or balance dispute (3)
- Problem with a product (3)
- Account closure or suspension (2)
- Audible account credits dispute (2)
- Removal of product review privileges (2)
- Deceptive advertising by third party seller (1)
- Dissatisfaction with trade-in program (1)
- IMDb content removal issue (1)

149 **Please identify the percentage of Amazon employees that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon employee contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

Amazon has no U.S. employees who are subject to a mandatory arbitration clause or class action waiver in an employment agreement with Amazon. Amazon makes offers of employment at-will to employees in the United States through offer communications that do not contain a mandatory arbitration clause or class action waiver.

150 **Since 2014, how many current or former Amazon employees have initiated arbitration proceedings to adjudicate a legal claim against Amazon, in total and broken down by type of legal claim?**

Amazon's records reflect that since 2014, no current or former Amazon employees have initiated arbitration proceedings to adjudicate a legal claim against Amazon.

151 **Please identify the percentage of Amazon contractors that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon contractor contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

Contractors are a small percentage of Amazon's overall workforce. The terms and structure of Amazon's relationships with contractor workers vary by business and circumstance.

Many of Amazon's contractor workers (non-employee individuals who perform work for Amazon) are Amazon Flex Independent Contractor "last-mile" Delivery Partners. They each enter into an Amazon Flex Independent Contractor Terms of Service agreement ("AmFlex TOS") with Amazon under which they agree to resolve disputes through arbitration with the American Arbitration Association on an individual basis.

The AmFlex TOS contains four provisions addressing arbitration, which: (1) state that Amazon and the Independent Contractor ("IC") mutually agree to subject disputes between them to final, binding arbitration on an individual basis; (2) describe the process for initiating an arbitration with the American Arbitration Association ("AAA"), identify the applicable AAA rules, limit the total amount of AAA fees and costs to be paid by the IC to $200, and describe other arbitration-process aspects; (3) state that the arbitration provisions will survive any termination of the AmFlex TOS; and (4) remind the IC that, by signing the AmFlex TOS, s/he is waiving certain rights in favor of arbitration on an individual basis and highlight that the IC has the opportunity to seek an attorney's advice before signing the AmFlex TOS.

Amazon contractor workers who are supplied by staffing agencies, employed by Amazon vendors, and engaged as independent contractors by a managed service provider do not sign an

agreement with Amazon that contains a mandatory arbitration clause and/or class-action waiver.

152 Since 2014, how many current or former Amazon contractors have initiated arbitration proceedings to adjudicate a legal claim against Amazon, in total and broken down by type of legal claim?

Amazon values its contractors and tries to address contractor concerns, with the vast majority of contractor complaints and disputes resolved amicably and informally by Amazon. Amazon's records reflect that 33 contractors have initiated arbitration proceedings since 2014. Twenty-four contractors initiated arbitration proceedings under wage and hour and/or unfair competition laws. Nine contractors initiated arbitration proceedings based on Amazon's alleged breaches of their contractor agreements.

153 Please identify the percentage of Amazon Marketplace participants that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon Marketplace contracts that do not contain a mandatory arbitration clause and/or class action waiver.

To sell on Amazon's store, all third party sellers agree to the Amazon Services Business Solutions Agreement (BSA). Among other provisions, the BSA includes provisions governing disputes. The seller agrees that any dispute or claim related to the BSA or to Amazon's services will be resolved through binding arbitration with the American Arbitration Association. The BSA informs the seller that while there is no judge or jury in arbitration, the arbitrator has the power to award the same damages and relief that a court could order, including injunctive and declaratory relief and statutory damages. The BSA also provides that any dispute resolution proceedings will be conducted only on an individual basis and not in a class, consolidated, or representative action. The BSA provides further that a seller may pursue in small claims court, rather than in arbitration, any claims that qualify for small claims treatment, and either party may go to court to enjoin infringement or other misuse of intellectual property rights.

154 Since 2014, how many current or former Marketplace participants have initiated arbitration proceedings to adjudicate a legal claim against Amazon, in total and broken down by type of legal claim?

Amazon views sellers as trusted partners and tries to address seller concerns, with the vast majority of seller complaints and disputes resolved amicably and informally by Amazon's seller service teams. Even after a seller expresses its intention to initiate arbitration proceedings, Amazon continues to engage with that seller to attempt to negotiate a mutually agreeable resolution. For those disputes that cannot be informally resolved, some sellers opt to initiate arbitration pursuant to the Amazon Services Business Solutions Agreement. Although Amazon has hundreds of thousands of sellers, Amazon's records reflect that 163 sellers have initiated arbitration proceedings since 2014. Those arbitrations involved the following types of claims:

- Funds withholding/inventory reimbursement dispute (100)
- Account closure or suspension (22)
- Reimbursement for lost, damaged, or disposed of inventory (16)
- Account compromise or unauthorized funds transfer (8)
- Infringing or counterfeit sales by other third party seller (5)
- Challenge to customer refund (5)
- Removal or restriction on certain product listings (4)
- Shipping charge dispute (2)
- Challenge to infringement complaints by others (1)

155 **Please identify the percentage of Amazon vendors that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon's contracts with vendors that do not contain a mandatory arbitration clause and/or class action waiver.**

To sell products to Amazon for sale to customers, most vendors agree to the Amazon Vendor Terms and Conditions (VTC). Among other provisions, the VTC includes provisions governing disputes. The vendor agrees that any dispute or claim arising out of the VTC and related policies will be resolved through binding arbitration with the American Arbitration Association. The VTC informs the vendor that while there is no judge or jury in arbitration, the arbitrator has the power to award the same damages and relief that a court could order, including injunctive and declaratory relief and statutory damages. The VTC also provides that any dispute resolution proceedings will be conducted only on an individual basis and not in a class, consolidated, or representative action. The VTC provides further that either party may go to court to enjoin infringement or other misuse of intellectual property rights. Some of Amazon's negotiated contracts with vendors do not contain a mandatory arbitration clause or class action waiver.

156 **Since 2014, how many current or former Amazon vendors have initiated arbitration proceedings to adjudicate a legal claim against Amazon in total and broken down by type of legal claim?**

Amazon views vendors as trusted partners and tries to address vendor concerns, with the vast majority of vendor complaints and disputes resolved amicably and informally by Amazon's vendor management teams. Even after a vendor expresses its intention to initiate arbitration proceedings, Amazon continues to engage with that vendor to attempt to negotiate a mutually agreeable resolution. For those disputes that cannot be informally resolved, some vendors opt to initiate arbitration pursuant to the Amazon Vendor Terms and Conditions. Amazon's records

reflect that 16 vendors have initiated arbitration proceedings since 2014. Those arbitrations involved the following types of claims:

- Challenge to chargebacks or various deductions from payments (7)
- Nonpayment or underpaid invoices (7)
- Challenge to withheld payments due to counterfeiting or restricted product issues (2)

157 **Please identify the percentage of Amazon employees and contractors that are subject to a non-compete clause in their agreement with Amazon, describe the relevant provisions, and identify any types or categories of Amazon employees and contractors that are not subject to a non-compete clause.**

As of September 23, 2019, less than 22% of Amazon's U.S. employees work in positions subject to a contractual non-compete clause. These non-compete clauses vary by location, and the applicable law in the relevant location. In general, these clauses restrict those employees, for a limited number of months after leaving Amazon, from working on or supporting any product or service that competes with any Amazon product or service they worked on or supported, or about which they received confidential information, at Amazon. Amazon's U.S. employees who are paid on an hourly basis or who work in jurisdictions where non-compete clauses are impermissible under applicable law are not subject to them. The terms and structure of Amazon's agreements with contractors vary significantly by business and circumstance.

158 **Since 2014, how many former Amazon employees and contractors has Amazon sued or initiated arbitration proceedings against in connection with an alleged breach of a noncompete clause? Please break down this number by type of legal relationship (e.g., employee or contractor) and describe the relevant circumstances that gave rise to each suit or arbitration.**

Amazon has sued or initiated arbitration proceedings against six former employees, and no contract workers, in connection with an alleged breach of a non-compete clause since 2014. Each of the six former employees accepted a new position working with products or services that were competitive with the products or services they were responsible for (or learned confidential information about) at Amazon. Three former employees left the sales, machine learning, or partner organizations in Amazon's cloud computing business to join those same groups at another cloud computing business. Another former employee left an applications organization in Amazon's cloud computing business to become the head of product for another applications company. Another former employee was an executive responsible for Amazon's supply chain delivery logistics effort who left to develop the same infrastructure for another retailer. The other former employee was a country leader for one of Amazon's boutique fashion businesses who left to become the head of business development for another boutique fashion business.

APPENDIX

Appendix A (Question 23)

Referral Fee Rates

Fees Effective February 19, 2019; referral fee percentages apply to the total price paid by the buyer. They can be found both online (https://sellercentral.amazon.com/gp/help/external/200336920) and reproduced below:

Category	Referral Fee	Min Fee	Closing Fee	Referral Changes	Min/Closing Changes
Health & Personal Care[1]	8% for products with a price up to $10 15% for products with a price above $10	$0.30	-	Feb 19, 2019 lowered from 15% to 8%	Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Personal Care Appliances	8% for products with a price up to $10 15% for products with a price above $10	$0.30	-	Feb 19, 2019 lowered from 15% to 8%	Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Beauty	8% for products with a price up to $10 15% for products with a price above $10	$0.30	-	Feb 19, 2019 lowered from 15% to 8%	Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Luxury Beauty	15% referral fee 15% Luxury Beauty Access Fee	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Baby	8% for products with a price up to $10	$0.30	-	Feb 19, 2019 lowered from 15% to 8%	Feb 19, 2019: min lowered from 1.00 to 0.30
	15% for products with a price above $10				Feb 19, 2019: min lowered from 1.00 to 0.30

Grocery	8% for products with a price up to $15		-	Oct 15, 2017: lowered from 15% to 8%	Feb 19, 2019: min lowered from 1.00 to 0.30
	15% for products with a price above $15				Feb 19, 2019: min lowered from 1.00 to 0.30
Home	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Kitchen	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Furniture	15% for portion of the price up to $200, 10% of portion of the price above $200	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
				Feb 19, 2019 lowered from 15% to 10%	Feb 19, 2019: min lowered from 1.00 to 0.30
Large Appliances	15% for portion of the price up to $300 8% of portion of the price above $300	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Electronics Base Devices *(Camera, Cell Phone Devices, CE)*	8%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
Electronics Accessories *(Includes Bundled Products)*	15% for portion of the price up to $100 8% of portion of the price above $100	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
					Feb 19, 2019: min lowered from 1.00 to 0.30
PC Base Devices	6%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30

Office Products	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Amazon Device Accessories	45%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Toys	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Pets	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Musical Instruments	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
BISS	12%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Automotive	12%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Tires & Wheel Products	10%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Sporting Goods	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Outdoor Recreation	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Home Improvement	15%	$0.30	-	Oct 23, 2014: raised from 12% to 15%	Feb 19, 2019: min lowered from 1.00 to 0.30
Tools	15%	$0.30	-	Oct 23, 2014: raised from 12% to 15%	Feb 19, 2019: min lowered from 1.00 to 0.30
Base Equipment Power Tools	12%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30

Shoes	15% for products with a price up to $75 18% for products with a price above $75	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
				April 15, 2018 raised from 15% to 18%	Feb 19, 2019: min lowered from 1.00 to 0.30
Apparel	17%	$0.30	-	April 15, 2018 raised from 15% to 17%	Feb 19, 2019: min lowered from 1.00 to 0.30
Luggage	15%	$0.30	-		Feb 19, 2019: min lowered from 1.00 to 0.30
Jewelry	20% for portion of the price up to $250 5% of the portion of the price above $250	$0.30	-		Feb 19, 2019: min lowered from 2.00 to 0.30
				Feb 22, 2018: Lowered from 20% to 5%	Feb 19, 2019: min lowered from 2.00 to 0.30
Watches	16% for portion of the price up to $1,500 3% of portion of the price above $1,500	$0.30	-		Feb 19, 2019: min lowered from 2.00 to 0.30
					Feb 19, 2019: min lowered from 2.00 to 0.30
Books	15%	-	$1.80	Mar 1, 2017: referral fee applicable to the shipping inclusive price (from exclusive)	Mar 1, 2017: closing fee increased from 1.35 to 1.80
DVD	15%	-	$1.80	Mar 1, 2017: referral fee applicable to the shipping inclusive price (from exclusive)	Mar 1, 2017: closing fee increased from 1.35 to 1.80
Music	15%	-	$1.80	Mar 1, 2017: referral fee applicable to the shipping	Mar 1, 2017: closing fee increased from 1.35 to 1.80

				inclusive price (from exclusive)	
Video Game Consoles	8%	-	$1.80	Mar 1, 2017: referral fee applicable to the shipping inclusive price (from exclusive)	Mar 1, 2017: closing fee increased from 1.35 to 1.80
Video Games	15%	-	$1.80	Mar 1, 2017: referral fee applicable to the shipping inclusive price (from exclusive)	Mar 1, 2017: closing fee increased from 1.35 to 1.80

US Refund Administration Fee

For refunds, Amazon charges 20% of the referral fee capped at $5 for non-media. This fee has not changed in the last five years.

High-Volume Listing Fee

Amazon charges a monthly High-Volume Listing Fee of $0.005 per eligible ASIN to cover its system costs associated with cataloging and maintaining large numbers of ASINs in Amazon's store. To be eligible for the High-Volume Listing Fee in a given month, an ASIN must meet the following criteria:

1. The ASIN is listed in a non-Media category. Media categories include: Books, DVDs, Music, Software, Computer/Video games, Video Game Consoles, and Video Game Accessories, among others.
2. The seller has had an active offer on the ASIN at some point during the month.
3. The ASIN was created at least 12 months ago.
4. The ASIN has not sold in the previous 12 months.

Amazon waives the High-Volume Listing for the first 100,000 ASINs that meet the above criteria. Amazon applies the fee to the highest number of eligible ASINs above 100,000 during that month. This fee has not changed in the last five years.

Selling Plans

Selling Plan	Monthly Subscription Fee	Per Item Fee
Professional	$39.99	$0
Individual	$0	$0.99

These fees have not changed in the last five years.

Appendix B (Question 60)

U.S. FBA Fulfillment Rates

February 2019 Change

			Before February 19, 2019	February 19, 2019, and after
Size tier	Shipping weight	Packaging weight	Fulfillment fee per unit[1]	Fulfillment fee per unit[1, 2]
Small standard	10 oz or less	4 oz	$2.41	$2.41
	10+ to 16 oz			$2.48
Large standard	10 oz or less	4 oz	$3.19	$3.19
	10+ to 16 oz			$3.28
	1 to 2 lb	4 oz	$4.71	$4.76
	2 to 3 lb	4 oz	$5.09	$5.26
	3 lb to 20 lb	4 oz	$5.09 + $0.38/lb above first 3 lb	$5.26 + $0.38/lb above first 3 lb
Small oversize	70 lb or less	1 lb	$8.13 + $0.38/lb above first 2 lb	$8.26 + $0.38/lb above first 2 lb
Medium oversize	150 lb or less	1 lb	$9.44 + $0.38/lb above first 2 lb	$9.79 + $0.39/lb above first 2 lb
Large oversize	150 lb or less	1 lb	$73.18 + $0.79/lb above first 90 lb	$75.78 + $0.79/lb above first 90 lb
Special oversize	N/A	1 lb	$137.32 + $0.91/lb above first 90 lb	$137.32 + $0.91/lb above first 90 lb

[1] *Add $0.40 per unit for clothing items*

[2] *Add $0.11 per unit for items with lithium batteries*

February 2018 Change

	Prior to February 22, 2018		February 22, 2018 and after
Standard-size	**January - September**	**October - December**	**Year-round Rates**
Small (1 lb. or less)	$2.41	$2.39	$2.41
Large (1 lb. or less)	$2.99	$2.88	$3.19
Large (1 lb. to 2 lb.)	$4.18	$3.96	$4.71
Large (over 2 lb.)	$4.18 +$0.39/lb. above first 2 lb.	$3.96 +$0.35/lb. above first 2 lb.	$4.71 +$0.38/lb. above first 2 lb.

Oversize	**January - September**	**October - December**	**Year-round Rates**
Small Oversize	$6.85 +$0.39/lb. above first 2 lb.	$6.69 +$0.35/lb. above first 2 lb.	$8.13 +$0.38/lb. above first 2 lb.
Medium Oversize	$9.20 +$0.39/lb. above first 2 lb.	$8.73 +$0.35/lb. above first 2 lb.	$9.44 +$0.38/lb. above first 2 lb.
Large Oversize	$75.06 +$0.80/lb. above first 90 lb.	$69.50 +$0.76/lb. above first 90 lb.	$73.18 +$0.79/lb. above first 90 lb.
Special Oversize	$138.08 +$0.92/lb. above first 90 lb.	$131.44 +$0.88/lb. above first 90 lb.	$137.32 +$0.91/lb. above first 90 lb.
Add $0.40 per unit for clothing items			

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February 2017 Change

FBA Fulfillment Fees (standard-size items)

Prior to February 22, 2017

Order Handling, Pick & Pack, and Weight Handling fees (per-unit total)

	Small standard-size (1 lb. or less)	*Large standard-size (1 lb. or less)*	*Large standard-size (1 to 2 lbs.)*	*Large standard-size (over 2 lbs.)*
January–October	$2.66	$3.02	$4.01	$4.01+ $0.39/lb. above the first 2 lbs.
November–December	$2.53	$2.89	$3.72	$3.72 + $0.35/lb. above the first 2 lbs.

Effective February 22, 2017

Fulfillment Fee (per-unit total)

	Small standard-size (1 lb. or less)	*Large standard-size (1 lb. or less)*	*Large standard-size (1 to 2 lbs.)*	*Large standard-size (over 2 lbs.)*
January–September	$2.41	$2.99	$4.18	$4.18 + $0.39/lb. above the first 2 lbs.
October–December	$2.39	$2.98	$3.96	$3.96 + $0.35/lb. above the first 2 lbs.

FBA fulfillment Fees (standard-size items)

Prior to February 22, 2017

Order Handling, Pick & Pack, and Weight Handling fees (per-unit total)

	Small standard-size (1 lb. or less)	*Large standard-size (1 lb. or less)*	*Large standard-size (1 to 2 lbs.)*	*Large standard-size (over 2 lbs.)*
January–October	$1.56	$1.91	$2.76	$2.30 + $0.41/lb. above the first 2 lbs.
November–December	$1.53	$1.77	$2.01	$2.01 + $0.37/lb. above the first 2 lbs.

Effective February 22, 2017

Fulfillment Fee (per-unit total)

	Small standard-size (1 lb. or less)	*Large standard-size (1 lb. or less)*	*Large standard-size (1 to 2 lbs.)*	*Large standard-size (over 2 lbs.)*
January–September	$2.41	$2.99	$4.18	$4.18 + $0.39/lb. above the first 2 lbs.
October–December	$2.39	$2.68	$3.96	$3.96 + $0.35/lb. above the first 2 lbs.

FBA Fulfillment Fees (oversize)

Prior to February 22, 2017

Order Handling, Pick & Pack, and Weight Handling fees (per-unit total)

	Small oversize	*Medium oversize*	*Large oversize*	*Special oversize*
January–October	$6.15 + $0.39/lb. above the first 2 lb.	$7.93 + $0.39/lb. above the first 2 lb.	$72.30 + $0.80/lb. above the first 90 lb.	$125.11 + $0.92/lb. above the first 90 lb.
November–December	$6.94 + $0.35/lb. above the first 2 lb.	$7.39 + $0.35/lb. above the first 2 lb.	$64.37 + $0.76/lb. above the first 90 lb.	$126.26 + $0.80/lb. above the first 90 lb.

Effective February 22, 2017

Fulfillment Fee (per-unit total)

	Small oversize	*Medium oversize*	*Large oversize*	*Special oversize*
January–September	$6.85 + $0.39/lb. above the first 2 lb.	$8.20 + $0.39/lb. above the first 2 lb.	$75.06 + $0.80/lb. above the first 90 lb.	$130.08 + $0.92/lb. above the first 90 lb.
October–December	$6.69 + $0.35/lb. above the first 2 lb.	$8.73 + $0.35/lb. above the first 2 lb.	$69.56 + $0.76/lb. above the first 90 lb.	$131.44 + $0.80/lb. above the first 90 lb.

Add $0.40 per unit for clothing items

November 2016 Change

Weight handling fees return to the amounts listed in the Prior to November 1, 2016 columns beginning January 1, 2017 (as seen below).

Standard-size

	Prior to November 1, 2016		Effective November 1 – December 31, 2016	
	Media	Non-Media	Media	Non-Media
Order handling per order	$0.00	$1.00	No change	No change
Pick & Pack* per item	$1.06	$1.06	No change	No change
Weight handling based on outbound shipping weight				
Small standard-size 1 lb or less	$0.59	$0.50	$0.47	$0.47
Large standard-size 1 lb or less	$0.85	$0.96	$0.71	$0.82
Large standard-size 1 lb to 2 lb	$1.24	$1.95	$0.95	$1.65
Large standard-size over 2 lb	$1.24 + $0.41/lb above the first 2 lb	$1.95 + $0.39/lb above the first 2 lb	$0.95 + $0.37/lb above the first 2 lb	$1.66 + $0.35/lb above the first 2 lb

Clothing items incur an additional $0.40 per item in Pick & Pack fulfillment fees.

Oversize

	Prior to November 1, 2016	Effective November 1 – December 31, 2016
Order handling per order	$0.00	No change
Pick & Pack per item		
Small oversize	$4.09	No change
Medium oversize	$5.20	No change
Large oversize	$8.40	No change
Special oversize	$10.53	No change
Weight handling based on outbound shipping weight		
Small oversize	$2.06 + $0.39/lb above the first 2 lb	$1.85 + $0.35/lb above the first 2 lb
Medium oversize	$2.73 + $0.39/lb above the first 2 lb	$2.10 + $0.35/lb above the first 2 lb
Large oversize	$63.98 + $0.80/lb above the first 90 lb	$56.57 + $0.76/lb above the first 90 lb
Special oversize	$124.58 + $0.92/lb above the first 90 lb	$115.73 + $0.88/lb above the first 90 lb

February 2016 Change

	Prior to February 18, 2016		Effective February 18, 2016	
	Media	Non-Media	Media	Non-Media
Order Handling per order	$0	$1	$0	$1
Pick & Pack per unit	$1.04	$1.04 ($1.44 for Clothing)	$1.06	$1.06 ($1.46 for Clothing)
Weight Handling Based on the Outbound Shipping Weight				
Small Standard-Size 1 lb. or less	$0.50	$0.50	$0.50	$0.50
Large Standard-Size 1 lb. or less	$0.63	$0.63	$0.85	$0.96
Large Standard-Size 1 lb. to 2 lbs.	$0.88	$1.59	$1.24	$1.95
Large Standard-Size Over 2 lbs.	$0.88 + $0.41/lb. above the first 2 lbs.	$1.59 + $0.39/lb. above the first 2 lbs.	$1.24+ $0.41/lb. above the first 2 lbs.	$1.95 + $0.39/lb. above the first 2 lbs.

	Prior to February 18, 2016		Effective February 18, 2016	
	All Oversize except Clothing	Clothing	All Oversize except Clothing	Clothing
Order Handling per order	$0	$0	$0	$0
Pick & Pack per unit				
Small Oversize	$4.06	$4.46	$4.09	$4.49
Medium Oversize	$5.12	$5.52	$5.20	$5.60
Large Oversize	$8.21	$8.61	$8.40	$8.80
Special Oversize	$10.34	$10.74	$10.53	$10.93
Weight Handling Based on the Outbound Shipping Weight				
Small Oversize	$1.59 + $0.39/lb. above the first 2 lbs.		$2.06 + $0.39/lb. above the first 2 lbs.	
Medium Oversize	$2.23 + $0.39/lb. above the first 2 lbs.		$2.73 + $0.39/lb. above the first 2 lbs.	
Large Oversize	$63.09+ $0.80/lb. above the first 90 lbs.		$63.98 + $0.80/lb. above the first 90 lbs.	
Special Oversize	$124.58 + $0.92/lb. above the first 90 lbs.		$124.58 + $0.92/lb. above the first 90 lbs.	

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February 2015 Change

February 18, 2015: Pick & Pack and weight handling fees will increase across all product sizes and weights. Additionally, for heavier and larger products, Amazon will use dimensional weight — which is equivalent to the unit's cubic volume (length x width x height in inches) divided by 166 — to determine fulfillment fees. Previously, dimensional weight was used only when oversize units reached a certain threshold. Now it will be used when the dimensional weight for small, medium or large oversize units is greater than the unit weight.

	Prior to February 18, 2015		Effective February 18, 2015	
	Media	Non-Media	Media	Non-Media
Order Handling per order	$0.00	$1.00	$0.00	$1.00
Pick & Pack per unit	$1.02	$1.02 ($1.42 for Clothing)	$1.04	$1.04 ($1.44 for Clothing)
Weight Handling Based on the Outbound Shipping Weight*				
Small Standard-Size 1 lb. or less	$0.46	$0.46	$0.50	$0.50
Large Standard-Size 1 lb. or less	$0.55	$0.55	$0.63	$0.63
Large Standard-Size 1 lb. to 2 lbs.	$0.82	$1.34	$0.88	$1.59*
Large Standard-Size Over 2 lbs.	$0.82 + $0.41/lb. above the first 2 lbs.	$1.34 + $0.39/lb. above the first 2 lbs.	$0.88 + $0.41/lb. above the first 2 lbs.	$1.59 + $0.39/lb. above the first 2 lbs.*

	Oversize Products	
	Prior to February 18, 2015	Effective February 18, 2015
Order Handling (Per order)	$0.00	$0.00
Pick & Pack (Per unit)		
Small Oversize	$4.02	$4.05
Medium Oversize	$5.07	$5.12
Large Oversize	$8.15	$8.21
Special Oversize	$10.25	$10.34
Weight Handling (based on Outbound Shipping Weight)		
Small Oversize	$1.17 + 0.39/lb. above the first 2 lbs.	$1.59 + 0.39/lb. above the first 2 lbs.
Medium Oversize	$1.54 + 0.39/lb. above the first 2 lbs.	$2.23 + 0.39/lb. above the first 2 lbs.
Large Oversize	$60.17 + $0.79/lb. above the first 90 lbs.	$63.09 + $0.80/lb. above the first 90 lbs.
Special Oversize	$124.08 + $0.92/lb. above the first 90 lbs.	$124.58 + $0.92/lb. above the first 90 lbs.

Add $0.40 per unit for clothing items effective February 18, 2015

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US FBA Monthly Storage Rates

February 2019– No Change on Core Rates

Monthly storage fees for most products will remain unchanged from 2018.

Monthly inventory storage fees		
Storage month	Standard size	Oversize
January – September	$0.69 per cubic foot	$0.48 per cubic foot
October – December	$2.40 per cubic foot	$1.20 per cubic foot

April 2018 Change

Prior to April 1, 2018		
Storage month	Standard-size	Oversize
January – September	$0.64 per cubic foot	$0.43 per cubic foot
October – December	$2.35 per cubic foot	$1.15 per cubic foot

April 1, 2018 and after		
Storage month	Standard-size	Oversize
January – September	$0.69 per cubic foot	$0.48 per cubic foot
October – December	$2.40 per cubic foot	$1.20 per cubic foot

March 2017 Change

Monthly Inventory Storage fees		
Prior to March 1, 2017		
	Standard-size	*Oversize*
January–October	$0.54 per cubic foot	$0.43 per cubic foot
November–December	$2.25 per cubic foot	$1.15 per cubic foot
Effective March 1, 2017		
	Standard-size	*Oversize*
January–September	$0.64 per cubic foot	$0.43 per cubic foot
October–December	$2.35 per cubic foot	$1.15 per cubic foot

October 2016 Change

	Prior to October 1, 2016		Effective October 1, 2016	
	Standard-size	Oversize	Standard-size	Oversize
January to September	$0.54 per cubic foot	$0.43 per cubic foot	No change	No change
October	$0.72 per cubic foot	$0.57 per cubic foot	$0.54 per cubic foot	$0.43 per cubic foot
November to December	$0.72 per cubic foot	$0.57 per cubic foot	$2.25 per cubic foot	$1.15 per cubic foot

March 2016 Change

	Prior to March 1, 2016		Effective March 1, 2016	
	Standard-Size	Oversize	Standard-Size	Oversize
January to September	$0.51 per cubic foot	$0.40 per cubic foot	$0.54 per cubic foot	$0.43 per cubic foot
October to December	$0.68 per cubic foot	$0.53 per cubic foot	$0.72 per cubic foot	$0.57 per cubic foot

March 2015 Change

	Prior to March 1, 2015		Effective March 1, 2015	
	Standard-Size	Oversize	Standard-Size	Oversize
January – September	$0.48 per cubic foot	$0.48 per cubic foot	$0.51 per cubic foot	$0.40 per cubic foot
October – December	$0.64 per cubic foot	$0.64 per cubic foot	$0.68 per cubic foot	$0.53 per cubic foot

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US FBA Long Term Storage Rates

February 2019 Change

As of February 15, 2019, items that have been in a fulfillment center for 181 to 365 days are no longer subject to long-term storage fees. Long-term storage fees still apply for items that have been in a fulfillment center for more than 365 days.

These changes also affect storage fees for the Multi-Channel Fulfillment program.

Long-term storage fee	
Inventory cleanup date	Items in a fulfillment center more than 365 days
15th of every month	$6.90 per cubic foot

Minimum long-term storage fee, February 15, 2019, and after	
Inventory cleanup date	Items in a fulfillment center more than 365 days
15th of every month	$0.15 per unit

Lowered minimum per unit from $0.50 to $0.15

September 2018 Change

		181-365 Days	365 Days or more
Prior to September 15, 2018	Semi-Annual: February 15 & August 15	$11.25 / cubic foot	$22.50 / cubic foot
September 15, 2018 and after	Monthly: 15th of every month	$3.45 / cubic foot	$6.90 / cubic foot

For items in inventory more than 365, minimum per unit charge is $0.50 per month

March 2015 Change

	Assessed on February 15, 2015 (scheduled semi-annual cleanup date, not subject to latest fee change)	Assessed semi-annually beginning August 15, 2015
Length of time inventory units have been in Amazon fulfillment centers	Charge Amount	Charge Amount
6 to 12 months	$0.00	$11.25 per cubic foot
12 months or more	$22.50 per cubic foot	$22.50 per cubic foot

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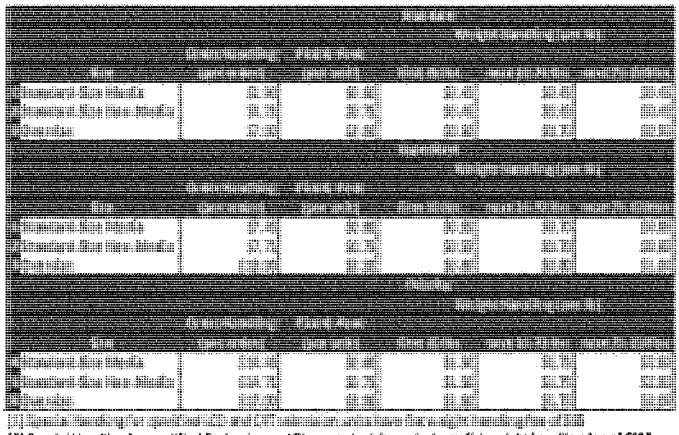
US FBA Multi-Channel Fulfilment Rates

June 2017 – present:

	Standard-size products (per unit)					
1	Size	1 unit order	2 unit order	3 unit order	4 unit order	5+ unit order
2	STANDARD 3-5 business day shipping					
3	Small: 1 lb or less	$5.85	$3.75	$3.35	$3.35	$2.20
4	Large: 1 lb or less	$5.90	$3.90	$3.40	$3.35	$2.80
5	Large: 1 to 2 lb	$5.95	$3.95	$3.45	$3.35	$2.95
6	Large: above first 2 lb	$5.95 + $0.39/lb	$3.95 + $0.39/lb	$3.45 + $0.39/lb	$3.35 + $0.39/lb	$2.95 + $0.39/lb
7	EXPEDITED 2 day shipping					
8	Small: 1 lb or less	$7.90	$4.65	$3.55	$3.40	$2.41
9	Large: 1 lb or less	$8.20	$4.80	$3.80	$3.55	$2.99
10	Large: 1 to 2 lb	$8.35	$5.35	$5.15	$4.95	$4.18
11	Large: above first 2 lb	$8.35 + $0.39/lb	$5.35 + $0.39/lb	$5.15 + $0.39/lb	$4.95 + $0.39/lb	$4.18 + $0.39/lb
12	PRIORITY next day shipping					
13	Small: 1 lb or less	$12.80	$7.30	$6.30	$5.80	$4.30
14	Large: 1 lb or less	$13.80	$7.80	$6.80	$5.90	$4.80
15	Large: 1 to 2 lb	$13.85	$7.85	$6.85	$5.95	$4.85
16	Large: above first 2 lb	$13.85 + $0.39/lb	$7.85 + $0.39/lb	$6.85 + $0.39/lb	$5.95 + $0.39/lb	$4.85 + $0.39/lb

	Oversize products (per unit)					
17	Size	1 unit order	2 unit order	3 unit order	4 unit order	5+ unit order
18	STANDARD 3-5 business day shipping					
19	Small: above first 2 lb	$12.30 + $0.39/lb	$6.80 + $0.39/lb	$5.80 + $0.39/lb	$4.80 + $0.39/lb	$3.80 + $0.39/lb
20	Medium: above first 2 lb			$15.30 + $0.39/lb		
21	Large: above first 90 lb			$78.30 + $0.83/lb		
22	Special: above first 90 lb			$143.30 + $0.93/lb		
23	EXPEDITED 2 day shipping					
24	Small: above first 2 lb	$13.30 + $0.39/lb	$7.80 + $0.39/lb	$7.30 + $0.39/lb	$7.15 + $0.39/lb	$6.85 + $0.39/lb
25	Medium: above first 2 lb			$16.80 + $0.39/lb		
26	Large: above first 90 lb			$78.30 + $0.83/lb		
27	Special: above first 90 lb			$143.30 + $0.93/lb		
28	PRIORITY next day shipping					
29	Small: 1 lb or less	$20.80 + $0.39/lb	$13.30 + $0.39/lb	$8.20 + $0.39/lb	$7.70 + $0.39/lb	$7.30 + $0.39/lb
30	Large: 1 lb or less			$31.30 + $0.39/lb		
31	Large: 1 to 2 lb			$78.30 + $0.83/lb		
32	Large: above first 2 lb			$143.30 + $0.93/lb		

Prior to June 2017



[2] Special Handling for qualified Projection and Plasma television units have flat weight handling fee of $125

October 11, 2019

Chairman David Cicilline
Ranking Member Jim Sensenbrenner
Committee on the Judiciary
Subcommittee on Antitrust, Commercial and Administrative Law
Attn: Joseph Van Wye
2138 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner, and Members of the Subcommittee:

Thank you for your questions for the record from the July 16, 2019 hearing entitled Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship. Per your request, attached are the answers for the record for your questions.

Sincerely,

Facebook, Inc.

facebook

Address: 1601 Willow Road
Menlo Park, CA 94025

Questions from Chairman Cicilline

1. **According to your testimony, Facebook faces intense competition for all the products and services that it provides. You identified Twitter, Snapchat, Apple, iMessage, Pinterest, Skype, Telegram, Viber, Google, YouTube, and Amazon as examples of its competitors. Do any of the individual companies cited by Facebook as competitors offer the full range of features and services that Facebook offers?**

We face stiff competition for every product and service that we offer—including photo and video sharing, messaging, and advertising. We have many competitors, both domestically and internationally, with hundreds of millions, if not billions, of users. For example, if you are looking to share pictures, videos, or a live stream, you might use Snapchat (over 200 million daily users), Vimeo (240 million monthly viewers), Twitter (326 million monthly users), Amazon's Twitch (nearly a million people watching at any given time), YouTube (over 1.8 billion monthly users), Google Photos (1 billion users), or Pinterest (over 250 million monthly users), among others. For messaging, you might use Telegram (200 million monthly users), WeChat (1 billion monthly users), Microsoft's Skype (300 million monthly users), or Line (164 million monthly active users), among others. And SMS is the most used data service in the world; according to MBA Online, more than 4.2 billion people are texting worldwide. To connect with colleagues or people in a professional network, you might go to Microsoft's LinkedIn (630 million registered users and over 30 million companies) or Slack (over 10 million daily active users), among others.

We work hard to innovate and to differentiate our products and services because we understand that consumers have many choices and can leave Facebook if they're not happy. For example, the average smartphone user has more than 80 apps on their phone, and they use close to 40 of those apps every month. And because so many services are low-priced or free, users are able to try new technologies as often as they like. If a user does not enjoy a product or experience, they can—and do—abandon it and explore the myriad other options available. This creates strong competition for every product and service Facebook offers, as well as pressure to develop new features to attract and retain users.

Given the highly competitive landscape, we are proud that Facebook offers a set of products and services that billions of people enjoy. This constant competition keeps us on our toes and acts as a powerful force that drives us to innovate.

2. **In May 2007, Facebook launched Facebook Platform, inviting developers to build apps on top of Facebook's social graph. In explaining its platform policy, Facebook stated that "we've made it so that any developer can build the same application that we can." In a published FAQ, Facebook stated, "We welcome developers with competing applications, including developers whose applications might compete with Facebook-built applications." How does Facebook reconcile this representation with its subsequent Platform Policy section 4.1, which stated that developers should "add something unique to the community, don't replicate core functionality that Facebook already provides"?**

Facebook Platform was designed to support third-party developers to create their own new and innovative social products. Allowing this type of third-party access was a unique and

transformative step in the industry and created a foundation for small developers to grow up around the Facebook platform. The rationale for the policy known as section 4.1 of the Platform Policy was to incentivize developers to use Facebook's technology and data to create new and innovative products, to protect and enhance the user experience, and to preserve the value of Facebook Platform. The provision was designed to preserve the significant investment and innovation that Facebook made in its product by seeking to limit duplicative free-riding on Facebook's investment and innovation. The provision was also designed to avoid creating potentially confusing experiences for users, who may otherwise have had inconsistent experiences while obtaining the same core services. Provisions like section 4.1 are common in the industry when companies open up a platform for third parties to build on, and without it, Facebook's incentives to take the bold step of developing Facebook Platform for the benefit of third-party developers would likely have been significantly reduced.

3. **Facebook dropped Platform Policy section 4.1 in December 2018, shortly before the U.K. Parliament released documents revealing e-mails between Facebook employees discussing rival apps. Please identify and describe all the reasons that Facebook decided to drop section 4.1 at this time.**

The decision to remove the provision was taken as part of a review of the Platform Policy. Our policies are intended to balance a variety of considerations, including protecting the user experience and protecting our investment in our product. We reevaluate those policies over time and update them to fit the evolving nature of the industry in which we exist and to respond to feedback we hear from users, developers, third-party experts, and policymakers.

4. **The documents released by the U.K. Parliament include an e-mail from a Facebook employee noting that Twitter had just launched Vine, a video-making app that was competing with Facebook's video product. The employee wrote, "Unless anyone raises objections, we will shut down [Vine's] friends API access today." Mark Zuckerberg responds with: "Yup, go for it." Please identify and describe all the reasons that Facebook cut off Vine's API access.**

In January 2013, Facebook restricted Vine's access to friends data via Facebook Platform APIs; Facebook did not restrict all access to its Platform APIs, as the question suggests. Vine was restricted on the basis of the Facebook Platform Policy section 4.1 in operation at that time (which has since been deprecated and is not contained in the current Facebook Platform Policy). This provision enabled Facebook to restrict access to users' friends data for third-party apps that replicated the core functionality of Facebook. Facebook considered Vine to be an app that replicated Facebook's core News Feed functionality.

5. **Please specify each Facebook product or service that competed with the following apps or services:**

   a. **Phhhoto;**

   b. **MessageMe;**

   c. **Voxer; and**

   d. **Stackla.**

Facebook does not restrict access to its Platform APIs simply because an app competes

with a Facebook product or service, but Facebook will restrict apps that violate its policies governing the Platform APIs. For example, Facebook previously had a policy, Platform Policy Section 4.1 (along with an analogous provision for Instagram), that prohibited apps from using the Platform APIs to closely replicate core functionalities of Facebook or Instagram. Apps that did so were: (i) free-riding on Facebook's investment and innovation; and/or (ii) potentially creating confusing experiences for users, who may otherwise have inconsistent experiences while obtaining the same services. Facebook restricted the API access of apps that were found to be violating this policy.

Stackla's access to Facebook Platform is the subject of ongoing litigation, but Stackla's access was not terminated because it competed with or was a competitor to Facebook's products or services. Stackla's access was terminated due to data scraping, which violates our policies.

6. **Please describe the timing and exact circumstances that led Facebook to cut off the following apps' or services' access to Facebook's platform:**

   a. **Phhhoto;**

   b. **MessageMe;**

   c. **Voxer; and**

   d. **Stackla.**

Facebook does not restrict access to its Platform APIs simply because an app competes with a Facebook product or service; but Facebook will restrict apps that violate its policies governing the Platform APIs. For example, Facebook previously had a policy, Platform Policy Section 4.1 (along with an analogous provision for Instagram), that prohibited apps from using the Platform APIs to closely replicate core functionalities of Facebook or Instagram. Apps that did so were: (i) free-riding on Facebook's investment and innovation; and/or (ii) potentially creating confusing experiences for users, who may otherwise have inconsistent experiences while obtaining the same services. Facebook restricted the API access of apps that were found to be violating this policy.

Stackla's access to Facebook Platform is the subject of ongoing litigation, but Stackla's access was not terminated because it competed with or was a competitor to Facebook's products or services. Stackla's access was terminated due to data scraping, which violates our policies.

7. **Has Facebook ever cut off access to Facebook's platform for any app or service because that app or service did not purchase sufficient ads on Facebook? If yes, please describe the relevant circumstances.**

No. Facebook does not currently, and has not previously, linked the access or use by third parties of Facebook data and/or Facebook Platform to spending on advertising with Facebook.

8. **Has Facebook ever conditioned access to Facebook APIs on the purchase of ads (desktop or mobile) on Facebook? If yes, please describe the relevant circumstances.**

No. Facebook does not currently, and has not previously, linked the access or use by third parties of Facebook data and/or Facebook Platform to spending on advertising with Facebook.

9. Has Facebook ever required that apps or services provide Facebook with access to user data in order to gain access to Facebook APIs? If yes, please describe the relevant circumstances.

No. Facebook does not and has not required developers that use the Facebook Platform to share user data back with Facebook. Rather, we have a principle that when a developer uses the Facebook Platform APIs to build a social experience built on Facebook data within their apps, that they should offer users the option (not a requirement) to share their social experiences back into their Facebook News Feeds. For example, if an app allows users to edit their photos from Facebook to create new content, it should give them the chance to post those creations back to Facebook. This is about offering users the choice to share their experiences back into their Facebook profiles, not about requiring developers to share data directly.

10. Public reporting and internal Facebook documents describe how Facebook used Onavo to monitor users' mobile activity, including their usage of competing apps. Please identify and describe all uses by Facebook of Onavo data since 2013.

The Onavo service allowed Facebook to improve its products and better meet consumers' needs. Onavo (which provided a few different apps) did not collect proprietary data of any competitor—it collected data from users that made the choice to share data about their usage of their own devices with Onavo. For example, when people downloaded the Onavo Protect VPN app to help secure their connection, they were informed about the information that would be collected and how it would be used. This type of industry research is common and central to improving our products and services. Onavo was not the only source of this type of user data—firms can get equivalent data from market research firms like App Annie, Nielsen, and Comscore. Also, the platforms that distribute apps and the operating systems on which apps run can access and collect the same type of data.

11. Please identify which categories of employees or teams within Facebook has or had access to Onavo data, specify the types of data or information to which each has or had access, and describe where in Facebook's organization chart the teams or employees are or were located.

The specific user-level data received by Onavo was not made widely available across the company, but generally was limited to the team that handles market research. Aggregated data that included Onavo data as well as data from external sources (e.g., App Annie, Comscore, Applause, Verto Analytics, IDC, and Ovum) was accessible more broadly for analysis purposes.

12. Please identify all product decisions made by Facebook that were informed by Onavo data. Please explain how the use of Onavo data informed each decision.

The Onavo service allowed Facebook to improve its products and better meet consumers' needs. Onavo (which provided a few different apps) did not collect proprietary data of any competitor—it collected data from users that made the choice to share data about their usage of their own devices with Onavo. For example, when people downloaded the Onavo Protect VPN app to help secure their connection, they were informed about the information that would be collected and how it would be used. This type of industry research is common and central to improving our products and services. Onavo was not the only source of this type of user data—

firms can get equivalent data from market research firms like App Annie, Nielsen, and Comscore. Also, the platforms that distribute apps and the operating systems on which apps run can access and collect the same type of data.

13. Please identify all acquisition decisions made by Facebook that were informed by Onavo data. Please explain how the use of Onavo data informed each decision.

The Onavo service allowed Facebook to improve its products and better meet consumers' needs. Onavo (which provided a few different apps) did not collect proprietary data of any competitor—it collected data from users that made the choice to share data about their usage of their own devices with Onavo. For example, when people downloaded the Onavo Protect VPN app to help secure their connection, they were informed about the information that would be collected and how it would be used. This type of industry research is common and central to improving our products and services. Onavo was not the only source of this type of user data—firms can get equivalent data from market research firms like App Annie, Nielsen, and Comscore. Also, the platforms that distribute apps and the operating systems on which apps run can access and collect the same type of data.

14. Please describe (a) "Project Atlas"; and (b) how Facebook has collected and used data obtained though Project Atlas.

Description

Like many companies, we invite people to participate in research that helps us identify things we can do better. Project Atlas, also known as the Facebook Research app (FBR app) was part of our research efforts. Launched in September 2016 as an "in-app action panel" (IAAP) app, the FBR app supported a panel-based research study designed to gather "in-app action" insights, which would enable Facebook to gain a deeper understanding about how certain types of users used their mobile devices. The study was designed to be restricted to Android and iOS users in the United States and India, and the FBR app was only made available to users who confirmed that they were from those countries. Facebook discontinued its collection of data from the Facebook Research app early in 2019.

Collection and Use of Data

The FBR app was not available for public download in the Apple App Store or Google Play Store. Instead, the FBR app was made available for download only to a panel comprised of a small group of certain types of users who agreed to be part of the study. This panel was selected and engaged by well-known third-party research vendors. As is customary in this type of market research, participants were paid by the vendors in exchange for their participation in the research panels.

Participants went through a transparent introductory process administered by the third-party vendors, which informed users, through clear consent flows and disclosures, of the nature and purpose of the program, including that it would involve providing user data to Facebook. As part of their introduction to the app, users were informed that this data would be shared for the purpose of (i) analyzing aggregate user behavior and engagement to understand how different user segments used specific apps and how they spent their time on those apps; and (ii) evaluating areas

of improvement for Facebook products so that Facebook could better serve its community of users. Throughout this process, potential participants were repeatedly informed and required to acknowledge that this was a Facebook app, that their data would be collected by Facebook, and that they could withdraw from the project and uninstall the FBR app at any time. After completing the research program sign-up process, participants would receive a link to download the FBR app and install it on their mobile device. The download page for the app was branded as a Facebook application.

The research conducted using the FBR app was focused on the sorts of actions or activities users engaged in in certain apps, so that Facebook could better understand what functionality was important to users.

FBR data was not widely used by Facebook. The insights were essentially used for operational and technical decisions on how to improve performance and user experience.

15. In June 2019, Facebook launched "Study from Facebook," an app that compensates users for allowing Facebook to monitor users' mobile usage. Please identify all types of data and information that Facebook collects through "Study from Facebook" and explain how each is used.

Through the Study from Facebook app, Facebook collects and analyzes data regarding participants' app usage, including (i) apps installed on participants' phones, (ii) time spent using apps, (iii) country, device, and network type, and (iv) app activity names, which may show the names of app features a participant is using. The Study from Facebook app does not collect content information, such as: emails, text messages, usernames, passwords, payment information, any field into which users write text, photos and videos on users' devices or that they upload or share with others, websites that users visit through a browser, or the contents of user purchases.

Facebook uses this data to learn which apps people value and how they're used, allowing Facebook to better understand its community to improve its products and services, including general improvement of ad targeting at an aggregated level. Facebook does not sell data from this app to third parties or use it to target ads to individual users.

All registered participants have agreed to share their app usage data with Facebook, and they are compensated for taking part in the program. We explain how to participate during registration, before participants accept the terms of Study from Facebook. Participants can leave the program at any time.

16. Please indicate, with a "yes" or "no," whether "Study from Facebook" enables Facebook to track any of the following activity:

a. Which apps are on a user's phone;

b. The amount of time a user spends on a non-Facebook app;

c. The purchases a user makes within a non-Facebook app;

d. The content of a user's text messages; and

e. The websites a user visits through a browser.

Through the Study from Facebook app, Facebook collects and analyzes data regarding participants' app usage, including (i) apps installed on participants' phones, (ii) time spent using apps, (iii) country, device, and network type, and (iv) app activity names, which may show the names of app features a participant is using. The Study from Facebook app does not collect content information, such as: emails, text messages, usernames, passwords, payment information, any field into which users write text, photos and videos on users' devices or that they upload or share with others, websites that users visit through a browser, or the contents of user purchases.

17. Please identify the revenue Facebook derived from the Facebook Audience Network (FAN) for each of the last three years.

A growing number of mobile app publishers have found success—better returns and more relevant advertising—through FAN and the people-based marketing approach that powers it. In Q4 2016, we reached a $1 billion annual run rate for advertising spend through the Audience Network, with the bulk of that value being passed to publishers, and the remainder being recorded as net revenue for Facebook. In 2018, Audience Network paid out more than $1.5 billion to publishers and developers.

18. Please identify the net revenue Facebook derived from FAN for each of the last three years.

A growing number of mobile app publishers have found success—better returns and more relevant advertising—through FAN and the people-based marketing approach that powers it. In Q4 2016, we reached a $1 billion annual run rate for advertising spend through the Audience Network, with the bulk of that value being passed to publishers, and the remainder being recorded as net revenue for Facebook. In 2018, Audience Network paid out more than $1.5 billion to publishers and developers.

19. Please identify the average and median clearing price of Facebook inventory by browser (e.g., Brave, Chrome, Edge, Mozilla, and Safari) for each month since July 2018.

Prices are determined by an auction system and therefore vary not only from month to month, but from moment to moment. All advertising on Facebook and the Facebook Audience Network is delivered through Facebook's ad delivery system and priced through Facebook's ad auction, regardless of which interface an advertiser used to place the ad.

Facebook's ad delivery system is designed to show people ads they find relevant while maximizing value to drive an advertiser's business objectives. We do this by holding an auction in which both interests are represented. Our goal is to match the right ad to the right person at the right time. An auction takes place whenever someone is eligible to see an ad. When an ad enters the Facebook auction, it competes with ads from other advertisers who target the same people who are eligible to see the ad.

In Facebook's auction process, the winner of an auction is not necessarily the advertiser that bids the highest dollar amount, but rather the advertiser whose ad has the highest "total value," taking into account (1) the estimated likelihood and rate at which the

user will take the advertiser's desired action, (2) the ad's quality and relevance to the user, and (3) the advertiser's bid amount. This means that the auction process explicitly takes consumer benefit into account—ensuring that the attractiveness of an advertisement to consumers is factored into the process and allowing a very relevant ad to win the auction over a less relevant ad even when the less relevant ad is associated with a higher monetary bid.

20. Please identify the average and median clearing price of FAN ad inventory by browser (e.g., Brave, Chrome, Edge, Mozilla, and Safari) for each month since July 2018.

Prices are determined by an auction system and therefore vary not only from month to month, but from moment to moment. All advertising on Facebook and the Facebook Audience Network is delivered through Facebook's ad delivery system and priced through Facebook's ad auction, regardless of which interface an advertiser used to place the ad.

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21. Does Facebook arbitrage, or has Facebook ever arbitraged, ad space that it acquires for, then sells to, marketers running ads on FAN? If yes, please describe the relevant circumstances.

Facebook's model is not to arbitrage, but rather to bid on the publisher's inventory of ad space, and if Facebook wins, to deliver an ad. Facebook does not pre-purchase and resell ad space.

22. Does Facebook ever acquire ad space on a "cost-per-mille" (CPM) basis from FAN participant sites or apps and sell this ad space on a "cost-per-click" (CPC) basis to marketers? If yes, please describe the frequency of this practice and the relevant circumstances.

Facebook does not pre-purchase and resell ad space. When a publisher provides Facebook Audience Network the chance to bid on an ad opportunity, Facebook uses its

auction system to value that opportunity and place a commensurate bid in "real-time." Should a publisher's auction system decide that Facebook's is the winning bid, Facebook places an advertisement in that unit of ad space. The publisher charges Facebook on a CPM basis, Facebook then charges the advertiser in a manner consistent with the advertisers' objectives, including potentially on a cost-per-click basis. The majority of the revenue from each ad placed is provided to the publisher.

23. What is the prevalence of ad fraud in digital advertising markets?

We're unable to comment on the prevalence of fraud across digital advertising markets. Based on industry research, we understand that ad fraud on Facebook as well as across our Facebook Audience Network platform has been found to occur at substantially lower rates than occurs across the broader internet.

24. What specific steps does Facebook take to detect ad fraud?

Fraudulent ads are not allowed on Facebook. They are in breach of our advertising policies, and we will remove them when we find them. Our abuse-fighting team builds and constantly updates a combination of automated and manual systems that help us catch suspicious activity at various points of interaction on Facebook, Instagram, and Audience Network, including creating an account, sending friend requests, setting up ads payments, and creating or editing ads or ad placements.

Facebook has also been certified by the Trustworthy Accountability Group's "Certified Against Fraud" program for Direct and Intermediary ad sales: https://www.tagtoday.net/certified-against-fraud-programcompliantcompanies/. TAG is an industry organization focused on eliminating fraudulent digital advertising traffic, combating malware, fighting ad-supported Internet piracy to promote brand integrity, and promoting brand safety through greater transparency. Our certification has been determined by independent validation, not just self-attestation (like most companies that are TAG-certified).

25. What specific steps does Facebook take to prevent ad fraud?

Fraudulent ads are not allowed on Facebook. They are in breach of our advertising policies, and we will remove them when we find them. Our abuse-fighting team builds and constantly updates a combination of automated and manual systems that help us catch suspicious activity at various points of interaction on Facebook, Instagram, and Audience Network, including creating an account, sending Friend requests, setting up ads payments, and creating or editing ads or ad placements.

Facebook has also been certified by the Trustworthy Accountability Group's "Certified Against Fraud" program for Direct and Intermediary ad sales: https://www.tagtoday.net/certified-against-fraud-programcompliantcompanies/. TAG is an industry organization focused on eliminating fraudulent digital advertising traffic, combating malware, fighting ad-supported Internet piracy to promote brand integrity, and promoting brand safety through greater transparency. Our certification has been determined by independent validation, not just self-attestation (like most companies that are TAG-

certified).

26. Under what circumstances does Facebook inform advertisers that their ad spend has been affected by ad fraud? Please describe the relevant circumstances.

When we have detected invalid traffic, we have provided refunds to advertisers we determine to have been affected. When we have detected that a publisher using Facebook Audience Network is responsible for invalid traffic, we have taken enforcement action, including terminating their ability to use Facebook Audience Network.

27. What processes does Facebook have in place to provide refunds to advertisers affected by ad fraud through Facebook?

When we have detected invalid traffic, we have provided refunds to advertisers we determine to have been affected. When we have detected that a publisher using Facebook Audience Network is responsible for invalid traffic, we have taken enforcement action, including terminating their ability to use Facebook Audience Network.

28. Please identify the non-Facebook services that advertisers can use to:

a. Assess the success of their ad campaigns on Facebook; and

Advertisers work with a variety of vendors for ad effectiveness measurement, and we offer integrations with many of these partners. We have agreements with various third parties, including measurement partners for measuring lift in sales, viewability of ads, and attribution of ads to sales objectives. For example, we have long partnered with Nielsen to provide third-party measurement services that advertisers can use to calibrate their advertising across the many options available to them (including TV ads, etc.).

b. Identify ad fraud on Facebook.

Advertisers have access to a variety of partners and services that seek to study ad fraud on Facebook and across the internet. The viewability measurement partners described above also help identify ad fraud, in addition to measuring ad effectiveness.

29. Please identify the specific steps that an advertiser can take to report suspected ad fraud to Facebook.

Advertisers can work with their Facebook client contacts and other available support channels, such as our call center, to report suspicious activity to Facebook.

30. WhatsApp was launched in 2009 and gained swift popularity in part due to the company's commitment to strong user privacy. This commitment was reflected in WhatsApp's rejection of in-app advertising and its decision not to collect or store users' data. On February 19, 2014, Facebook announced that it was purchasing WhatsApp. In light of significant user skepticism that Facebook would continue to honor WhatsApp's privacy commitments, both Facebook and WhatsApp promised that the acquisition would not result in less privacy for WhatsApp users. A

statement published by WhatsApp on February 19, 2014, stated, "Here's what will change for you, our users: nothing." A letter to Facebook and WhatsApp from Jessica Rich, Director of the Bureau of Consumer Protection at the Federal Trade Commission, noted that Facebook's acquisition of WhatsApp would not legally nullify the privacy promises WhatsApp had made to users. The letter added, "[I]f you choose to use data collected by WhatsApp in a manner that is materially inconsistent with the promises WhatsApp made at the time of collection, you must obtain consumers' affirmative consent before doing so." On August 25, 2016, WhatsApp announced it would subsequently transfer user information to Facebook, enabling Facebook to use the data of WhatsApp users as part of its digital advertising business. WhatsApp did not obtain opt-in consent from users before implementing this new policy. How does WhatsApp reconcile its February 2014 assurance to users that the Facebook acquisition would change "nothing" for users with its August 2016 decision to share WhatsApp users' information with Facebook?

WhatsApp's prior statements are consistent with its sharing of information with Facebook after the acquisition. WhatsApp's long-standing commitment to honoring user privacy has remained a priority for the company. As we continue to innovate in order to improve our products and services to consumers, some change in services is to be expected. When we do make changes in how data is used, however, we ensure that our actions comply fully with FTC guidance and with our users' expectations.

In 2016, we improved WhatsApp in a number of ways, and because we understood that this resulted in a change in WhatsApp's privacy practices, we provided clear, prominent notice about the change and provided control mechanisms to users. On August 25, 2016, we updated the WhatsApp Privacy Policy to explain to our users that WhatsApp is part of the Facebook Family of Companies, and as part of the larger Facebook Companies, WhatsApp receives information from, and shares information with, this family to help improve, customize, support, and market WhatsApp Services and the other companies' offerings. See WhatsApp Privacy Policy, "Affiliated Companies," https://www.whatsapp.com/legal?eea=0#privacy-policy-affiliated-companies. We also updated the Policy to make clear that "Facebook and other companies in the Facebook family also may use information from us to improve your experiences within their services such as making product suggestions (for example, of friends or connections, or of interesting content) and showing relevant offers and ads." *Id.* We included clear and prominent explanations of these changes.

In addition to the updated Privacy Policy, Facebook provided descriptive in-product notices to existing users that described the change and the choices that users had. The notices first told users that the WhatsApp Privacy Policy and Terms had changed. The notices then highlighted the "Key Updates" as to what had changed, including how WhatsApp and Facebook would work together going forward to improve the services offered to consumers, including "making product suggestions, and showing relevant offers and ads on Facebook."

Users were then presented with a control over whether to "share [their] WhatsApp account information with Facebook to improve their Facebook ads and product experiences." WhatsApp then ensured that its privacy practices for a given user aligned with that user's choice.

31. How does Mark Zuckerberg reconcile his February 2014 statement promising that "We are absolutely not going to change plans around WhatsApp and the way it uses user data," with Facebook's August 2016 decision to let Facebook access the information of WhatsApp users, thereby changing how WhatsApp uses user data?

Mark Zuckerberg's prior statements are consistent with WhatsApp's sharing of information with Facebook after the acquisition. WhatsApp's long-standing commitment to honoring user privacy has remained a priority for the company. As we continue to innovate in order to improve our products and services to consumers, some change in services is to be expected. When we do make changes in how data is used, however, we ensure that our actions comply fully with FTC guidance and with our users' expectations.

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Users were then presented with a control over whether to "share [their] WhatsApp account information with Facebook to improve their Facebook ads and product experiences." WhatsApp then ensured that its privacy practices for a given user aligned with that user's choice.

32. How does Facebook reconcile its February 2014 statement, "As we have said repeatedly, WhatsApp will operate as a separate company and will honor its commitments to privacy and security," with Facebook's August 2016 decision to let Facebook access the information of WhatsApp users, thereby changing how WhatsApp uses user data?

Facebook's prior statements are consistent with WhatsApp's sharing of information with Facebook after the acquisition. WhatsApp's long-standing commitment to honoring user privacy has remained a priority for the company. As we continue to innovate in order to improve our products and services to consumers, some change in services is to be expected. When we do make changes in how data is used, however, we ensure that our actions comply fully with FTC

guidance, and with our users' expectations.

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Users were then presented with a control over whether to "share [their] WhatsApp account information with Facebook to improve their Facebook ads and product experiences." WhatsApp then ensured that its privacy practices for a given user aligned with that user's choice.

33. In March 2019, Mark Zuckerberg announced that Facebook was reorienting itself to be a privacy-focused platform. When testifying before the Senate last year, Mr. Zuckerberg said, "Every piece of content that you share on Facebook, you own, and you have complete control over who sees it and how you share it, and you can remove it at any time." He further testified, "I think we need to take a broader view of our responsibility around privacy than just what is mandated in the current law." Does this still accurately reflect Facebook's position?

Yes. Facebook takes privacy seriously and is committed to providing users with the best possible experience. Our approach to privacy centers around our commitment to transparency and control. We believe that it is important to communicate with people about the information that we collect and how people can control it. That is why we work hard to provide this information to people in a variety of ways, including in our Data Policy (https://www.facebook.com/policy) and in Privacy Basics (https://www.facebook.com/about/basics), which provides walkthroughs of the most common privacy questions we receive. And we are always looking for additional steps we can take to put people more in control of their privacy.

34. Facebook is involved in litigation in the Northern District of California, in the matter of *In Re: Facebook, Inc. Consumer Privacy User Profile Litigation*, No. 18-MD-02843 VC. During oral argument on May 29, 2019, Facebook argued that

"there is no privacy interest" on Facebook and that the mere act of sharing information on Facebook "negated any reasonable expectation of privacy." Given that Facebook has communicated to users that it is a privacy-focused platform while arguing in federal district court that there "is no privacy interest" on Facebook, is Facebook misleading users or is Facebook misleading the court?

We take privacy seriously. Recent media reports have distorted and taken out of context the exchange between our lawyer and the judge during the hearing. The statements referenced in media reports stem from a hypothetical presented by the judge during a hearing that required our attorney to apply a specific set of legal doctrines based on the counter-factual assumption that Facebook had not honored users' privacy settings. In particular, the questioning was focused on applying common-law claims to the modern context of social media. The relevant portion of the exchange is reflected below:

> Judge Chhabria: "[L]et's assume, for the sake of argument, that Facebook suggested to its users that if your settings are to share stuff with friends only, only your hundred friends – let's say a user has 100 friends – and you adjust your settings so that your posts and your likes and whatnot, your photographs are shared only with your friends, we, Facebook, will make sure not to give anyone else access to that information. Okay? And let's say that in contravention of that assurance, Facebook actually disseminated the photographs and the likes and the posts to hundreds of companies. Wouldn't that be a really serious privacy violation?" (Tr. 4:12–22)
>
> Facebook Attorney: "The answer, Your Honor, is no ... this is not serious enough to give rise to a claim of invasion of privacy or any other privacy [tort]" because "**the gravamen, obviously, of any [common-law] privacy tort, including any invasion of privacy tort, is a reasonable expectation of privacy, whether it's seclusion upon intrusion, whether it's public disclosure of private facts, or any constitutional privacy right that may exist under California law.**" (Tr. 4:23–5:18)
>
> Judge Chhabria: "Forget about what the plaintiffs are alleging right now" and assume "there are no other disclosures under this hypothetical.... [I]s that a serious privacy invasion by Facebook?" (Tr. 6:12–7:4)
>
> Facebook attorney: "No. There is no privacy interest, because by sharing with a hundred friends on a social media platform, which is an affirmative social act to publish, to disclose, to share ostensibly private information with a hundred people, you have just, **under centuries of common law, under the judgment of Congress, under the SCA**, negated any reasonable expectation of privacy." (Tr. 7:5–11.) "[T]he hypothetical [Judge Chhabria] gave ... of course, bears no resemblance to the facts of this case at all." (Tr.

12:13–15)

The Facebook attorney closed the hearing by saying, "let me be very, very clear. **Facebook scrupulously honors and respects privacy on its platform, but in accordance with users' privacy settings.** And that's the part they want to elide over. Users had the absolute right to control who saw what. And to the extent a user made that privacy designation, Facebook scrupulously honored it. And what's clear from this lengthy Complaint ... is that **at no time did Facebook take any action in excess of those privacy settings**...." (Tr. 134:23–135:10)

35. **There is a case pending in California state court between Facebook and Six4Three, LLC. During the course of this litigation, Facebook has produced documents that are relevant to the House Judiciary Committee's investigation into digital markets. At the July 16, 2019 hearing, Facebook committed "to cooperate to the fullest extent possible and to act in good faith to respond to the Committee request in a timely and complete manner."**

    a. **In light of this commitment, will Facebook agree to voluntarily share with the Committee the documents produced in Six4Three, LLC v. Facebook, Inc., Case No. CIV533328, and any related cases in federal or state court?**

    b. **In light of this commitment, will Facebook refrain from taking any actions that would impede the Committee's efforts to obtain any documents produced in Six4Three, LLC v. Facebook, Inc., Case No. CIV533328, and any related cases in federal or state court?**

Facebook will continue to engage with the Committee to provide responsive information and documents.

36. **Please identify the percentage of Facebook users that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Facebook, describe the relevant provisions, and identify any types or categories of Facebook user contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

Facebook's Terms of Service, applicable to all Facebook users, do not include a mandatory arbitration clause or a class action waiver. As indicated in our Terms of Service (available at https://www.facebook.com/terms), certain users may be subject to Facebook's Commercial Terms. Facebook's Commercial Terms apply to users residing in the U.S. or businesses located in the U.S. that access or use Facebook's products for business or commercial purposes, such as buying ads, selling products, managing a group or Page for a business, or using our measurement services. The Commercial Terms include arbitration and class action terms. These terms are available in the "Disputes" section of Facebook's Commercial Terms: https://www.facebook.com/legal/commercial_terms.

Because the Commercial Terms apply to a defined set of activities (for example, purchasing an ad) and not a defined set of users, Facebook cannot provide a percentage of users that are subject to those terms.

37. **Since 2014, how many Facebook users have initiated arbitration proceedings to**

adjudicate a legal claim against Facebook, in total and broken down by type of legal claim?

Facebook's Commercial Terms, which contain an arbitration provision, became effective in May 2018. We are not aware of any Facebook users who have initiated an arbitration proceeding pursuant to this provision to adjudicate a legal claim against Facebook since that time. Between 2014 and May 2018, Facebook's terms of service for users did not have an arbitration clause.

38. Please identify the percentage of Facebook employees that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Facebook, describe the relevant provisions, and identify any types or categories of Facebook employee contracts that do not contain a mandatory arbitration clause and/or class action waiver.

Since November 2013, the vast majority of Facebook employees have signed a mutual arbitration agreement with the company. The current version of the arbitration agreement contains a variety of provisions, including, but not limited to, a description of claims covered/not covered, a class action waiver (which employees can opt out of), and other procedural items. Although not documented in the agreement, we have an internal policy stating that for any sexual harassment claims, employees have the option to bring either an action in arbitration or court of law.

39. Since 2014, how many current or former Facebook employees have initiated arbitration proceedings to adjudicate a legal claim against Facebook, in total and broken down by type of legal claim?

Five current or former Facebook employees have initiated arbitration proceedings since 2014. The cases raised a range of claims including false representations, discrimination, retaliation, harassment, an alleged violation of state wage law, failure to provide reasonable accommodations, and failure to engage in interactive process.

40. Please identify the percentage of Facebook contractors that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Facebook, describe the relevant provisions, and identify any types or categories of Facebook contractor contracts that do not contain a mandatory arbitration clause and/or class action waiver.

We are not aware of Facebook entering into arbitration agreements with contingent workers. We generally do not have visibility into agreements that contingent workers enter into with our vendors or other third parties.

41. Since 2014, how many current or former Facebook contractors have initiated arbitration proceedings to adjudicate a legal claim against Facebook, in total and broken down by type of legal claim?

As discussed above, we are not aware of Facebook entering into arbitration agreements with contingent workers, and we are not aware of any contingent worker initiating arbitration proceedings against Facebook.

42. Please identify the percentage of developers that do business with Facebook that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Facebook, describe the relevant provisions, and identify any types or categories of Facebook's contracts with developers that do not contain a mandatory arbitration clause and/or class action waiver.

Facebook's Commercial Terms apply to all users that reside in the U.S. and to businesses located in the U.S. that access or use Facebook's products for business or commercial purposes, including app developers. These terms are available in the "Disputes" section of Facebook's Commercial Terms: https://www.facebook.com/legal/commercial_terms.

43. Since 2014, how many current or former developers have initiated arbitration proceedings to adjudicate a legal claim against Facebook, in total and broken down by type of legal claim?

We are not aware of any developers that have initiated arbitration proceedings to adjudicate a legal claim against Facebook.

44. Please identify the percentage of Facebook employees and contractors that are subject to a non-compete clause in their agreement with Facebook, describe the relevant provisions, and identify any types or categories of Facebook employees and contractors that are not subject to a non-compete clause.

Facebook does not enter into non-competition agreements with employees or contractors.

45. Since 2014, how many former Facebook employees and contractors has Facebook sued or initiated arbitration proceedings against in connection with an alleged breach of a non- compete clause? Please break down this number by type of legal relationship (e.g., employee or contractor) and describe the relevant circumstances that gave rise to each suit or arbitration.

None. Facebook does not enter into non-competition agreements with employees or contractors.

Questions for the Record from the Honorable David N. Cicilline, Chairman, Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary

Questions for Mr. Kyle Andeer, Vice President, Corporate Law, Apple, Inc.

1. **Does Apple permit iPhone users to uninstall Safari? If yes, please describe the steps a user would need to take in order to do so. If no, please explain why not.**

   Users cannot uninstall Safari, which is an essential part of iPhone functionality; however, users have many alternative third-party browsers they can download from the App Store.

   Users expect that their Apple devices will provide a great experience out of the box, so our products include certain functionality like a browser, email, phone and a music player as a baseline. Most pre-installed apps can be deleted by the user. A small number, including Safari, are "operating system apps"—integrated into the core operating system—that are part of the combined experience of iOS and iPhone. Removing or replacing any of these operating system apps would destroy or severely degrade the functionality of the device.

   The App Store provides Apple's users with access to third party apps, including web browsers. Browsers such as Chrome, Firefox, Microsoft Edge and others are available for users to download.

2. **Does Apple permit iPhone users to set a browser other than Safari as the default browser? If yes, please describe the steps a user would need to take in order to do so. If no, please explain why not.**

   iPhone users cannot set another browser as the default browser. Safari is one of the apps that Apple believes defines the core user experience on iOS, with industry-leading security and privacy features. As noted in response to Question 1, Safari is an "operating system app," like the Phone, Camera and iMessage, which are designed to work together.

3. **Does Apple permit iPhone users to set a browser other than Safari as the default browser for opening links clicked in apps that are pre-installed on Apple devices (e.g., Apple Messenger, Mail)? If yes, please describe the steps a user would need to take in order to do so. If no, please explain why not.**

   No, for the same reason described in response to Questions 1 and 2.

4. **Does Apple restrict, in any way, the ability of competing web browsers to deploy their own web browsing engines when running on Apple's operating system? If yes, please describe any restrictions that Apple imposes and all the reasons for doing so. If no, please explain why not.**

   All iOS apps that browse the web are required to use "the appropriate WebKit framework and WebKit Javascript" pursuant to Section 2.5.6 of the App Store Review Guidelines <https://developer.apple.com/app-store/review/guidelines/#software-requirements>.

The purpose of this rule is to protect user privacy and security. Nefarious websites have analyzed other web browser engines and found flaws that have not been disclosed, and exploit those flaws when a user goes to a particular website to silently violate user privacy or security. This presents an acute danger to users, considering the vast amount of private and sensitive data that is typically accessed on a mobile device. By requiring apps to use WebKit, Apple can rapidly and accurately address exploits across our entire user base and most effectively secure their privacy and security. Also, allowing other web browser engines could put users at risk if developers abandon their apps or fail to address a security flaw quickly. By requiring use of WebKit, Apple can provide security updates to all our users quickly and accurately, no matter which browser they decide to download from the App Store.

WebKit is an open-source web engine that allows Apple to enable improvements contributed by third parties. Instead of having to supply an entirely separate browser engine (with the significant privacy and security issues this creates), third parties can contribute relevant changes to the WebKit project for incorporation into the WebKit engine.

5. **If a competing web browser seeks to introduce new features and security systems that would offer users enhanced privacy, would any restrictions imposed by Apple limit the competing web browser's ability to do so on iOS? If yes, please describe the restrictions that Apple imposes and all the reasons for doing so. If no, please explain why not.**

Please see the response to Question 4. On iOS, all apps that browse the web are required to use the appropriate WebKit framework and WebKit Javascript. This ensures that all browsers on iOS will have access to the enhanced security and privacy protections. It is not our experience that competing web browsers have typically offered enhanced privacy or security that would protect users as adequately as our WebKit protections.

6. **Apple's Safari browser uses WebKit, the same browser engine that Apple policy requires competing browsers to use. Are there any WebKit functions that Apple allows Safari to use but that competing browsers are not permitted to use? If yes, please identify which ones and for each function describe all the reasons for not granting access to competing browsers.**

The following are examples of WebKit features that are not available to third-party browsers:

- WebRTC for videoconferencing is not supported for third-party browsers because Safari displays a prominent UI to make sure the user knows when a website is recording using the camera and microphone. Apple does not yet have a way to make this UI work in other WebKit clients.
- Service Workers is not supported for third-party browsers because Apple does not yet have a way to prevent abuse for an unintended purpose.

- Enabling Intelligent Tracking Protection is not supported for third-party browsers as Apple believes this privacy setting should be under user control.
- Fullscreen API is not supported for third-party browsers because Safari takes steps to prevent abuse of this feature by phishing and other security attacks that attempt to trick the user. Apple has not yet been able to generalize these protections for use by third-party browsers.

7. **In its testimony, Apple stated that 84% of apps on the App Store "share none of the revenue they make from our store with Apple." Please explain how Apple selects the 16% of apps that are required to share their revenue with Apple.**

Developers, not Apple, decide whether to charge for their app and services, and this determines whether or not they pay a commission to Apple. If it's a free app for which the user pays nothing to use or play, and the developer is otherwise monetizing the download of that app (*e.g.*, via ad revenue) the developer gets 100% and Apple gets nothing. Apple only charges a commission when a developer charges a user for a digital good or service delivered onto the device. These fundamentals of the App Store business model have been the same since the beginning of the App Store.

On the App Store many kinds of apps are offered with varying business models, the majority of which do not include the payment of any commission to Apple. It is up to developers to choose which business model is best suited for their apps:

Free: These are apps that users pay nothing to use or play. The developer chooses to make them free to the user. Apple generates no revenue from supporting, hosting and distributing these apps.

Free (Ad Supported): These apps are free for users to download, and the developer generates revenue from the advertisements in the apps. Apple generates no revenue from supporting, hosting and distributing these apps as well.

Physical Goods: These apps generate revenue for the developer from the sale of physical goods and services, such as purchasing clothing, delivering food or ordering a ride from a transportation service. Apple generates no revenue from supporting, hosting and distributing these apps.

Free (In-app Purchase): These are apps that users pay nothing to download, and typically provide some degree of use or play without any payment from the user. Users download these apps and have access to most of the experience, and they pay for additional digital features and content in the app with Apple's in-app purchase (IAP) system. Developers pay Apple a 30% commission on payments received from the user for the purchase of these in-app digital features and content.

Paid: These are apps that customers pay for the first time they download the app, and then own the app in full. Developers pay Apple a 30% commission on the price paid by the user.

Subscription: These are apps that users subscribe to within the app or game on the App Store using Apple's IAP subscription system. Developers pay Apple a 30% commission on subscription fees received from the user in Year 1, and 15% for all successive years that the user remains a subscriber.

Subscription (Reader): These are apps where the user has subscribed to content outside of the app, not on the App Store. Apple honors these subscriptions, even when they originate elsewhere. Examples of these include books, music and TV apps. In these cases, the developer keeps all of the revenue they generate from bringing the customer to their app because the customer was not acquired via iOS. Apple generates no revenue from supporting, hosting and distributing these apps.

8. **Please identify all the factors that Apple considers when determining whether it will allow an app to offer payment options other than Apple's own payment system and explain why and how each is considered.**

A developer who wishes to sell digital content to an iOS user has several choices. First, a developer may choose to distribute digital content over the Internet or via a web-app, which are not subject to App Store terms and conditions, including its payment system. The developer, rather than Apple, dictates payment mechanisms and other terms and conditions for content sold over the Internet or through a web-app on iOS devices. Apple does not impose any terms or conditions on these transactions, nor does it receive any compensation. Some developers have opted to offer their content only through their own web apps and handle payment and billing themselves.

A developer may also choose to take advantage of the opportunities created by the App Store. Developers selling digital content via the App Store must utilize Apple's in-app purchase (IAP) payment feature, through which Apple receives its standard commission.

As noted previously, Apple does not realize any revenue from the vast majority of apps on the App Store, as the majority of activity on the App Store does not result in a commission to Apple and is therefore not subject to IAP.

9. **Please identify the principles that Apple believes it must adhere to with regard to how it treats apps that compete with Apple's own apps and explain all the reasons why for adopting them.**

Apple's incentives are to ensure that it offers consumers the widest selection of quality apps as possible, as this increases the attractiveness of Apple's ecosystem to consumers.

We provide here numerous examples of very successful apps on the App Store which compete with Apple apps. We have worked with many of these companies for years to help make them a success:

Mail: Apple offers Mail. On the App Store, users will find competitive mail clients that have been downloaded hundreds of millions of times. Examples: Microsoft Outlook, Google Gmail, QQ Mail, Yahoo Mail and dozens more.

Web Browsing: Apple offers Safari. There are a wide variety of browser apps on the App Store. Examples: Google Chrome, Microsoft Edge, Firefox, Yahoo, Yandex Browser and Duck Duck Go.

Maps: Apple offers Apple Maps. The App Store offers Google Maps, Waze, Yahoo Maps, City Mapper, NAVER Map, Maps.ME and Yandex.Navi.

Messages: Apple offers iMessage. On the App Store, users will find hundreds of messaging apps including WhatsApp, Facebook Messenger, Snap, WeChat, QQ, Microsoft Teams, Discord, LINE and Ding Talk.

Video Chat: Apple offers FaceTime. On the App Store, third-party video chat apps have had billions of downloads. Examples: Skype for Business, Google Hangouts, Zoom Cloud Meetings, Line, Dingtalk, Facebook Messenger and QQ.

Podcasts: Apple offers Apple Podcasts. On the App Store, there are dozens of podcast apps. Examples: Spotify, iHeartRadio, The Podcast App and Overcast.

Camera: Apple offers Camera. On the App Store, this is a vibrant category. Examples: Instagram, Snapchat, Obscura 2, Moment and Prime.

Notes: Apple offers Notes for note-taking. There are a number of prominent notes apps. Examples: Google Keep, Evernote, Wunderlist, Todoist, Bear, Notability, Post-it and Pendo Note.

iCloud: Apple offers iCloud. Users have many options for Cloud storage on the App Store. Examples: Google Drive, Microsoft OneDrive, Dropbox, Box and Verizon Cloud.

Music: Apple offers iTunes and Apple Music. There are many music apps on the App Store. Examples: Pandora, Tidal Music, Deezer, Spotify, Amazon Music, Google Play Music, YouTube Music, SoundCloud, iHeartRadio and Anghami.

Video: Apple offers iTunes and Apple TV. There are many video apps on the App Store. Examples: Hulu, Amazon Prime, HBO Now, Netflix, Ivi, YouTube, Hotstar, Sling TV and Tubi.

10. **Does Apple believe that it is appropriate to enable its own apps to have functionality or features within iOS that Apple does not allow competing apps to use? If yes, please explain why. If no, please explain why not.**

Apple has long believed that integrated product development, the marrying of hardware, software and services, results in the best products. Engineers work side-by-side to create the very best, and most secure, products on the market. Our development strategy results in a deeply integrated, almost seamless, product. It would be difficult, if not impossible, to offer the same level of access to third parties. These decisions reflect design and development decisions, not commercial decisions.

Apple has a strong track record of sharing the innovations and technologies it has created with third-party developers, including those that compete against Apple. This includes a variety of developer tools like ARkit, which helps developers build unparalleled augmented reality experience for users on iOS; and Core ML, enabling developers to take advantage of our CPU, GPU and Neural Engine to integrate the latest cutting-edge machine learning models into their apps. Developers can also take advantage of Siri through the use of Apple's SiriKit framework. Other examples of Apple technology to which developers have been provided access include: Face ID, Touch ID, 3D Touch, Force Touch and CarPlay.

11. Does Apple allow apps to e-mail their customers whose e-mail addresses were obtained by signing up for the app through the iOS?

a. If no, why not?

b. If Apple does allow some apps to e-mail consumers but does not allow others, please explain how Apple makes this determination.

In order to protect the privacy of users who choose to sign up for or purchase a service through iOS, Apple does not share their email address with developers. If an app developer wishes to collect an email address to communicate with a user, it must do so via its own legally-compliant process.

A developer may obtain a customer's email address by communicating with the customer through its app. If an app developer wishes to collect an email address to communicate with a user, this is a matter between the developer and the user. The developer must obtain consent from users to collect their email address pursuant to legally appropriate notice and consent in the country in which such activity occurs. This approach reflects Apple's core belief that customers should be in the driver's seat when it comes to choosing what they share, and with whom.

12. In 2012, Apple introduced Apple Maps. How much has Apple invested in Apple Maps since its introduction?

Apple has invested billions of dollars in Apple Maps.

13. Why did Apple decide to build its own maps application rather than continue to use Google Maps to power the maps applications on iPhones?

Apple believed that it could create a better map. In addition, because of Apple's commitment to privacy and security, and the desire to keep as much information "on device" as possible, Apple believed offering a map that was more integrated into the device would serve the privacy needs of customers while providing them an exceptional map experience. Apple Maps helps users find their way without compromising privacy. Personalized alerts and suggestions, like letting users know when it's time to leave for their next appointment, are created using data on your device. And the data that is sent to

Maps while the app is being used—such as search terms, navigation routing and traffic information—is associated with random identifiers instead of a user's Apple ID.

14. **For each of the past five years, what percentage of iOS users have downloaded Google Maps or another Google map application (e.g., Waze)?**

Apple cannot provide the requested information with any meaningful degree of accuracy. However, Google Maps and Waze have been downloaded by Apple users hundreds of millions of times over the last five years.

15. **How does Apple Maps usage compare to usage of Google Maps and other Google map applications on iOS?**

Apple does not have usage data for any third-party apps.

16. **Does Apple impose any restrictions on what information third-party mapping applications can collect? If yes, please identify all the restrictions, the reason for each restriction, and indicate whether Apple also limits iOS or Apple mapping applications from collecting this same type of information.**

Apple does not impose restrictions on the information third-party mapping applications can collect. Apple does require notifications to users allowing them to control how apps, including mapping apps, can use their location data.

17. **Why does Apple prevent independent repair stores from accessing many of Apple's spare parts and repair manuals? Isn't this just a way for Apple to elbow out competition and extend its monopoly into the market for repairs?**

Our goal is to achieve a safe and reliable repair for our customers, whether that repair is done by Apple or a service provider designated by Apple. Apple has spent time and money to make Apple devices incredibly user friendly—but they are still complex, very technical machines. And there are a number of factors that go into achieving the goal of ensuring repairs on these complex devices are safe and reliable.

Genuine Apple parts are designed, tested and manufactured for Apple quality and performance standards. If a customer needs an Apple device repaired, it's important that the repair be conducted by a certified technician who has completed Apple service training and who uses genuine Apple parts and tools. Repairs performed by untrained technicians might not follow proper safety and repair procedures and could result in improper function, product quality issues or safety events. Additionally, repairs that do not properly replace screws or cowlings might leave behind loose parts that could damage a component such as the battery, causing overheating or resulting in injury. For these reasons, we believe it is important for repair shops to receive proper training when obtaining access to spare parts and repair manuals.

We continue to expand the number of locations where consumers can get repairs, while maintaining a priority on safety and reliability. Apple continues to grow its base of third-

party repair providers in the United States. Eligible repair providers can now apply to participate in Apple's recently announced independent repair provider program (IRP).

In addition, we have expanded the Authorized Service Provider program. In 2018, we expanded the scope of our Authorized Service Provider program with Apple's major expansion of its authorized service network into every Best Buy store in the US, tripling the number of U.S. Apple Authorized Service Provider ("AASP") locations compared to three years ago. We now have nearly 1,000 Best Buy stores across the US providing expert service and repairs for Apple products. We continue to focus on providing customers convenient access to authorized repair locations—but we will never compromise on safety.

18. **What types of repairs does Apple prevent its authorized technicians from making on Apple devices and what are the reasons for doing so?**

AASPs conduct the exact same repairs that Apple Retail Stores offer. There are a very limited number of repairs that require special fixtures or equipment, necessitating that those repairs be done at an Apple Repair Center. In these cases, neither an Apple Retail Store nor an AASP will be permitted to conduct the repair. But they can mail the device to the closest Apple Repair Center to do the repair and then ship it back to the customer.

19. **Does Apple take any actions to block consumers from seeking out or using repair shops that offer a broader range of repairs than those offered by authorized technicians? If yes, deseribe each action that Apple takes and the reason for doing so.**

Apple does not take any actions to block consumers from seeking out or using repair shops that offer a broader range of repairs than those offered by Apple's authorized technicians. Customers are free to obtain repairs from any repair shop of their choice.

20. **How many repair technicians does Apple employ in the United States?**

There are tens of thousands of Apple-authorized repair technicians working at Apple Retail Stores and third-party retailers.

21. **For each year since 2009, please identify the total revenue that Apple derived from repair services.**

For each year since 2009, the costs of providing repair services has exceeded the revenue generated by repairs.

22. **Apple has created a network of Apple Authorized Service Providers (AASPs) to make Apple-certified repairs. Please provide a full list of repairs that Apple permits AASPs to make on Apple products.**

AASPs are permitted to conduct exactly the same repairs, both in terms of product and type of repair, that Apple Retail Stores conduct. These repairs are described below. As noted below, the ability to repair certain modules depends on the model of the Apple device.

(1) iPhone
- Display
- Battery
- Speaker
- Camera

(2) Mac Portables
- Top Case (some models include battery, keyboard, trackpad and speakers)
- Bottom Cover
- Motherboard
- Solid State Drive
- Memory
- Fan(s)
- Display
- Trackpad
- Speakers
- Battery
- Internal Flex Cables
- Antennas
- Touch ID
- Small Circuit Boards (I/O, audio, etc.)
- Power Adapter/Cable

(3) iMac
- Display Panel
- Display Adhesive
- Left and Right Speaker (as a pair)
- Fan
- Hard Drive (if applicable)
- Display Thermal Sensor Cable
- Embedded DisplayPort (eDP) Cable
- Hard Drive Bracket, Left (if applicable)
- Hard Drive Bracket, Right (if applicable)
- Power Signal Cable
- Hard Drive Data and Power Cable (if applicable)
- Logic Board (fully assembled, no component-level repairs in the field)
- Bluetooth Antenna
- Middle Wi-Fi Antenna
- Lower Wi-Fi Antenna
- Memory

- Power Supply
- Flash Storage (if not soldered to Logic Board)
- Hinge Mechanism
- Camera (if not integrated with the Display Panel)
- Camera Cable
- Chin Strap
- Rear Housing
- Memory Door
- Stand
- Antenna Cowling
- Memory Door Lock Mechanism
- VESA Mechanism Plate
- VESA Tongue
- VESA Mount Bracket

For other Apple products, both Apple direct repair channels and AASPs offer repair services through refunds or replacements. We currently do not provide same unit repairs for all products due to the challenge of reliably re-assembling devices after disassembling the unit for repair. For example, it is not possible to reliably repair some products because it is not feasible to split products into its component parts without significant risk of damage to those components.

23. **Does Apple limit the repairs it permits AASPs to make? If so, please provide a full list of the repairs that AASPs are not permitted to make and explain all the reasons Apple does not permit each type of repair.**

AASPs are permitted to conduct exactly the same repairs (both type of repair and type of product) that Apple's Retail Store staff are permitted to conduct. For more complicated repairs that cannot be handled at stores (at Genius Bars and at AASP store locations), both Apple Retail Store and AASP technicians can mail the units for repair to the nearest Apple Repair Center.

24. **If a customer seeks a repair that an AASP will not make and the customer then seeks that same repair from an unauthorized technician, will Apple refuse repair services to that customer in the future? If yes, explain all the reasons why Apple refuses access to future repair services.**

Apple would not refuse repair services to that customer in the future. For example, Apple does not automatically reject service for a device that show attempts by third parties to perform repairs. Similarly, the presence of non-Apple genuine components that are designed to mimic the function of Apple genuine components, even if those components infringe on Apple's intellectual property, does not automatically make the device ineligible for service by Apple.

However, Apple may not provide services to devices under the following circumstances:

- Devices in which certain original components, such as the main logic board and enclosure, have been replaced with non-original components. This is due to the fact that to replace these components the device has to be disassembled to a point that special tooling and processes are required to reassemble the device. Attempting to reassemble devices disassembled to this state without using proper Apple tools and processes may result in the issue the customer has reported.
- When a device has been disassembled to a point that special tooling and processes are required to reassemble the device.
- When an Apple genuine component is replaced with a counterfeit component designed to look like an Apple genuine component, but not designed to function (*e.g.*, fake speaker or camera modules).
- When a device is beyond economic repair such that repairing the device would result in greater cost to the customer than replacing the device.
- Devices that are missing components.
- Devices with intentional tampering designed to defraud Apple.

25. **Does Apple instruct AASPs to refuse repair services to customers based on customers' repair history? If yes, describe these instructions and explain all the reasons why Apple gives these instructions.**

No, Apple does not instruct AASPs to refuse repair services to customers based on customers' repair history.

26. **Please provide a full list of circumstances or conditions under which Apple instructs AASPs to refuse repair services to customers and explain all the reasons for each instruction.**

Apple will instruct AASPs to refrain from providing repair services on devices in a limited number of circumstances for the reasons described in our response to question 24 above.

27. **Are there any repair shops to which Apple will not sell Apple replacement parts? If yes, please identify and describe the factors that determine whether Apple will or will not sell replacement parts to a repair shop.**

Eligible repair providers can now apply to participate in the independent repair provider program (IRP). If accepted into the program, Apple will sell commonly repaired components, including iPhone displays and batteries to participants. Apple also provides access to training, tools and processes to allow IRPs to perform repairs on iPhones. Eligibility criteria include that the repair shop or a sole proprietor runs a repair business that has at least one trained technician to conduct the repairs.

28. **Which Apple spare or replacement parts does Apple make available for purchase by customers who may want to repair products themselves or hire an independent technician?**

Apple has launched an independent repair provider program. As noted above, we currently only support sole proprietors and repair providers who conduct repairs as a business, and not individuals. Repairs performed by individuals, who are more likely to be untrained technicians, increases the likelihood that repairs will not follow proper safety and repair procedures and could result in improper function, product quality issues or safety events.

29. **For each year since 2009, what is the total amount that Apple has accepted from Google for the right to be the default search engine in Safari and in any other Apple products or services? Please identify the amount accepted from Google in total and broken down by each Apple product.**

Apple's search agreement with Google generates revenue based on referral traffic through the URL/search box on Apple's Safari browser. Although Google search is set as the default, this can be changed in settings on iPhone to another search engine, such as Yahoo!, Microsoft Bing and DuckDuckGo. Consumers may also conduct searches on search apps available through the App Store, searches performed on the web (through the search engine's web portal), or through virtual assistants like Siri, Cortana or Alexa that are available to users on our platform.

30. **Please describe what types of data Apple collects through Siri and how Apple uses each type of data.**

When users invoke Siri, the things they say and dictate are sent to Apple to process their requests. In addition to these audio recordings, the user's device will send other data to help better recognize what the user is saying. This data includes things such as:

- contact names, nicknames and relationships (*e.g.*, "my dad");
- music, books and podcasts the user requests;
- names of the user's devices;
- names of devices the user has set up in the Home app; and
- the names of the user's photo albums, apps installed on their device and shortcuts they have added through Siri.

If a user has also enabled Location Services, the location of the user's device at the time of a request will also be sent to Apple to help Siri and Dictation improve the accuracy of its response (*e.g.*, if a user asks "What's the weather here?"). This data is associated with a random, device generated identifier and is not linked to the user's Apple ID, email address or other data Apple may have from the user's use of other Apple services.

A user's request history, including transcripts, audio and related request data, such as device specifications, device configuration, performance statistics and the approximate location of the device at the time the request was made, may be retained for two years to help Apple develop and improve Siri, Dictation and other language processing features like Voice Control. The request history is disassociated from the random identifier at 6 months. A small subset of requests that have been reviewed may be kept beyond two years for ongoing improvement of Siri.

We have announced some additional changes to further enhance our commitment to privacy:

- First, by default, we will no longer retain audio recordings of Siri interactions. We will continue to use computer-generated transcripts to help Siri improve.
- Second, users will be able to opt-in to help Siri improve by learning from the audio samples of their requests. We hope that many people will choose to help Siri get better, knowing that Apple respects their data and has strong privacy controls in place. Those who choose to participate will be able to opt-out at any time.
- Third, when customers opt-in, only Apple employees will be allowed to listen to audio samples of the Siri interactions. Our team will work to delete any recording which is determined to be an inadvertent trigger of Siri.

31. **Please identify which categories or teams of Apple employees have access to data or information that Apple collects through Siri, specify the types of data to which each has access, and describe where in Apple's organization chart the teams or employees are located.**

Access to Siri data is tightly controlled and is available to Apple teams who are using it to improve Siri, Dictation and other language processing features like Voice Control. This activity is almost entirely done by the Siri engineering team. Access to customer data by these engineering teams is limited: engineers use the data which may be necessary to develop the feature they are working on.

This Fall, customers may opt-in to have audio samples of their Siri actions available for grading by a limited group of trained Apple employees to measure how well Siri was responding and to improve its reliability. For example, did the user intend to wake Siri? Did Siri hear the request accurately? And did Siri respond appropriately to the request? By using this process across a small sample of Siri requests over time, Apple is able to make big improvements that help ensure our customers around the world have the best Siri experience possible.

32. **Does Apple include, or has it ever included, in any contracts with business partners a waiver of some or all intellectual property rights whereby a business partner agrees not to bring some or all intellectual property infringement claims with regards to an Apple product? If yes, please describe the relevant circumstances.**

The intellectual property rights that flow between the parties may vary greatly depending on the type of business relationship the parties will have and the activities that are contemplated. Most of Apple's agreements include some express grants of intellectual property rights by the business partners as well as by Apple with respect to the other's products and/or services.

33. **Does Apple include, or has it ever included, in any contracts with business partners a waiver of some or all antitrust claims whereby a business partner agrees not to bring some or all antitrust claims with regards to Apple's conduct? If yes, please describe the relevant circumstances.**

Apple is unaware of any such terms in its business agreements.

34. **Please identify the percentage of Apple consumers that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Apple, describe the relevant provisions, and identify any types or categories of Apple consumer contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

None. Apple does not have such provision in its consumer agreements.

35. **Since 2014, how many Apple consumers have initiated arbitration proceedings to adjudicate a legal claim against Apple, in total and broken down by type of legal claim?**

None.

36. **Please identify the percentage of Apple employees that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Apple, describe the relevant provisions, and identify any types or categories of Apple employee contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

Apple does not track the percent of US employees who have agreed to arbitration provisions. (Apple first implemented limited arbitration provisions for new employees starting in June 2016, and those employees are provided the option of opting out of the arbitration provision.)

The provision expressly excludes certain claims from arbitration, including claims for discrimination and harassment, which are expressly carved out (so that even employees who do opt-in to the arbitration provision can pursue any such claims in court).

37. **Since 2014, how many current or former Apple employees have initiated arbitration proceedings to adjudicate a legal claim against Apple, in total and broken down by type of legal claim?**

Two. Both are for wrongful termination claims. One of the employees was not subject to an arbitration agreement but requested his claims be arbitrated.

38. **Please identify the percentage of Apple contractors that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Apple, describe the relevant provisions, and identify any types or categories of Apple contractor contracts that do not contain a mandatory arbitration clause and/or class action waiver.**

Apple does not track the percentage of Apple contractors that are subject to a mandatory arbitration clause (or class action waiver). Apple's standard Professional Services Agreement and Individual Consulting Services Agreement forms contain arbitration provisions subject to International Chamber of Commerce Rules governing the arbitration of commercial disputes.

39. **Since 2014, how many current or former Apple contractors have initiated arbitration proceedings to adjudicate a legal claim against Apple, in total and broken down by type of legal claim?**

Apple is not aware of any.

40. **Please identify the percentage of app developers that are subject to a mandatory arbitration clause and/or class action waiver in their agreement with Apple, describe the relevant provisions, and identify any types or categories of Apple's contracts with app developers that do not contain a mandatory arbitration clause and/or class action waiver.**

None. Apple does not have such terms in its developer agreements.

41. **Since 2014, how many current or former app developers have initiated arbitration proceedings to adjudicate a legal claim against Apple, in total and broken down by type of legal claim?**

None.

42. **Please identify the percentage of Apple employees and contractors that are subject to a non-compete clause in their agreement with Apple, describe the relevant provisions, and identify any types or categories of Apple employees and contractors that are not subject to a non-compete clause.**

Apple does not have non-compete clauses for its US employees. And Apple does not track the percentage of Apple contractors that are subject to a non-compete clause. Apple's

standard Professional Services Agreement and Individual Consulting Services Agreement forms do not contain non-compete clauses.

43. **Since 2014, how many former Apple employees and contractors has Apple sued or initiated arbitration proceedings against in connection with an alleged breach of a non- compete clause? Please break down this number by type of legal relationship (*e.g.*, employee or contractor) and describe the relevant circumstances that gave rise to each suit or arbitration.**

Apple does not have non-compete clauses for US employees and has not sued any former employees or contractors for alleged breach of a non-compete clause.

Written Questions for the Record from the Honorable Mary Gay Scanlon

1. CreativeFuture—a coalition representing 555 organizations and more than 250,000 people in the creative rights community—has raised concerns about the effect of copyright theft on Facebook and Google on the competitive process.

As Ruth Vitale, the CEO of CreativeFuture, notes in a submission for the record, "unfair methods of competition often facilitated and sometimes practiced by the massive internet platform providers results in less creative content than otherwise would exist, fewer new voices, and harm to legitimate sources of distribution."

- **What is your response to the concern of people in the creative rights community that YouTube has little economic incentive to combat widespread copyright theft, and that this has distorted the market for online streaming of movies and television?**

Digital tools and online distribution have created new opportunities and lower barriers to entry, transforming every kind of creative endeavor, both amateur and professional. As reflected in a 2019 report from the Computer & Communications Industry Association (available at https://skyrising.com), the result is that more photography, music, video, software, and books are being created by more people than ever before. By creating new and growing revenue streams and allowing creators to reach global audiences, digital services have become a central and important part of the creative economy. YouTube is proud to be a part of this growth opportunity for content producers. Today, for example, channels from over 90 different countries earn revenue from their videos on YouTube. These YouTube creators are redefining the face of media, building businesses on and off the platform, contributing to local and global economies, and creating new jobs.

At Google, we build platforms where people can legitimately purchase, consume, and discover entertainment and culture and pioneer innovative approaches to monetizing online media. And our partners include independent creators, major studios, record labels, and publishers. As a result, we not only have a legal obligation, but also a business incentive to fight piracy and take the ongoing challenge seriously.

We invest significantly in the technology, tools, and resources that prevent copyright infringement on our platforms. We also work with others across the industry on efforts to combat piracy. These efforts are having an effect: around the world, online piracy has been decreasing, and spending on legitimate content is rising. We detail all of these efforts in our report, How Google Fights Piracy, which is available at https://www.blog.google/documents/27/How_Google_Fights_Piracy_2018.pdf.

On YouTube, for example, we've invested over $100 million in building YouTube's industry-leading Content ID system, which allows rights holders a way to claim content at scale by finding matches to content they submit to us and giving them an automated way to identify, block, and even make money from uploads of their content. We have paid out over $3 billion to creators who use Content ID. YouTube also recently launched its Copyright Match Tool, which uses the power of the Content ID matching system to find near identical re-uploads of creator videos on YouTube. Instead of uploading a reference file to YouTube, creators who are the first to upload a video to YouTube, now including private video uploads, are shown subsequent uploads that match their videos. Creators can then review the matching videos and file takedowns for any they wish to remove. Finally, copyright owners and their representatives can submit takedown notices using an easy-to-use webform or our program for high volume submitters. In addition, YouTube's copyright center has extensive information aimed at educating people about copyright.

2. CreativeFuture also reports that Google and Facebook's failure to adequately address piracy and infringement is posing an existential threat to the independent film and TV industry. It seems that Google and Facebook's market power in online distribution means they face no real ramifications for this failure. YouTube receives 900 million takedown notices over a year, many of times for the same content.

a. What processes does Google have in place to adequately protect content producers?

In connecting users to authorized sources for films and television programming, Google faces a competitive landscape where many other providers also distribute film and television content. Indeed, there have never been more authorized sources of film and television content, particularly in the online streaming space, with offerings from Amazon, Netflix, Hulu, SlingTV, Apple+, CBS All Access, and Sony Playstation Vue,

among others, in addition to traditional cable and satellite offerings. Content creators like Disney are also creating their own online distribution channels.

Google is an industry leader in copyright protection and provides copyright and content management tools that give rights holders control of their content on YouTube. These tools are effective. For example, over 98% of copyright issues on YouTube are handled through Content ID, rather than the notice-and-takedown process. And 90% of the time rights holders choose to monetize these claims. For the remaining 2% of copyright issues, we have robust tools for notice and takedown including an easy-to-use webform, the Content Verification Program, and the Copyright Match Tool. For Search, we currently process approximately 2 million URLs each day, and a majority of these URLs are not even in our index at the time of submission.

3. Dozens of websites have reported that Google has copied their content without attribution to build out Google's own competing products and to keep users within Google's ecosystem. The Federal Trade Commission investigated this conduct in 2012 and concluded that the "natural and probable effect of Google's conduct is to diminish the incentives of vertical websites to invest in, and to develop, new and innovative content."

The Commission's staff also recommended that the FTC bring an antitrust lawsuit against Google for this conduct. Although Google agreed to voluntary changes to settle the Commission's investigation of this conduct, it appears that Google still engages in scraping for its information box, the panel that Google uses to highlight its own content.

- **Mr. Cohen, does it remain Google policy to systematically copy the content of third-parties for its information boxes?**

Google works to surface useful information for users in response to their Search queries. Like other search engines, our results not only include links but sometimes direct answers, such as the current weather or the age of a celebrity. Some of these results are Knowledge Panels, which are a collection of different kinds of information from different kinds of sources on the internet. Information in Knowledge Panels, or in other direct-answer results, are often licensed content from third party websites. For example, we license information from Weather.com for our Knowledge Panels about the weather, and credit Weather.com for the information. In some cases, we allow

businesses and individuals to post directly to their Knowledge Panels, which allows them control over the information display.

4. Recently, the founders of Genius—a website dedicated to producing accurate song lyrics—publicly shared that for two years Google has been displaying, or "scraping", lyrics copied from Genius in its information box, which takes up 40% of a desktop results page and 80% of a mobile results page. As they noted, this appropriation of third-party content makes it unlikely that users will ever leave Google in favor of the site that actually produces the content.

In fact, the founders of Genius approached Google about copying their product, but Google did nothing to address the issue for over two years. It was only after Genius shared its account with the Wall Street Journal that Google sprung into action and fixed the problem.

- **Mr. Cohen, in response to this report, Google stated that it does not scrape or crawl third-party websites for lyrics. But what process does Google have in place for content producers to report widespread copying of their content?**

- **Is it Google's policy to only address the concerns of content producers when they go public?**

Google understands the importance of protecting copyright, and we respond to valid DMCA requests from the copyright owner. In the case of Genius, we did not receive a DMCA request related to its concerns. Google licenses the lyrics we display in search directly from the rights holders and their official licensors. We recently wrote a blog post about how we show users lyrics, which is available at https://www.blog.google/products/search/how-we-help-you-find-lyrics-google-search/.

5. In addition to the lack of consequences for the market power Google and YouTube have over the film and television industry, their platforms also compete with these industries – specifically YouTube. Google produced a report titled *How Google Fights Piracy* that discusses the efforts you all have made to de-rank pirated content on your site, but I'm concerned that these efforts may not be uniform across the board.

When Googling original shows produced by YouTube Premium for pirated versions, nothing comes up. However, when you search for pirated versions of shows like *Game of Thrones*, or even far less popular shows like Netflix's *Russian Doll* or HBO's *Barry*, a litany of torrented versions comes up.

- **This discrepancy in the availability of pirated content suggests that Google is offering preferential treatment for their content to the detriment of other content producers – a practice which at best could be an oversight but at worst could be an attempt to dilute web traffic for competing content providers. Can you explain this discrepancy?**

- **Can you provide details on how you decide which pirated content to take down and when?**

- **Can you provide information on how pirated content is taken down?**

Google does not offer preferential treatment in Search results to our own content and takes the protection of copyrighted works seriously regardless of the identity of the content producer. To help copyright owners submit copyright removal notices for Search, Google has developed a streamlined submission process built around an online webform that copyright owners can use to submit removal notices. Since 2011, more than 135,000 different submitters have requested we remove web pages from search results for copyright violation. Since launching this submission tool for copyright owners and their agents, we have removed over 3 billion URLs that infringed copyright from Search.

In addition to our content removal webform, Google provides a tool for copyright owners with a proven track record of submitting accurate notices and a consistent need to submit thousands of web pages each day. Google created the Trusted Copyright Removal Program (TCRP) for Search to further streamline the submission process, allowing copyright owners or their enforcement agents to submit large volumes of web pages on a consistent basis. As of 2017, there are more than 178 TCRP partners, who together submit the vast majority of notices.

Google also factors in the number of valid copyright removal notices we receive for any given site as one signal among the hundreds that we take into account when ranking search results. Consequently, sites for which Google has received a large number of valid removal notices appear much lower in search results. We have found

that demoted sites lost an average of 89% of their traffic from Google Search. In addition, this may have contributed to the 9% decrease in the number of URLs listed in takedown notices from 2016 to 2017. We will continue to invest substantial resources and engineering efforts into improving our procedures for receiving and processing copyright removal notices.

In addition, when people search with the intention to watch or listen to media, we may show new cards for those queries directing them to legitimate sources. These cards may also appear for queries to "stream" or "download" the movie, and also appear for similar music-related queries. Our partners for these "Watch Actions" include, for example, HBO, Netflix, Amazon, Apple, and Hulu.

In the specific case of YouTube Originals, except for some of the most recently launched productions, YouTube is not the copyright owner of the content. Instead, our production partners retained copyright, and YouTube is merely a licensee for a period of years. Enforcement against unauthorized versions of the content is the responsibility of those production partners, who have used a variety of standard means, without being given any special treatment by Google or YouTube. For some of these original productions, where the partner did not already have an established anti-piracy strategy, YouTube ensured that anti-piracy vendors were engaged to request removals of unauthorized copies from the Google Search index through the standard means available to other rightholders, as well as to use YouTube's tools, again through standard means available to other rightholders. In some of the most recently launched productions where Google is the copyright owner, we have chosen to make this content freely available on YouTube, on an ad-supported basis. We believe that increasing access to authorized sources for this content reduces the incentive to engage in piracy.

Responses of Maureen Ohlhausen, Esq., Partner, Baker Botts L.L.P. to Questions for the Record from Subcommittee Ranking Member F. James Sensenbrenner

1. *Some say that the tech sector is particularly vulnerable to anticompetitive conduct because of high network effects and switching costs in the sector and the advantages existing market players' data holdings give them over new entrants. Are those issues that just mean antitrust violations may crop up more in this sector and enforcement agencies need more resources to keep up with them? Or, are those issues that mean antitrust law itself needs to be changed to better address the tech sector?*

It is certainly true that some portions of the tech sector are characterized by high network effects (because an abundance of users tends to make any given platform more valuable) and that access to consumer data is an increasingly important factor for competition in some products and services. On the other hand, the tech sector often exhibits low switching costs for consumers due to a lack of long-term contracts, the availability of free services, and many consumers who multi-home between different services when they perceive value in each. Thus, the tech sector, like many other industries, has a variety of characteristics that make any competitive analysis complex.

The key factor is that the antitrust agencies have been successful in the past in taking action against anticompetitive mergers and conduct where there are strong network effects and other incumbent advantages, both in and out of the tech sector. However, I believe additional resources for antitrust enforcement is necessary, particularly given the fact that the FTC has not had a budget increase in several years while its costs have risen and the U.S. economy has grown. I would caution against expanding the antitrust statutes in an effort to loosen evidentiary standards, forgo judicial review, or move away from the focus on consumers. Current antitrust law has the flexibility and breadth necessary to capture mergers that substantially increase market power for tech companies, and anticompetitive or monopolistic conduct by those same companies. Expanding the scope of antitrust law generally risks generating significantly more "false positives" (enforcement against mergers or activity that are actually procompetitive), and attempting a "carved-out" expansion of antitrust in the tech sector alone raises many line-drawing problems, including how exactly to define what the "tech sector" is – not a simple question give the degree to which technology has expanded to touch on many aspects of modern life.

2. *What is your view of the opinion that tech sector companies have been able to get away more easily with anti-competitive conduct simply by purchasing rivals, rather than trying to wound them through predatory pricing, exclusionary conduct or other traditional antitrust violations?*

Current antitrust provides the agencies the tools necessary to evaluate and enforce the law against anticompetitive mergers as well as anticompetitive or exclusionary conduct by tech sector companies. In some ways, it is easier to block a merger than it is to challenge conduct, given that the agencies benefit from a "market share presumption" of anticompetitive harm when merging companies' market share exceeds certain percentages in a relevant market. Even for acquisitions of nascent or emerging competitors, the market share of the acquirer provides at least some evidence of market power. On the hand, an exclusionary conduct (monopolization) case requires a higher showing of market share, typically well in excess of 50%.

I also agree with former FTC Bureau of Competition Director Bruce Hoffman, when he stated this past May that "I am not aware of good economic evidence that there is a unique and widespread 'nascent' or 'start-up' acquisition issue in the tech industry."[1] Recent FTC action against CDK and Auto/Mate (mentioned in my testimony), against Mallinckrodt (formerly Questcor) for purchasing an up-and-coming pharmaceutical competitor[2], and the challenge just announced to Illumina's purchase of nascent DNA sequencing system competitor Pacific Biosciences,[3] all demonstrate that the agencies can and do take action to preserve nascent competition in high-tech and complex industries. It is important to be sure we ground any decision to amend the antitrust laws or alter course in enforcement priorities in sound evidence that such changes are needed.

3. *You raise a note of caution about retrospective review of consummated mergers, saying that while they can be helpful in limited doses, they should not be more routine. Can you explain that in more detail?*

My concern with dramatically expanding retrospective merger reviews rests primarily on the significant resources consumed by such reviews. Undertaking a retrospective review that is thorough and comprehensive is likely to consume nearly as many resources as the prospective review that the agencies currently undertake for any acquisition that raises concerns, given that it would involve the same kinds of fact-gathering, economic analysis, and canvassing of opinions from relevant industry players. My concern is also based on my first-hand experience overseeing the FTC's update of its merger divestiture study that, while resulting in useful information that informed FTC's practices going forward, consumed substantial resources despite focusing on a discrete subset of previously-cleared transactions.

4. *It has been argued that, were the United States antitrust agencies to launch a policy of unwinding significantly more consummated mergers, that would create a great deal of regulatory uncertainty for companies contemplating new mergers and have chilling effects on merger-and-acquisitions investment. What is your view?*

I agree with this assessment. The agencies can and do step in to unwind anticompetitive mergers post-consummation, particularly those that are below the HSR reporting threshold and so represent a "first bite at the apple" for antitrust enforcers. The FTC's recent decision unwinding prosthetic manufacturer Otto Bock's acquisition of Freedom Innovations—upholding a complaint that I brought during my tenure as Acting FTC Chairman—is a good example.[4] But altering current enforcement policy by pursuing widespread agency"second bites" at already-cleared transactions

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[1] Bruce D. Hoffman, "Antitrust in the Digital Economy: A Snapshot of FTC Isues", *GCR Live: Antitrust in the Digital Economy*, at 5 (May 2019), available at https://www.ftc.gov/system/files/documents/public_statements/1522327/ hoffman_-_gcr_live_san_francisco_2019_speech_5-22-19.pdf.

[2] Mallinckrodt Will Pay $100 Million to Settle FTC, State Charges It Illegally Maintained its Monopoly of Specialty Drug Used to Treat Infants (Jan. 18, 2017), available at https://www.ftc.gov/news-events/press-releases/2017/01/mallinckrodt-will-pay-100-million-settle-ftc-state-charges-it.

[3] FTC Challenges Illumina's Proposed Acquisition of PacBio (Dec. 17, 2019), available at https://www.ftc.gov/news-events/press-releases/2019/12/ftc-challenges-illuminas-proposed-acquisition-pacbio.

[4] *In re Otto Bock HealthCare N.A., Inc.*, FTC No. 9378 (Nov. 1, 2019), available at https://www.ftc.gov/system/files/documents/cases/d09378commissionfinalopinion.pdf.

would result in market uncertainty and likely chill business activity, including pro-competitive mergers.

5. *It also has been argued that launching a policy of unwinding more past mergers to help manage the U.S. economy would complicate the ability of U.S. antitrust regulators to take on foreign countries like China for their abuse of their antitrust laws to advance their own industrial policies. What is your view of that assertion?*

As discussed in my testimony, U.S. antitrust law focuses on the value of market competition to benefit American consumers and the U.S. has been a leader is resisting antitrust enforcement in the pursuit of industrial policy. If U.S. changes policy and brings challenges (either retrospective or prospective) to pursue other industrial policy values, such as fairness, consumer privacy, or protection of small businesses at the expense of efficiency, that will undermine U.S. leadership and encourage other countries to pursue industrial policies in their competition enforcement, which will likely harm U.S. business and consumer interests.

6. *Would it be a better approach to merger issues if Congress amended the Hart-Scott-Rodino Act to require more pre-merger review of smaller-value mergers, rather than just the larger ones the Act now covers?*

FTC Bureau of Competition Director Bruce Hoffman raised "several cautionary flags" about the idea of lowering HSR reporting thresholds. The thresholds were raised in 2001 to address a flood of HSR filings that was overburdening the enforcement agencies and distracting from their work on mergers that raised actual competitive concerns.[5] Also, "more recent evidence suggests that reducing the HSR thresholds would not likely generate many good cases,"[6] because bigger deals tend to be the ones raising the most significant concerns. I agree with Director Hoffman's concerns and add that any drop in the HSR thresholds would need to be accompanied by a very substantial increase in agency funding to avoid prejudicing their in-depth reviews of problematic transactions.

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[5] *See* Hoffman, footnote 1, at 7.
[6] *Id.*

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Question for the Record

Rep. W. Gregory Steube (FL-17)

House Judiciary Committee

Subcommittee Committee Hearing: Online Platforms and Market Power

Part 2: Innovation and Entrepreneurship

1. **Mr. Andeer, as I understand it Apple charges apps that provide digital content 30% with each transaction. If the app has to pass that cost onto consumers, are they able to tell consumers they can receive that service elsewhere like going to their website?**

We believe competition makes everything better and results in the best apps for our customers. We also care about quality over quantity, and trust over transactions. Our users trust Apple—and that trust is critical to how we operate a fair, competitive store for developer app distribution.

Like any fair marketplace, developers decide what they want to charge. We only collect a commission from developers when a digital good or service is delivered through an app. As noted during the testimony, approximately 84% of apps obtained through the App Store share no revenue with Apple. Developers also receive free marketing opportunities through our store design, including the new Today editorial feature, personalized recommendations, search tools, top lists and social marketing. All this helps to support the millions of successful apps on the App Store.

Outside of the App Store, developers communicate with their consumers in a variety of ways, and that is completely up to them. Developers can inform their customers where to purchase digital content from the developer, such as on the developer's website, on social media or through advertising. App developers frequently use websites, social media and traditional (TV, radio, print) marketing, email ads and targeted ads, and referrals and partnerships with other businesses to promote purchasing through channels not related to the App Store. In response to such communications and marketing, consumers routinely purchase digital content from the developer outside of the App Store and then can access/use that purchased content inside the app—with Apple receiving no payment related thereto. In fact, some developers like Spotify and Netflix have their customers buy digital content subscriptions *only* outside Apple's App Store, such as from Spotify's or Netflix's own website. In these cases, developers receive all of the revenue they generate from bringing the customer to their app. Apple receives no commission from supporting, hosting and distributing these apps.

The sole restriction on developers in communicating to customers the availability of alternative offers is that a developer not use Apple's iOS ecosystem as a "free billboard," or free recruiting tool to direct customers they have acquired through Apple to purchase content elsewhere for the purpose of avoiding Apple's rightful commission. The prohibition on developers promoting, *via* the App Store, transactions outside the

App Store is no different than the policies of virtually any other retailer, both brick-and-mortar or online. These anti-circumvention rules, to prevent free-riding, are common.[1] No one would expect or demand that a brick-and-mortar retail store be required by a wholesaler to hang a sign on the display of certain goods directing customers to a different store to spare the wholesaler any fees charged by that retailer, and no online store should be held to a different standard.

2. **As you explained to that 30% tax becomes 15% in the second year of the subscription, is the app able to tell consumers of the lower fees in the second year within their app? Can they explain that the app service could be cheaper elsewhere outside of the app?**

The App Store's commission is not a "tax." It reflects the value of the App Store as a channel of distribution for developers and the costs of running the store. Apple established its 30% commission when it launched the App Store in 2008. This commission represents a considerable cost savings for developers when compared to physical distribution. It was also much lower than the 50%–70% that was then typically paid for the digital distribution of software. The App Store's revenue-sharing model was much more favorable to developers and ultimately led to a lowering of prices for the distribution of digital content across the industry. Apple's revenue-sharing model is now the industry standard and consistent with the practices of other digital, as well as brick-and-mortar, marketplaces.

The App Store has been a significant factor in democratizing software development by reducing barriers to entry to the benefit of consumers, competition and innovation. The ease of use, the low up-front cost of distribution, investments in software tools and Application Programming Interfaces, have benefitted all developers—and independent and small developers get immediate access to hundreds of millions of consumers in 155 countries and do not have to invest significant resources to distribute through the App Store. All of this is made possible by Apple's business model.

Developers are able to advise consumers of lower fees in the second year of a subscription, but many choose not to do so and have not passed any cost savings onto their customers. For example, Spotify has repeatedly attempted to attribute its in-app pricing decisions to Apple, yet Spotify has never passed on the benefits of Apple's lowered commission onto Spotify subscribers. When Apple lowered the commission from 30% to 15% for subscriptions renewals for the approximately 680,000 Spotify

[1] For example, the Samsung Galaxy App Store states that the developer "shall not use customer information obtained from the Services," such as Samsung's app store, to sell or distribute content "without using the Services or STORE." The Roku Store, which serves the popular TV-connected console/digital media player as well as the smart TV (Roku TV), has similar rules for developers, stating: "you will not (a) use any alternate billing service within your Application, (b) direct end users, via messaging that appears in your Application, to use alternative billing services, or (c) otherwise directly or indirectly encourage end users to purchase access to your Content other than through the Platform." Other online marketplaces that bring buyers and sellers together have similar policies to ensure that businesses do not free-ride on the marketplace's investments.

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Premium subscribers that Spotify acquired through Apple's App Store, Spotify continued to charge those subscribers $12.99 a month, same as before.

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ONLINE PLATFORMS AND MARKET POWER, PART 3: THE ROLE OF DATA AND PRIVACY IN COMPETITION

HEARING

BEFORE THE

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

OF THE

COMMITTEE ON THE JUDICIARY HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

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ONLINE PLATFORMS AND MARKET POWER, PART 3: THE ROLE OF DATA AND PRIVACY IN COMPETITION

FRIDAY, OCTOBER 18, 2019

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

COMMITTEE ON THE JUDICIARY

Washington, DC.

The subcommittee met, pursuant to call, at 9:41 a.m., in Room 2141, Rayburn House Office Building, Hon. David Cicilline [chairman of the subcommittee] presiding.

Present: Representatives Cicilline, Nadler, Johnson, Jayapal, Demings, Scanlon, Sensenbrenner, Buck, Gaetz, Armstrong, and Steube.

Staff Present: Madeline Strasser, Chief Clerk; Moh Sharma, Member Services and Outreach Advisor; Amanda Lewis, Counsel; Joseph Van Wye, Professional Staff Member; Lina Khan, Counsel; Slade Bond, Chief Counsel; Daniel Flores, Minority Chief Counsel; and Andrea Woodard, Minority Professional Staff.

Chairman NADLER [presiding]. The subcommittee will come to order. Without objection, the chair is authorized to declare recesses at any time.

We welcome everyone to the third in our series of hearings investigating competition in digital markets, this one on the role of data and privacy in competition.

I now recognize myself for an opening statement.

I should state the obvious: I'm not the chairman of the subcommittee; I'm the chairman of the full committee. The chairman of the subcommittee will be here in a few minutes.

Digital technologies have provided Americans with a remarkable array of services. It has never been easier to share news and information, to publish content, and to communicate with loved ones all at a moment's notice. But as with technological revolutions of the past, this transformation has upended the balance of power across our economy. It is important for Congress to study and understand how these imbalances are affecting Americans, what is causing these asymmetries of power, and whether these new and growing inequalities are compatible with our democratic values. The committee's ongoing oversight of competition in digital markets is a key part of this process.

Today's hearing will examine the role that data plays in creating and maintaining inequalities of power and how this affects competition. As previous hearings have shown, a growing share of commerce and communications is now controlled by a small number of companies. Because these platforms are, in essence, large intermediaries, they are perfectly positioned to closely track each transaction in communication that passes through their channels.

While intermediaries have long collected information on the economic activity that flows through their platforms, the large firms of the digital economy have unprecedented ability to track and surveil users across the internet. This data collection includes information not only about a person's shopping and reading habits, but also about the time that they wake up and go to sleep, a precise location of each hour of the day, and the content of their most private communications.

Because several of these platforms derive the vast majority of their revenue through digital advertising, these firms also have an incentive to collect as much information as possible so they can target consumers with precision. This trove of personal information can also be used by companies in even more nefarious ways to discriminate based on the user's race, gender, or income, or otherwise to intrude on personal privacy.

In light of these trends, there are at least two questions that I hope will be addressed in today's hearing. First, how are digital technologies and the constant data collection they enable affecting competition? Is there something unique about digital markets that enables firms to acquire and maintain market power in novel ways?

In digital markets, maximizing data collection can provide a company with a significant competitive advantage. A large and constantly growing set of user data allows firms both to improve existing products and services and to expand into new lines of business, often with a competitive edge. Frequently, the most dominating companies in the digital economy are those that have captured the most data from as many sources as possible.

In recent years, scholars have described this dynamic as leading to winner-take-all markets where the first company to establish a competitive lead wins the market, crushing any potential competition. In other words, competitors of digital markets have a strong incentive to collect as much information on users as possible, as quickly as possible, as part of a long-term strategy to compete in the marketplace and to achieve market dominance.

This raises serious questions about whether it is good for society for unrelenting data collection to be the key dimension on which companies are looking to outcompete one another. The fact that several major digital platforms make most of their profits by selling targeted advertisements heightens those incentives.

The second question that I hope will be addressed in today's hearing is how data collection increases the number of ways that dominant companies can abuse their market power. Does the collection and use of data enable new forms of conduct that lawmakers and regulators should recognize as anticompetitive? For example, platforms and service intermediaries for commerce have

critical insight into their rivals' business models, a dynamic that raises significant competition concerns.

With these issues in mind, I look forward to hearing from our esteemed panel of witnesses today.

I yield back the balance of my time, and I now recognize, for his opening statement, the distinguished ranking member and former chairman of the committee, Mr. Sensenbrenner of Wisconsin.

Mr. SENSENBRENNER. Thank you, Mr. Chairman.

Today, we continue our oversight of the state of competition in the tech sector. To date, our primary focus has concerned large online platforms. The specific topics we address today, the roles that data and data privacy play in competition, and the ways in which we can better protect the privacy of consumers' online data largely concern these same platforms.

Data is, in many ways, the life blood of the internet. Numerous issues are swirling around the use of this data. For example, these include allegations that, one, platform's needs for very large accumulations of data can operate as a barrier to market entry by new platforms. Two, platforms holding large databases can leverage that data to compete unfairly with third-party competitors that are dependent upon their platforms. Three, incumbent platforms have pursued mergers with emerging competitors in order to kill off competition for data acquisition and market shares.

It is my hope our hearing can help us determine fact from fiction when it comes to these allegations. As I have stressed before, antitrust laws do not exist to punish success, but to foster it. Congress and antitrust enforcement agencies need to be careful not to overreach to extend or apply antitrust laws in ways that end up punishing success, suppressing innovation, and ultimately, limiting consumer welfare. This applies not just to issues concerning competition for data, but also applies to issues concerning privacy. If we're going to address data and consumers' data privacy through legislation, we must get it right.

I do not say this in a vacuum. Governments in the United States and Europe have already begun to lay down laws to address these issues. The most prominent example to date is the European Union's General Data Protection Regulation, or GDPR. Following in its footsteps has been California's recently passed California Consumer Privacy Act, or CCPA, which is substantially modeled on the GDPR.

And testimony offered before the Senate Judiciary Committee in March by one of our witnesses today, Dr. Roslyn Layton, constituted a powerful indictment of the GDPR. However well-intentioned, the GDPR is already producing substantial collateral damage to consumer welfare, innovation, and the health of the digital economy. It is likely that the CCPA will have the same effects. All of these effects are avoidable. It is imperative that we in the United States identify and put in place a better means of protecting consumers' privacy online.

I hope our witnesses today can help us work our way through these important issues.

And before yielding back, let me ask unanimous consent to insert in the record a number of statements and submissions to the record

that I have received. One from the Mercatus Center of George Mason University.

Mr. CICILLINE [presiding]. Without objection.

Mr. SENSENBRENNER. Second, a joint statement by the national CTA, CTIA, and USTelecom.

Mr. CICILLINE. Without objection.

Mr. SENSENBRENNER. A letter that has been sent to the chairman and myself from epic.org.

Mr. CICILLINE. Without objection.

Mr. SENSENBRENNER. A letter for the record from Carl Szabo, vice president and general counsel of NetChoice.

Mr. CICILLINE. Without objection.

Mr. SENSENBRENNER. And I now yield back the balance of my time.

[The information follows:]

MR. SENSENBRENNER FOR THE RECORD

MERCATUS CENTER
George Mason University

SUBMISSION FOR THE RECORD

ANTITRUST AND THE DEBATE OVER DATA PRIVACY

Jennifer Huddleston
Research Fellow, Fourth Branch Project, Mercatus Center at George Mason University

US House Committee on the Judiciary, Subcommittee on Antitrust, Commercial, and Administrative Law

October 18, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the Subcommittee on Antitrust, Commercial, and Administrative Law.

My name is Jennifer Huddleston and I am a research fellow at the Mercatus Center at George Mason University. My research focuses primarily on the intersection of law and technology, including issues related to data privacy and antitrust. Therefore, I welcome the opportunity to submit a statement regarding the potential need for and effect of a government intervention, via antitrust, into various digital spaces; and what the potential consequences of such an intervention might be, particularly with regards to privacy concerns.

In this statement for the record, I will focus on three key points:

1. The dynamic nature of the technology industry makes it difficult to utilize traditional antitrust tools.
2. The focus for antitrust should remain on consumer welfare.
3. There is no guarantee that breaking up technology giants would resolve other technology-related concerns, such as issues surrounding data privacy, and it might even exacerbate these concerns.

DIFFICULTIES IN APPLYING TRADITIONAL ANTITRUST IN A HIGHLY DYNAMIC INDUSTRY

Technology is a highly dynamic industry, and it is often difficult to define the market and competitors for many of the largest and most successful companies. Just over a decade ago, headlines expressed concerns about MySpace's natural monopoly,[1] how Yahoo won the search wars,[2] and what to do about the potential walled gardens and lack of interoperability of AOL Instant Messenger.[3] However, not only did competitors emerge to challenge these once seemingly invincible giants, new and different technologies changed the nature of the very markets in which they were competing. This dynamism can make it difficult to determine the relevant market when determining if a firm is a monopoly. As Geoffrey Manne and Alec Stapp point out, antitrust regulation takes a static view of the competition in

[1] Victor Keegan, "Will MySpace Ever Lose Its Monopoly?," *Guardian*, February 8, 2007.
[2] Randall E. Stross, "How Yahoo! Won the Search Wars," *Fortune*, March 2, 1998.
[3] Christopher Koopman and Michael Kotrous, "AIM's Demise Illustrates the Fluidity of the Tech Market," *The Hill*, October 16, 2017.

The ideas presented in this document do not represent official positions of the Mercatus Center or George Mason University.

the industry and can fail to anticipate the dynamic changes and innovations that change the nature of the markets and competition.[4]

Competition in many of these markets comes not only from new entrants, but from the emergence of new options that change the entire nature of the market. Antitrust can be focused only on the immediate situation, and by the time a case concludes, the dynamics of the industry may have changed substantially. As the Competitive Enterprise Institute's Ryan Young writes, "Markets are ongoing-long-term processes but antitrust cases are often short-term reactions to temporary situations—even if they sometimes last so long as to outlive the problem they seek to address."[5] For example, as my colleague Adam Thierer and I discussed, the 13-year-long case against IBM failed to foresee the emergence of new competitors via the personal computing revolution that occurred by the case's end, and the 11-year-long Microsoft case missed the emergence of today's search engines, social media, and mobile-based internet.[6] These days few are concerned about competition in long-distance service, not only because of the breakup of AT&T via antitrust, but because of the innovations that changed the market for communications like cell phones and the internet.[7]

Such dynamic changes can occur in any field, but they seem particularly at issue when considering "Big Tech." The pace of adoption of new technologies only seems to be increasing,[8] so the market that exists for today's technology giants might look entirely different within a short time frame, owing to innovative changes as well as new entrants. In an earlier era, it was easier to determine potentially harmful monopolies in stable, established sectors; however, in the case of many of the information technologies, this determination would be more difficult.[9]

This is not to say that antitrust may never be an appropriate tool. Rather, in a rapidly changing field, market definition is difficult, and innovation may change the nature competition. In one survey, fewer than 16 percent of American consumers responded that they thought today's online giants could not be replaced by a better competitor.[10] Some evidence indicates that individuals may already be looking for new options. For example, in a Pew Research survey of teenagers, 35 percent of respondents reported that Snapchat was the platform they use most often.[11]

Regulators and policymakers should carefully consider when antitrust is a necessary intervention and when innovation may provide a better solution for both entrepreneurs and consumers.

CONSUMER HARM AND ANTITRUST IN THE DIGITAL MARKET

Another key element of antitrust enforcement has been its focus on anticompetitive behavior's harm to consumers. While some practices are considered so inherently anticompetitive that they have been deemed per se violations,[12] the current approach to antitrust enforcement mostly applies the consumer

[4] Geoffrey Manne and Alec Stapp, "This Too Shall Pass: Unassailable Monopolies That Were in Hindsight Eminently Assailable," *Truth on the Market*, April 1, 2019.
[5] Ryan Young, "Antitrust Basics: Think Long Term, Not Just Short Term," *Competitive Enterprise Institute* (blog), August 23, 2019.
[6] Adam Thierer and Jennifer Huddleston, "Facebook and Antitrust, Part 3: Will Structure Remedies Solve Alleged Problems?," *The Bridge*, June 18, 2019.
[7] Thierer and Huddleston, "Facebook and Antitrust, Part 3."
[8] Rita Gunther McGrath, "The Pace of Technology Adoption Is Speeding Up," *Harvard Business Review*, November 25, 2013.
[9] Adam Thierer and Jennifer Huddleston, "Facebook and Antitrust, Part 1: What Is the Relevant Market?," *The Bridge*, June 7, 2019.
[10] NetChoice, "American Consumers Reject Backlash against Tech," accessed September 5, 2019, https://netchoice.org/techlashpoll/.
[11] Monica Anderson and Jing Jing Jiang, *Teens, Social Media & Technology 2018* (Washington, DC: Pew Research Center, 2018).
[12] Federal Trade Commission, "Dealings with Competitors," accessed September 5, 2019, https://www.ftc.gov/tips-advice/competition-guidance/guide-antitrust-laws/dealings-competitors.

welfare standard rather than a more subjective measure that focuses on non-price-based metrics, such as a general opposition to the mere size of a large company.[13]

Prior to greater acceptance of the consumer welfare standard, a more discretion-based approach focused on the "rule of reason" that created some uncertainty about what would be considered a violation as policy climates and judges viewed certain practices differently.[14] Proponents of this approach express greater concern about the effect on other competitors than on the consumers themselves and are more likely to express concerns about bigness itself.[15] However, as my Mercatus colleague Andrea O'Sullivan points out in her analysis of contemporary calls to return to a more policy-focused standard, research indicates that the relationship between concentration and dynamism or competition is more complex than it may initially appear.[16] A shift away from the consumer welfare standard focuses on a narrow view of what competition should look like rather than examining the effect on consumers of these behaviors.

One benefit of the consumer welfare standard is its ability to provide more certainty while also adapting to technological changes and an increasingly global market.[17] As the Information Technology and Innovation Foundation's Joe Kennedy argues, the consumer welfare standard is able to handle antitrust concerns about potential anticompetitive behavior such as manipulating search results to favor one's own services over a competitor's or leveraging monopoly power in specific defined relevant markets such as advertising.[18]

The adaptability of the objective consumer welfare standard includes the ability to handle questions regarding today's services offered free of charge to consumers by many tech companies.[19] Under the consumer welfare standard, it is difficult to see where consumers are harmed by large tech companies, and consumers may even benefit from the current model for providing services.[20] As Adam Thierer and I wrote, in order to resolve some of the concerns about these free services, a company would have to raise its prices and restrict its output, diminishing the benefits and value consumers find in its free-for-use service.[21] Similarly, Andrea O'Sullivan points out that shifting away from a consumer welfare standard could lead to keeping prices high and benefit interest groups rather than consumers.[22] That is not to say harm could never occur for a free-of-charge service but that antitrust should continue to focus on the potential harm to consumer welfare rather than an amorphous set of policy concerns.

The consumer welfare standard remains a balanced and objective approach that can respond to potentially anticompetitive behaviors while retaining the benefits for consumers and certainty for companies. It remains objective while adapting to today's digital age.

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[13] Andrea O'Sullivan, "What Is 'Hipster Antitrust?'," *The Bridge*, October 18, 2018.
[14] The "rule of reason" relies on judges' discretion in identifying unreasonable restraints of trade violations and antitrust laws in addition to existing per se violations. See Ryan Young, "Antitrust Basics: Rule of Reason Standard vs. Consumer Welfare Standard," *Competitive Enterprise Institute* (blog), July 8, 2019.
[15] O'Sullivan, "What Is 'Hipster Antitrust?'"
[16] O'Sullivan.
[17] Joe Kennedy, *Why the Consumer Welfare Standard Should Remain the Bedrock of Antitrust Policy* (Washington, DC: Information Technology & Innovation Foundation, 2018), 9.
[18] Kennedy, *Why the Consumer Welfare Standard Should Remain*, 13.
[19] Adam Thierer and Jennifer Huddleston, "Facebook and Antitrust, Part 2: Where Is the Consumer Harm?," *The Bridge*, June 12, 2019; Kennedy, *Why the Consumer Welfare Standard Should Remain*, 13–14.
[20] Thierer and Huddleston, "Facebook and Antitrust, Part 2."
[21] Thierer and Huddleston.
[22] Andrea O'Sullivan, "Will Antitrust Action Against Big Tech Resolve Anything?," *Reason*, June 11, 2019.

THE IMPORTANCE OF USING THE APPROPRIATE POLICY TOOL TO ADDRESS CONCERNS

Often conversations about antitrust and "Big Tech" are part of a larger "techlash" conversation with a litany of complaints and concerns—from data privacy and fake news to alleged political bias and "addiction."[23] Antitrust is a powerful tool, but when it comes to today's technology giants, it could be more of a sledgehammer than a scalpel. Concerns about data privacy, fake news, or online content will need a more targeted approach than antitrust would provide.[24]

Not only could a breakup of such companies fail to address these concerns, in some cases, the fractured entities might actually exacerbate the problems. For example, as Tyler Cowen argues, the currently integrated companies are able to keep certain elements less ad driven or more privacy centric because they are able to rely on the revenue earnings of the main company as a whole.[25] Smaller entities would no longer be able to rely on such cross-subsidization and might need to pursue those same disfavored advertising or data behaviors themselves.[26]

Similarly, there is no guarantee that the smaller entities would be any better at content moderation or addressing other concerns than the current players would. In order to ensure effectiveness, the firewalls between these new separate entities would have to be strictly maintained, likely leading to increased concerns about walled gardens and interoperability.[27] As Adam Thierer and I have discussed, this would require companies to forgo new services or capabilities that consumers want and increase costs to consumers through both direct and indirect costs such as increased search costs to find the same information or tools.[28] At the same time, such a proposal would also require burdensome regulatory requirements that may or may not actually improve competition and consumer welfare.[29]

Policymakers should look for ways of educating and empowering consumers to make choices that reflect their own preferences for data usage and technology rather than assuming that breaking up today's tech companies will address data privacy and other technological concerns.[30] Policymakers should consider a targeted approach by looking at existing tools for targeted enforcement and focusing on those areas of agreed-upon harm or failure when developing new tools.[31] Antitrust is a powerful tool, but it is not a silver bullet for a plethora of policy concerns. As such, it should be used for its intended purpose of preventing anticompetitive behaviors that harm consumers rather than for resolving concerns such as data privacy, to which it is an ill-fitted tool.

CONCLUSION

America is a leader in many technologies, including the internet, in part because of the permissionless policy framework that created low barriers to entry and allowed entrepreneurs to find unique ways to serve consumers.[32] Technology continues to evolve and change in a dynamic fashion. Sometimes the best competition comes from unexpected sources that change the nature of the market and topple once seemingly unstoppable giants.[33] With this in mind, while antitrust laws do serve a purpose when it comes to consumer protection and competition in the free market, the focus should remain on consumer welfare rather than seeing antitrust as a way to address a variety of policy concerns for which it is ill-suited.

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[23] Thierer and Huddleston, "Facebook and Antitrust, Part 3."
[24] Thierer and Huddleston.
[25] Tyler Cowen, "Breaking Up Facebook Would Be a Big Mistake," *Slate*, June 13, 2019.
[26] Cowen, "Breaking Up Facebook."
[27] Thierer and Huddleston, "Facebook and Antitrust, Part 3."
[28] Thierer and Huddleston.
[29] Thierer and Huddleston.
[30] Roslyn Layton, "Keys for a Consumer-Centric Approach to Online Privacy," *AEIdeas*, September 26, 2018.
[31] Jennifer Huddleston, "Four Questions to Consider When Debating Potential Data Privacy Policy," *The Bridge*, April 25, 2019.
[32] Adam Thierer, *Permissionless Innovation: The Continuing Case for Comprehensive Technological Freedom* (Arlington, VA: Mercatus Center at George Mason University, 2016), 11–14.
[33] Adam Thierer and Jennifer Huddleston, "Facebook and Antitrust, Part 1."

September 19, 2019

The Honorable Lindsey Graham
Chairman
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Dianne Feinstein
Ranking Member
Committee on the Judiciary
United States Senate
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The Honorable Jerrold Nadler
Chairman
Committee on the Judiciary
United States House of Representatives
Washington, DC 20515

The Honorable Doug Collins
Ranking Member
Committee on the Judiciary
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The Honorable Roger Wicker
Chairman
Committee on Commerce, Science,
and Transportation
United States Senate
Washington, DC 20510

The Honorable Maria Cantwell
Ranking Member
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The Honorable Frank Pallone
Chairman
Committee on Energy and Commerce
United States House of Representatives
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The Honorable Greg Walden
Ranking Member
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

The Honorable Ron Johnson
Chairman
Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, DC 20510

The Honorable Gary Peters
Ranking Member
Committee on Homeland Security
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The Honorable Bennie G. Thompson
Chairman
Committee on Homeland Security
United States House of Representatives
Washington, DC 20515

The Honorable Mike Rogers
Ranking Member
Committee on Homeland Security
United States House of Representatives
Washington, DC 20515

Chairmen and Ranking Members:

We would like to bring to your attention an issue that is of concern to all our organizations. Google is beginning to implement encrypted Domain Name System lookups into its Chrome browser and Android operating system through a new protocol for wireline and wireless service, known as DNS over HTTPS (DoH). If not coordinated with others in the internet ecosystem, this could interfere on a mass scale with critical internet functions, as well as raise data competition issues. We ask that the Committee seek detailed information from Google about its current and future plans and timetable for implementing encrypted DNS lookups, as well as a commitment not to centralize DNS lookups by default in Chrome or Android without first meeting with others in the internet ecosystem, addressing the implications of browser- and operating-system-based DNS lookups, and reaching consensus on implementation issues surrounding encrypted DNS.

DNS acts as a telephone directory for the Internet and has historically been broadly dispersed, on a de-centralized "local basis." When an end user types in the name of a website (*e.g.*, www.wikipedia.org), the end user's Internet Service Provider or other provider performs a "DNS look-up" by consulting a directory that translates the website name into a string of numbers that is used to connect the end user to the website. End users can choose a DNS provider other than their ISP, and many customers do so, in particular enterprise customers who manage their own private networks.

Google is unilaterally moving forward with centralizing encrypted domain name requests within Chrome and Android, rather than having DNS queries dispersed amongst hundreds of providers. When a consumer or enterprise uses Google's Android phones or Chrome web browser, Android or Chrome would make Google the encrypted DNS lookup provider by default and most consumers would have limited practical knowledge or ability to detect or reject that choice. Because the majority of worldwide internet traffic (both wired and wireless) runs through the Chrome browser or the Android operating system, Google could become the overwhelmingly predominant DNS lookup provider.

While we recognize the potential positive effects of encryption, we are concerned about the potential for default, centralized resolution of DNS queries, and the collection of the majority of worldwide DNS data by a single, global internet company. By interposing itself between DNS providers and the users of the Chrome browser (> 60% worldwide share) and Android phones (> 80% worldwide share of mobile operating systems), Google would acquire greater control over user data across networks and devices around the world. This could inhibit competitors and possibly foreclose competition in advertising and other industries.

Moreover, the centralized control of encrypted DNS threatens to harm consumers by interfering with a wide range of services provided by ISPs (both enterprise and public-facing) and others. Over the last several decades, DNS has been used to build other critical internet features and functionality including: (a) the provision of parental controls and IoT management for end users; (b) connecting end users to the nearest content delivery networks, thus ensuring the delivery of content in the fastest, cheapest, and most reliable manner; and (c) assisting rights holders' and law enforcement's efforts in enforcing judicial orders in combatting online piracy, as well as law enforcement's efforts in enforcing judicial orders in combatting the exploitation of minors. Google's centralization of DNS would bypass these critical features, undermining important consumer services and protections, and likely resulting in confusion because consumers will not understand why these features are no longer working. This centralization also raises serious cybersecurity risks and creates a single point of failure for global Internet services that is fundamentally at odds with the decentralized architecture of the internet. By limiting the ability to spot network threat indicators, it would also undermine federal government and private sector efforts to use DNS information to mitigate cybersecurity risks.

For these reasons, we ask that the Committee call upon Google not to impose centralized, encrypted DNS as a default standard in Chrome and Android. Instead, Google should follow the Internet Engineering Task Force best practice of fully vetting internet standards, and the internet community should work together to build consensus to ensure that encrypted DNS is implemented in a decentralized way that maximizes consumer welfare and avoids the disruption to essential services identified above.

Sincerely,

CTIA
NCTA – The Internet & Television Association
US Telecom – The Broadband Association

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October 18, 2019

The Honorable David Cicilline, Chair
The Honorable F. James Sensenbrenner, Ranking Member
House Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law
2138 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

We write to you regarding the hearing on "Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition."[1] For over two decades, the Electronic Privacy Information Center (EPIC) has focused public attention on emerging privacy issues, including the growing concentration of the Internet industry.[2] Over the past two decades, an absence of privacy regulation has led to a growing concentration of internet services. Privacy rules could help level the playing field.

The Federal Trade Commission Has Failed to Promote Competition and Has Failed to Consider the Significance of Data Collection in Merger Review

EPIC has long urged federal agencies to protect American consumers in merger reviews.[3] In 2007, EPIC filed a complaint with the FTC in which we urged the Commission to block Google's proposed acquisition of DoubleClick. EPIC said at the time that the acquisition would enable Google

[1] *Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition*, 116th Cong. (2019), H. Comm. on the Judiciary, Subcomm. on Antitrust, Commercial, and Administrative Law, https://judiciary.house.gov/legislation/hearings/online-platforms-and-market-power-part-3-role-data-and-privacy-competition-0 (Oct. 18, 2019).

[2] *See An Examination of the Google-DoubleClick Merger and the Online Advertising Industry: Hearing Before the S. Comm. on the Judiciary, Subcomm. on Antitrust, Competition Policy and Consumer Rights*, 110th Cong. (2007) (statement of Marc Rotenberg, Exec. Dir., EPIC), https://epic.org/privacy/ftc/google/epic_test_092707.pdf.

[3] In 2000, EPIC joined with our colleagues in the TransAtlantic Consumer Dialogue to urge anti-trust authorities reviewing the AOL-Time Warner deal to "condition approval of the proposed merger on the adoption of enforceable Fair Information Practices that would guarantee consumer privacy safeguards at least equal to those that would be provided under the EU Data Directive" TACD, *Merger of American Online and Time Warner on Privacy Protection* (Feb. 2000), http://test.tacd.org/wp-content/uploads/2013/09/TACD-ECOM-17-00-Merger-of-America-Online-and-Time-Warner-and-Privacy-Protection.pdf. Consumer groups anticipated almost two decades that the collection of personal data would become an increasingly important consideration in merger review, particularly among tech firms. *See also*, EPIC Complaint to FTC regarding DoubleClick's proposed acquisition of Abacus Direct (Feb. 10, 2000) ("Not only did DoubleClick deceive consumers by claiming in multiple earlier privacy policies that information collected would remain anonymous, the company also unfairly collects and links information about Internet users without their knowledge or control.")

to collect the personal information of billions of users and track their browsing activities across the web.[4] EPIC correctly warned that this acquisition would accelerate Google's dominance of the online advertising industry and destroy competition. The FTC ultimately allowed the merger to go forward over the compelling dissent of Commissioner Pamela Jones Harbour.[5]

EPIC also explained to the FTC that other mergers also posed substantial risks for consumer privacy and competition. In 2011, EPIC warned the FTC that Google's dominance in the search algorithm marketplace was allowing it to preference its own content in search results.[6] Today Google occupies 88% of the search market in the United States[7] and 94% of the search market in Europe.[8] And as Tim Wu explained in his recent book, "Google wants to organize the world's information, but to do so they need to get their hands on all the information in the world."[9]

Google's Acquisition of YouTube Skewed Search Results to Favor Google

Google's acquisition of YouTube was also problematic. Several years ago, EPIC provided the videos among the top-ranked search results on YouTube for a search on "privacy." At the time, YouTube's search results were organized by the objective criteria of "hits" and "viewer rankings." Both objective criteria are easy to verify. However, after Google acquired YouTube, EPIC's search rankings fell. Google had substituted its own subjective, "relevance" ranking in place of objective search criteria. Google's ranking algorithm was opaque and proprietary. Google's subjective algorithm gave preference to Google's video content on YouTube about "privacy" over that of EPIC and others. The Google videos rose in the rankings while others fell.

EPIC prepared a detailed report for the FTC when it undertook its investigation of anti-competitive behavior of Internet companies, based on EPIC's specific experience with Google's decision to change the search algorithm on YouTube to favor its own content.[10] The FTC took no action on EPIC's complaint. But the European Commission found that Google had abused its dominance as a search engine by rigging its search results to prefer its own shopping service.[11] The Commission required Google to change its algorithm to rank its own shopping comparison as it ranks its competitors.

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[4] EPIC, Complaint and Request for Injunction, Request for Investigation and for Other Relief In the Matter of Google, Inc. and DoubleClick, Inc. (Apr. 20, 2007), https://epic.org/privacy/ftc/google/epic_complaint.pdf.
[5] Dissenting Statement of Commissioner Pamela Jones Harbour, *In re Google/DoubleClick*, FTC File No. 070-0170 (Dec. 20, 2007), https://www.ftc.gov/sites/default/files/documents/public_statements/statement-matter-google/doubleclick/071220harbour_0.pdf.
[6] Letter from EPIC to the Fed. Trade Comm'n (Sept. 8, 2011), https://epic.org/privacy/ftc/google/Google_FTC_Ltr_09_08_11.pdf.
[7] *Search Engine Market Share United States of America*, Statcounter, http://gs.statcounter.com/search-engine-market-share/all/united-states-of-america.
[8] *Search Engine Market Share Europe*, Statcounter, http://gs.statcounter.com/search-engine-market-share/all/europe.
[9] Tim Wu, *The Curse of Bigness* 126 (2018).
[10] Letter from EPIC to Commissioners of the Fed. Trade Comm'n (Sept. 8, 2011), https://epic.org/privacy/ftc/google/Google_FTC_Ltr_09_08_11.pdf.
[11] Press Release, European Comm'n, Antitrust: Commission fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison-Shopping Service (June 27, 2017), http://europa.eu/rapid/press-release_IP-17-1784_en.htm.

This early experience with internet mergers helps explain the need for greater transparency today about the determination of search rankings.

Google's Acquisition of Nest, and Facebook's Acquisition of WhatsApp Broke Privacy Commitments

Companies that protect user privacy are being absorbed by companies that do not protect privacy. In 2014, EPIC warned the FTC about the privacy risks of Google's acquisition of Nest Labs, a maker of "smart thermostats," stressing that "Google regularly collapses the privacy policies of companies it acquires' and urged the FTC to block the deal.[12] Yet the FTC let the deal go forward without any qualifications.[13]

Most notably, in 2014, Facebook purchased WhatsApp, a text-messaging service that attracted users specifically because of strong commitments to privacy.[14] WhatsApp's founder stated in 2012 that, "[w]e have not, we do not and we will not ever sell your personal information to anyone."[15] EPIC and the Center for Digital Democracy urged the FTC to block the deal.[16]

The FTC ultimately approved the merger after Facebook and WhatsApp promised not to make any changes to WhatsApp users' privacy settings.[17] However Facebook announced in 2016 that it would begin acquiring the personal information of WhatsApp users, including phone numbers, directly contradicting their previous promises to honor user privacy.[18] Following this, EPIC and CDD filed another complaint with the FTC in 2016, but the Commission has taken no further action.[19] Meanwhile, antitrust authorities in the EU fined Facebook $122 million for making deliberately false representations about the company's ability to integrate the personal data of WhatsApp users.[20]

Inaction by the FTC has spurred more disregard for the privacy interests of WhatsApp users. Facebook said recently it would WhatsApp users with ads, despite earlier statements to the contrary

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[12] EPIC, *Google Plans Advertising on Appliances, Including Nest Thermostat* (May 22, 2014), https://epic.org/2014/05/google-plans-advertising-on-ap.html.
[13] Fed. Trade Comm'n, Early Termination Notice: 20140457: Google Inc.; Nest Labs, Inc. (Feb. 4, 2014), https://www.ftc.gov/enforcement/premerger-notification-program/early-termination-notices/20140457.
[14] EPIC, *In re: WhatsApp*, https://epic.org/privacy/internet/ftc/whatsapp/.
[15] WhatsApp, *Why We Don't Sell Ads* (June 18, 2012), https://blog.whatsapp.com/245/Why-we-dont-sell-ads.
[16] EPIC and Center for Digital Democracy, Complaint, Request for Investigation, Injunction, and Other Relief In the Matter of WhatsApp, Inc., (Mar. 6, 2014), https://epic.org/privacy/ftc/whatsapp/WhatsApp-Complaint.pdf.
[17] *See*, Letter from Jessica L. Rich, Dir., Bureau of Consumer Prot., Fed. Trade Comm'n, to Facebook and WhatsApp (Apr. 10, 2014), https://epic.org/privacy/internet/ftc/whatsapp/FTC-facebook-whatsapp-ltr.pdf (concerning the companies' pledge to honor WhatsApp's privacy promises).
[18] WhatsApp, *Looking Ahead for WhatsApp* (Aug. 25, 2016), https://blog.whatsapp.com/10000627/Looking-ahead-for-WhatsApp.
[19] EPIC and Center for Digital Democracy, Complaint, Request for Investigation, Injunction, and Other Relief In the Matter of WhatsApp, Inc. (Aug. 29, 2016), https://epic.org/privacy/ftc/whatsapp/EPIC-CDD-FTC-WhatsApp-Complaint-2016.pdf.
[20] Mark Scott, *E.U. Fines Facebook $122 Million Over Disclosures in WhatsApp Deal*, N.Y. Times (May 18, 2017), https://www.nytimes.com/2017/05/18/technology/facebook-european-union-fine-whatsapp.html.

and opposition from WhatsApp's founders.[21] And earlier this year, Mark Zuckerberg confirmed Facebook's plans to merge WhatsApp, Facebook Messenger, and Instagram.[22] As we explained for *Techonomy*, a leading journal of tech innovation:

> If the FTC had stood behind its commitment to protect the data of WhatsApp users, there might still be an excellent messaging service, with end-to-end encryption, no advertising and minimal cost, widely loved by internet users around the world. But the FTC failed to act and one of the great internet innovations has essentially disappeared.[23]

Instead, consumers are left with fewer options, Facebook has less competition, and the increased amount of data available to Facebook will make it even easier to crush the next competitor.

In the Commission's recent settlement with Facebook, the FTC chose not to undo the mistaken approval of the WhatsApp acquisition against the advice of consumer groups.[24] Far from protecting market competition, the Commission is facilitating industry consolidation.

Merger Review Should Consider Data Protection

The United States stands alone in its unwillingness to address privacy as a competition issue. The merger of Facebook and WhatsApp has prompted countries in Europe to scrutinize the deal and issue fines.[25] But the FTC has repeatedly failed to even consider consumer privacy and data security in its merger review process.[26] EPIC emphasized the consequences of this failure in comments to the FTC in 2015, stating, "[i]n every instance, it was clear that the practical consequence of the merger would be to reduce the privacy protections for consumers and expose individuals to enhanced tracking and profiling."[27]

EPIC further underscored the dangers of lax enforcement in recent comments to the FTC, noting that Google and Facebook's access to consumer data "is at the very heart of why the digital

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[21] Anthony Cuthbertson, *WhatsApp to Start Filling Up with Ads Just Like Facebook*, Independent (Oct. 1, 2018), https://www.independent.co.uk/life-style/gadgets-and-tech/news/whatsapp-update-targeted-ads-status-facebook-brian-acton-a8563091.html.

[22] Mike Issac, *Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger*, N.Y. Times (Jan. 25, 2019), https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html.

[23] Marc Rotenberg, *The Facebook-WhatsApp Lesson: Privacy Protection Necessary for Innovation*, Techonomy (May 4, 2018), https://techonomy.com/2018/05/facebook-whatsapp-lesson-privacy-protection-necessary-innovation.

[24] Letter from EPIC et al. to Joseph Simons, Chairman, Federal Trade Comm'n (Jan. 24, 2019), https://epic.org/privacy/facebook/2011-consent-order/US-NGOs-to-FTC-re-FB-Jan-2019.pdf.

[25] *Fuel of the Future: Data is Giving Rise to A New Economy*, Economist (May 6, 2017), http://www.economist.com/news/briefing/21721634-how-it-shaping-up-data-giving-rise-new-economy.

[26] Nathan Newman, *15 Years of FTC Failure to Factor Privacy into Merger Reviews*, Huffington Post, (Mar. 19, 2015), https://www.huffingtonpost.com/nathan-newman/15-years-of-ftc-failure-t_b_6901670.html.

[27] EPIC, Comments of the Electronic Privacy Information Center: Assessing the FTC's Prior Actions on Merger Review and Consumer Privacy, FTC File No. P143100, (Mar. 17, 2015), https://epic.org/privacy/internet/ftc/Merger-Remedy-3-17.pdf.

platforms have been able to entrench their dominance."[28] But as Facebook and Google have developed increasingly invasive tracking of their users, the FTC failed to act. Despite an active consent decree against Facebook, the FTC allowed the company to disclose the personal information of 87 million Americans.[29] The Commission had the power to stop the scandal, simply by enforcing its previous orders in a way that protected consumer privacy.[30]

Antitrust enforcers must ensure that consumer privacy and data is treated as the competitive harm that it so clearly is. In written responses to this Committee, Assistant Attorney General Delrahim stated that he would "vigorously enforce the antitrust laws with respect to online platforms."[31] Chairman Simons said in his nomination hearing "the FTC needs to devote substantial resources to determine whether its merger enforcement has been too lax, and if that is the case, the agency needs to determine the reason for such failure and to fix it."[32] Clearly, there have been considerable shortcomings in merger enforcement. This Committee must ensure those are remedied.

The consolidation of user private data into the hands of a small group of firms shows that enforcement agencies cannot ignore the economic impacts of privacy on proposed merger. EPIC has continued to insist that privacy and users' data be considered in the analysis of competitive harms, and we urge the Subcommittee to press its witnesses to ensure that competition *and* consumers are protected in merger reviews. We note also the recent statement from the TransAtlantic Consumer Dialogue, almost twenty years since the original statement on the AOL-Time Warner merger review, which again stresses the importance of privacy protection in competition review: "the lack of privacy protection in the US has contributed to the decline in competition among technology firms."[33]

Finally, EPIC urges the Subcommittee to make "algorithmic transparency" a priority for merger review. When companies combine vast amounts of consumer data, it not only increases the risk of data breach, but allows companies to use that data in increasingly opaque ways.[34] Consumers

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[28] EPIC et al., Comments on Competition and Consumer Protection in the 21st Century Hearings at 19 (Aug. 20, 2018), https://epic.org/apa/comments/EPIC-FTC-CompetitionHearings-August2018.pdf.

[29] Kevin Granville, *Facebook and Cambridge Analytica: What You Need to Know as Fallout Widens*, N.Y. Times (March 19, 2018), https://www.nytimes.com/2018/03/19/technology/facebook-cambridge-analytica-explained.html.

[30] Marc Rotenberg, *How the FTC Could Have Prevented the Facebook Mess*, Techonomy (Mar. 22, 2018), https://techonomy.com/2018/03/how-the-ftc-could-have-avoided-the-facebook-mess ("If the FTC had enforced the Facebook consent order, Cambridge Analytica could not have accomplished its unprecedented data harvest.").

[31] Questions for the Record, Makan Delrahim, Nominee to be Assistant Attorney General of the Antitrust Division at 6, https://www.judiciary.senate.gov/imo/media/doc/Delrahim%20Responses%20to%20QFRs.pdf.

[32] *Nomination Hearing Before the S. Comm. on Commerce, Sci., and Transp.*, 115th Cong. (2018) (statement of Joseph Simons, Chairman, Fed. Trade Comin'n. at 59:40), https://www.commerce.senate.gov/public/index.cfm/hearings?ID=EECF6964-F8DC-469E-AEB2-D7C16182A0E8.

[33] TACD, *Resolution on Competition, Privacy and Consumer Welfare* (Dec. 10, 2018), http://tacd.org/wp-content/uploads/2018/12/TACD-Resolution_Comp_Dec2018_final.pdf. *See generally*, TACD, *TACD publishes resolution on competition, privacy and consumer welfare* (Dec. 10, 2018), http://tacd.org/tacd-publishes-resolution-on-competition-privacy-and-consumer-welfare/.

[34] For instance, Facebook's massive breach last week was particularly damaging because the 50 million affected accounts were used by Facebook in myriad ways users did not understand. *See* Mike Isaac and

face a "black box" of automated scoring systems that impact every aspect of their lives.[35] Consumers have no control over which companies have access their personal data and how those companies use that data. Algorithms often make determinations about consumers based on inaccurate, outdated or incomplete information, and these determinations can serve as the basis for denying a consumer a job, a home loan, or a scholarship.[36] Companies should not be allowed to merge large sets of consumer data without oversight, accountability, and transparency. The Universal Guidelines for AI provide the basis for legislation on this important issue.[37]

Thank you for your timely attention to this pressing issue. EPIC looks forward to working with the Subcommittee to ensure that consumers are protected during merger reviews. We ask that this statement be entered in the hearing record.

Sincerely,

/s/ Marc Rotenberg
Marc Rotenberg
EPIC President

/s/ Caitriona Fitzgerald
Caitriona Fitzgerald
EPIC Policy Director

/s/ Christine Bannan
Christine Bannan
EPIC Consumer Protection Counsel

Sheera Frenkel, *Facebook Security Breach Exposes Accounts of 50 Million Users*, N.Y. Times (Sept. 28, 2018), https://www.nytimes.com/2018/09/28/technology/facebook-hack-data-breach.html.

[35] *See* Danielle Keats Citron & Frank Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 Wash. L. Rev. 1 (2014); Frank Pasquale, *The Black Box Society* 8 (2015).

[36] *Id.*

[37] The Public Voice, *The Universal Guidelines for Artificial Intelligence*, https://thepublicvoice.org/ai-universal-guidelines/.

Letter for the Record of

Carl Szabo

Vice President & General Counsel

NetChoice

before

U.S. House of Representatives Judiciary Subcommittee on

Antitrust, Commercial, and Administrative

Hearing on *Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition*.

October 18, 2019

We thank the Subcommittee for holding this important hearing on *Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition*.

NetChoice[1] is a trade association of businesses who share the goal of promoting free speech and free enterprise on the net. We are significantly engaged in the states, in Washington, and in international internet governance organizations.

New developments in markets and in business-to-business and business-to-consumer relationships show robust competition and innovation

The online environment is robust, healthy, and market players are numerous. For consumers, prices are low. For small businesses, opportunity and entrepreneurship are growing. And these results are because competition is robust.

Today, American consumers have more choices and more information than ever. Historically, consumers had to rely upon only a handful of nearby businesses from which to purchase products and services. These businesses could set prices higher than competitors located further away, and customers had a difficult time researching the comparative value and quality of options.

Today, thanks to the internet, consumers have access to a smorgasbord of products, businesses, and information about pricing. With a couple of clicks customers can find the lowest prices for goods they want. No longer limited to just nearby stores, the internet enables customers to buy from hundreds of thousands of stores across the country.

Online services have evolved to help consumers find the lowest prices. Websites such as Slickdeals[2] help consumers find active discounts. Services such as Honey[3] enable real-time price comparison and coupon testing at checkout. Today, customers can easily find the products they want at the lowest prices.

For businesses, the internet has reduced barriers to entry and increased their potential marketplace. Now an art student can easily sell paintings from her studio to anyone around the world, without first obtaining access to dealers and conceding markups to galleries. A parent can sell their childrens' old toys in a large market rather than relying on a one-day neighborhood yard sale. Anyone can compete with any business, big or small.

There is no dearth of competition. The marketplace has never been more competitive.

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[1] NetChoice is a trade association of e-Commerce and online businesses, at www.netchoice.org. The views expressed here do not necessarily represent the views of every NetChoice member company.
[2] Slickdeals.net
[3] JoinHoney.com

Large platforms help small businesses

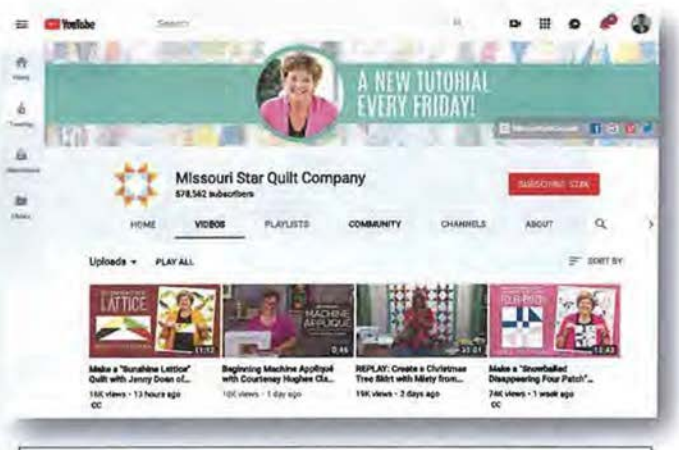
Anti-business advocates claim that "big is bad." But for America's small and mid-size businesses, the bigger the platform the better for reaching larger audiences.

Consider the local custom furniture store. Just fifteen years ago businesses like this could barely afford to place an ad in a local newspaper, let alone on TV or radio. ***Thanks to large online platforms, for less than ten dollars a small business can reach thousands of potential customers and target them more accurately than ever.***

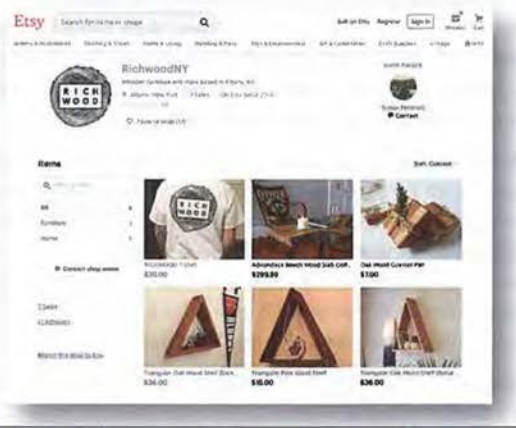
Large online platforms have given new growth opportunities to America's small businesses. Consider the app stores on the Apple and Android platforms. Developers can reach markets of millions of customers. And the costs for a developer to distribute an app are intentionally low, to empower small developers to compete. Fifteen years ago, this was only possible through significant outlays for advertising, distribution, and logistics to move software to customers. And even if developers decide to not publish their apps in the Android or Apple marketplaces, they can make their services available via device websites.

Or consider how the platforms Etsy and eBay enable small sellers to find customers across the country and even around the world.

These benefits are the result of allowing online platforms to grow and flourish because America's antitrust law has relied upon the consumer welfare standard to regulate that growth.



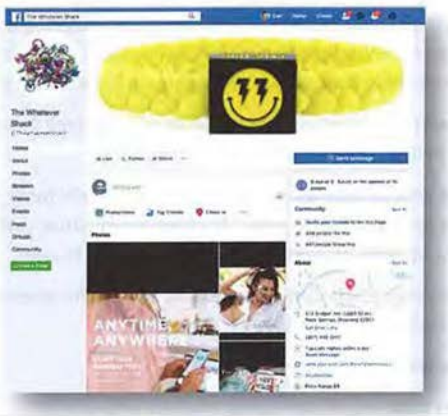
Missouri Star Quilt Company in Hamilton, MO uses YouTube to advertise to customers across the country.



In Albany, NY, woodworker RichwoodNY uses Etsy to find customers from across the country.



William Wolstenholme in Cumberland, RI uses eBay to sell consignment to customers across the country.



The Whatever Shack in Rock Springs, WY uses Facebook Marketplace to find customers from across the country.



Turpin's Jewelry in Dillard, GA uses eBay to find customers from across the country.

Polling shows that Americans oppose government limitations on business acquisitions and Americans do not see consumers as the chief beneficiaries of big-tech breakups

Polling of Americans conducted by Zogby Analytics and commissioned by NetChoice found overwhelming opposition to limitations on acquisitions by large online platforms.[4] Moreover, this polling found overwhelming concern with breaking-up large online platforms.

Question: *Some groups are calling for the break-up of large tech businesses. Who do you believe would most benefit from a break-up?*

- 28% of those with an opinion said, "Consumers" would most benefit.
- 53% of those with an opinion said, "Traditional industries competing with tech businesses" and "Anti-business groups" would most benefit.

Question: *If an online business becomes successful, should the government prevent them from acquiring any tech startups that seek to be acquired?*

- 86% of those with an opinion said "No"

That same polling shows that:

- Only 10% of Americans think the government should prevent successful online businesses from acquiring other companies.

Americans said that the government should most focus its anticompetitive resources on sectors *other than tech*.

When asked:

- Only 5% of Americans say the government should most focus its anticompetitive enforcement on tech platforms.[5]

To compare:

- 29% of Americans say the government should most focus its anticompetitive enforcement on pharmaceutical companies, and

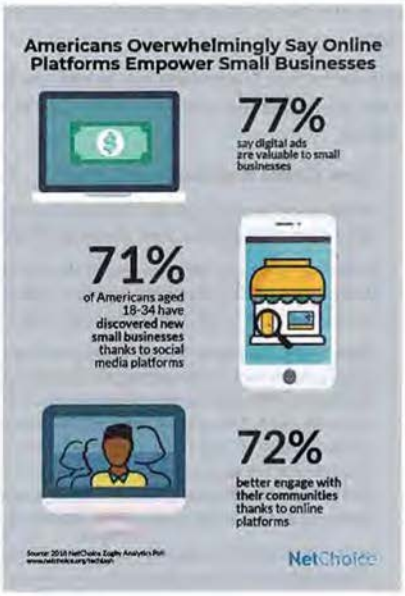
[4] NetChoice.org/TechlashPoll.
[5] *Id.*

- 11% of Americans say the government should most focus on the electricity and gas industry.

These findings are also seen in an NBC poll, ***"By a more emphatic 68% to 28%, respondents said such decisions [about big-tech breakups] should be left to the free market rather than government."***[6]

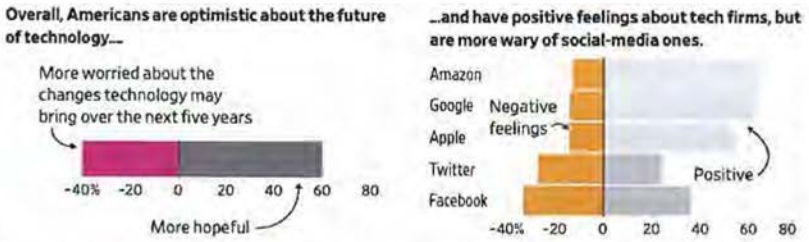
While a *Wall Street Journal* - NBC poll shows that a majority of users have privacy concerns, there are other findings that are far more relevant to today's hearing. For example, their polling shows that Americans have very positive feelings about the large platforms (see image below).[7]





[6] John Harwood, *Americans don't support Sen. Elizabeth Warren's plan to break up big tech: Poll*, CNBC (Apr. 5, 2019)

[7] John D. McKinnon and Danny Dougherty, *Americans Hate Social Media but Can't Give It Up, WSJ/NBC News Poll Finds*, Wall St. Jo. (Apr. 5, 2019).



Disruptive and generational changes in technology provide new avenues for competition

With rapid innovation and growth of online platforms, we've seen a breakdown of barriers for new entrants into established markets, which forces existing businesses to innovate and compete.

Despite claims that "consumers are locked into large platforms," public opinion and consumer behavior shows just the opposite. Think back to 20 years ago, when Fortune Magazine featured this article:

> **How Yahoo! Won the Search Wars**[8]
>
> *Once upon a time, Yahoo! was an Internet search site with mediocre technology. Now it has a market cap of $2.8 billion. Some people say it's the next America Online.*
>
> Let's leave aside, for now, questions of whether Yahoo! will be around in ten years or whether there's any way its stock might be a good investment. This much is clear: Yahoo! has won the search-engine wars and is poised for much bigger things.
>
> According to a survey by Mediamark Research last year, in a typical month more than 25 million people use Yahoo!. Some months, 40 million people visit. More people go to Yahoo! than to Netscape or AOL. More people search at Yahoo! than watch MTV, Nickelodeon, or Showtime in any given week. More people check out Yahoo! than read the typical issue of Time, Newsweek, or Life. Simply put, that's why some people think Yahoo! may make wads and wads of money in the future by selling ads. Observes Oppenheimer & Co. analyst Henry Blodget: "I have yet to find a flat surface attractive enough to grab the attention of 40 million pairs of eyeballs but not attractive enough to spend big money advertising on."
>
> Gathering eyeballs has been the company plan since its inception. It turns out that this pack of Net-besotted, Yahooling-their-brains-out, twenty- and thirty-something Web surfers have real business savvy, and **their near-flawless execution and brilliant marketing have eviscerated the competition.** (emphasis added)

[8] Stross, Randall, *How Yahoo! Won the Search Wars*, in Fortune Magazine, at https://archive.fortune.com/magazines/fortune/fortune_archive/1998/03/02/238576/index.htm (Mar 2, 1998)



It's hard to believe now, but online search was dominated by Yahoo when Google arrived as the 8th search competitor in the late 1990s.

In 2006, MySpace had more daily visitors than Google — but was later overtaken by Facebook. As stated by Ryan Bourne in Cato Policy Analysis:

> "Will Myspace ever lose its monopoly?" asked Victor Keegan in the *Guardian*'s technology section in early 2007. The journalist was riffing off a TechNewsWorld article by John Barrett that claimed Myspace was not just a monopoly, but a natural one.
>
> The arguments for such claims were similar to those made about Facebook today
>
> Importantly, the Myspace history shows that the very network effects that lead to massive growth can also lead to a rapid demise when a superior product comes along. All social networks face a difficult balancing act between providing an attractive and innovative user experience, on the one hand, and monetizing the platform by competing for the real "customers"—digital

> advertisers—on the other. The Myspace example shows the degree of interdependence between the two. Getting the balance wrong can have significant consequences.[9]

Truth is, nobody can predict what the tech landscape will look like in five or ten years, and today's leaders must adapt – or risk the same fate as MySpace.

When looking online for products, ***more online shoppers start their product searches on Amazon than on Google***.[10] For general searches, we've seen rapid growth of new search engines like DuckDuckGo.[11] For travel searches we have Expedia, Travelocity, Orbitz, and Kayak. And when searching for local restaurants and vendors, Americans choose from TripAdvisor, UrbanSpoon, Angie's List, and Yelp.

Despite Yelp's present leadership in this search category, the company says in its latest earnings report, ***"We compete in rapidly evolving and intensely competitive markets, and we expect competition to intensify further in the future with the emergence of new technologies and market entrants."***[12]

Innovative new features easily attract consumer attention, and competition is truly only a click away. Nationwide polling conducted by Zogby Analytics and commissioned by NetChoice[13] showed consumers can and do leave platforms when better options are available.

> *Question: Do you think that the services offered by online platforms like Apple, Google, Facebook, and Amazon can be replaced if a better competitor comes along?*
>
> - 70% of those with an opinion said "Yes"

Online advertising is competitive and new competitors are growing fast

Antitrust regulators should first explain why they are limiting their advertising market analysis to an "online environment." Rather than look only at the *online* market, regulators should expand their analysis and market definition to cover *all* advertising – including television, radio, and newspapers.

Regulators need to look at consumers as multi-taskers – surfing the web on their phones while watching a sporting event, for example. In that scenario there is overlap in online and offline advertising markets.

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[9] Bourne, Ryan, *Is This Time Different? Schumpeter, the Tech Giants, and Monopoly Fatalism*, in Cato Policy Analysis, at https://www.cato.org/publications/policy-analysis/time-different-schumpeter-tech-giants-monopoly-fatalism (Jun 17, 2019)

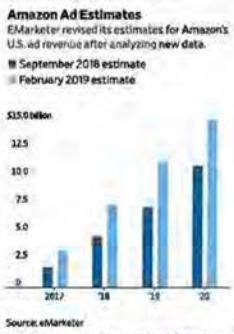
[10] Krista Garcia, *More Product Searches Start on Amazon*, eMarketer (Sept. 7, 2018) ("Nearly half (46.7%) of US internet users started product searches on Amazon compared with 34.6% who went to Google first, according.").

[11] Matt Southern, *DuckDuckGo Traffic Up 50% from Last Year, Hits New Record of 30M Daily Searches*, Search Engine Journal (oct. 11, 2018).

[12] Yelp Inc., 10-Q, May 2019.

[13] *See* Zogby Analytics survey of 1222 adults in the United States conducted from August 6, 2018 to August 8, 2018.

However, if regulators incorrectly limit their antitrust analysis to only *online* advertising, they will readily discover that the online market is competitive and open to new entrants. While Google and Facebook remain the two largest online advertising platforms, neither has anywhere near a monopoly share of ad dollars. According to eMarketer, Google has 32% share of US ad revenue while Facebook has 20%.



Wall St. Journal, Amazon's Ad Business May Be Growing Faster Than Thought

Moreover, Amazon's service is catching up fast. From the Wall Street Journal:[14]

> Amazon's ad revenue is expected to increase to $15 billion in 2020, or just under 10% of the digital ad market share in the U.S., from $11.3 billion in 2019 and an 8.8% share, according to the latest forecast.

With such prolific diversity among advertising platforms, ad exchanges, and ad networks, it is clear that competition is robust. And using Amazon as an example, growth for new competitors is happening.

Big Tech critics have failed to make their case

Proponents of breaking-up tech companies via new theories of antitrust have failed to substantiate their allegations – even though the burden of proof rests with these accusers.

Consider Sen. Elizabeth Warren's *Medium* post,[15] where she proclaims Facebook and Google as "monopolies" while ignoring their actual market share and growing competition in every market they serve.

With less than 20 million U.S. users, Facebook's messaging tool WhatsApp is much smaller than Apple's iMessage, which connects over 90 million American consumers.

TikTok, a fairly new competitor in the social media market, has over half a billion users worldwide.

And in search, Google's competition is a click away as we see the rapid ascent of new general search engines like DuckDuckGo[16] and Google competes with tailored search like Yelp for restaurants and AngiesList for services.

> The consumer welfare standard looks to overall consumer welfare and economic efficiency as the main factors when engaging in antitrust analysis.

[14] Alexandra Bruell, *Amazon's Ad Business May Be Growing Faster Than Thought*, Wall St. Jo. (Feb. 20, 2019).
[15] Sen. Elizabeth Warren, *Here's how we can break up Big Tech*, Medium (Mar. 8 2019).
[16] Matt Southern, *DuckDuckGo Traffic Up 50% from Last Year, Hits New Record of 30M Daily Searches*, Search Engine Journal (oct. 11, 2018)

These American businesses are not consumer-harming monopolies as some claim but are social networking services that have earned global success in a competitive marketplace.

American success stories, such as Google, Apple, and Facebook, empower small businesses to reach new customers all over the world like never before. From online marketplaces, to app stores, to photo sharing services, these platforms allow individuals to connect with the world in ways only dreamt of twenty years ago.

We have seen other anti-business proclamations without facts from Tim Wu, who fails to make a substantive case throughout his book, *The Curse of Bigness*, despite having 300 pages in which to do so.

Consider one of Wu's first points. He cites indexes showing fewer large firms as evidence of consolidation. But Wu ignores similar indexes showing the resurgence in *small* firms.

The Kauffman Index of Growth Entrepreneurship shows that entrepreneurship is at its highest levels since 2008. Main street growth and startup activity are likewise up.[17] The US Bureau of Labor Statistics found self-employment is up since 2014 and is projected to grow at 7.9% — faster than the projected rate for all workers.[18] This shows the inherent danger in making snap-decisions that ignore market changes over time.

In essence, there is a direct correlation between the growth of small entrepreneurs and online platforms like eBay, Facebook, and Google. These platforms are helping small businesses the same way a large retailer operates as an anchor for a shopping center or mall.

The larger these platforms grow means the more customers small businesses can reach with better targeting and lower costs. ***To America's entrepreneurs, bigger is better when finding a platform for the most effective advertising.*** 58% of Americans, and 73% of those between 18 and 24 years old, say online platforms helped them discover a small business they had not previously known.[19]

Tim Wu sees a world where one business controls the market and once it has dominance, it raises prices on consumers and businesses. Take for example the oil industry, the example around which Wu bases his theory.

But under the existing consumer welfare standard, if big oil uses market power to raise prices, that would violate our existing antitrust standards. Moreover, Wu ignores President Teddy Roosevelt's apprehension about the break-up. Roosevelt lamented, "I do not see what good can come from dissolving the Standard Oil Company into 40 separate companies."[20]

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[17] Kauffman Indicators of Entrepreneurship, *available at* https://indicators.kauffman.org
[18] Bureau of Labor and Statistics, *Small-business options: Occupational outlook for self-employed workers, available at* https://www.bls.gov/careeroutlook/2018/article/self-employment.htm
[19] NetChoice.org/TechlashPoll
[20] Crane, *All I Really Need to Know About Antitrust I Learned in 1912*, Iowa Law Review Vol. 100:2025, 2030.

Biographer Ron Chernow captured Roosevelt's conflicting instincts about breaking up America's largest oil company:

> In retrospect, it seems clear that the ambiguous signals from the White House reflected more than duplicity on Roosevelt's part, for he was genuinely reluctant to wield the big stick against Standard Oil. He preferred compromise to antitrust cases, which were slow, time-consuming, and fiendishly difficult to win. He wanted to supervise the trusts, not break them up and sacrifice their efficiency, and he was searching for some conciliatory overture from his adversaries, a suggestion that they would accept government oversight and voluntarily mend their ways.[21]

Wu also cites actions against AT&T and IBM as evidence of antitrust failures. So, while Wu thinks he has found a slam-dunk argument against the consumer welfare standard, he actually shows that the current antitrust system and standards work effectively.

Back in 2010, Tim Wu complained[22] that Facebook's size alone precludes new entrants. Yet Wu's prognostications missed emerging Facebook competitors Twitter, Snapchat, Reddit, YouTube, and LinkedIn. And since 2010, we've seen the rise of additional social media competitors like Twitch, TikTok, Pinterest, and Tumblr.

Likewise, Tim Wu and Sen. Warren complain about businesses giving preference to their own products ahead of others. But it's become expected for retailers – online and off – to offer their own brands to consumers seeking lower cost alternatives from a producer they trust.

For example, Costco features its Kirkland brand in stores. Safeway features its O Organics and Signature Cafe brands. Kohl's is known for its Tony Hawk brand while Macy's has over 20 of its own private label brands. Trader Joe's and Aldi markets prominently feature their proprietary products.

If the prosecutor fails to prove their case, as Sen. Warren, Tim Wu, and their allies have, then governmental action cannot be justified.

Reviewing merger consent decrees

When the termination date of a merger or acquisition consent decree is approaching, that is a prime opportunity to do a second review of market conditions and company conduct. The overseeing agency should review the current market and identify whether the concerns that gave rise to the earlier consent decree remain relevant. If those concerns are no longer relevant, the consent decree should be allowed to expire.

However, if pre-acquisition or pre-merger concerns remain, or the company shows evidence of anti-competitive behavior, then the consent decree should be extended.

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[21] Chernow, Ron, Titan, page 522.

[22] Tim Wu, *In the Grip of the New Monopolists*, Wall St. Jo (Nov. 13, 2010).

For example, the approved merger of Ticketmaster and Live Nation was subject to a 10-year consent decree that expires in 2020.[23] This approved vertical merger allowed the dominant ticketing platform to merge with the largest promoter of concerts.

When reviewing the Ticketmaster-Live Nation transaction in 2010, the Department of Justice raised concerns that "This loss of competition likely would result in higher prices for and less innovation in primary ticketing services."[24] The DoJ was prescient: in the decade since that merger, Ticketmaster continues to maintain a market share of 70-80% in primary ticket sales.[25]

Ticketmaster and Live Nation are now expanding efforts to control event ticketing transactions, by restricting how fans sell or give away their tickets. They are preventing resale of tickets on non-Ticketmaster platforms, using their dominance in primary ticket sales to prohibit competition with respect to ticket resales.

In addition to using terms and conditions, technology, and business conditions with their partners to restrict transferability of tickets amongst consumers,[26] Ticketmaster-Live Nation also uses threats of retaliation to dominate the ticket market and impede competition.[27]

Any objective review of Ticketmaster-Live Nation would conclude that the consent decree is not working. This is a prime example of where oversight agencies should use their merger review powers to maintain a competitive marketplace that serves consumer interests and institute remedies that will ensure competition in the ticket industry.

Congress should proceed carefully when hearing calls to "break-up" technology businesses – no matter how loudly a few are complaining. Instead, Congress should retain and protect the model on which consumers and business have relied and it has and will continue to work – the consumer welfare standard for antitrust

We thank you for your consideration.

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[23] *U.S. v. Ticketmaster Entertainment, Inc.*, Case: 1:10-cv-00139 (U.S.D.C. 2010).
[24] *Id.*
[25] *Id.*
[26] *See*, Ticketmaster Credit Card Entry, *available at* https://www.ticketmaster.com/h/credit-card-entry.html ("Can I sell Credit Card Entry tickets? That's up to the artist, team, or venue! If they give the green light you'll see a Sell button when you click the order number under Order History in My Account.").
[27] *See, e.g.*, Jem Aswad, *Department of Justice 'Looking Into Accusations' Against Live Nation, Report Claims*, Variety (Apr. 1, 2018) (""They have been reviewing complaints that Live Nation, which manages 500 artists, including U2 and Miley Cyrus, has used its control over concert tours to pressure venues into contracting with'").

Friday, October 18, 2019 at 9:39:51 AM Eastern Daylight Time

Subject: 230c
Date: Friday, October 18, 2019 at 9:38:54 AM Eastern Daylight Time
From: Murphy, Devin
To: Andrews, Jessica

(c) Protection for "Good Samaritan" blocking and screening of offensive material
(1) Treatment of publisher or speaker
No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider.
(2) Civil liability No provider or user of an interactive computer service shall be held liable on account of—
(A) any action voluntarily taken in good faith to restrict access to or availability of material that the provider or user considers to be obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable, whether or not such material is constitutionally protected; or
(B) any action taken to enable or make available to information content providers or others the technical means to restrict access to material described in paragraph (1).[1]

Devin Murphy
Legislative Director
Office of Congressman Matt Gaetz
Florida's First Congressional District
1721 Longworth House Office Building
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Sent via iPhone

Mr. CICILLINE. I thank the gentleman for yielding back, and I thank the chairman of the full committee for opening the hearing. I now recognize myself for an opening statement.

In June, this committee launched a historic bipartisan investigation into the state of competition in the digital marketplace. The purpose of this investigation is to document anticompetitive conduct online, to examine whether dominant firms are engaging in anticompetitive conduct, and to assess whether our antitrust laws and current enforcement levels are adequate to address these problems.

Since launching the investigation, the committee has held a series of bipartisan hearings, briefings, and member roundtables as part of this top to bottom review. Most recently, we have requested documents, communications, and information relevant to the investigation from the four dominant platforms.

On Monday, the committee received the first tranche of responses to the requests, tens of thousands of documents, and we expect to receive and review additional materials as part of this request in the weeks ahead. We'll also continue to hold hearings and roundtables and conduct oversight to ensure that the goals of the investigation are met.

As I've said before, this work is essential to the committee's legislative mandate and constitutional responsibility to conduct oversight of our antitrust laws and competition policies to ensure that they're working. Congress, not the courts, agencies, or private companies enacted the antitrust laws, and Congress must be responsible for determining whether current laws or enforcement levels are keeping up with the digital markets.

We have much work ahead of us, but I'm immensely proud of the efforts of my colleagues, Chairman Nadler and Ranking Members Collins and Sensenbrenner, along with their dedicated staff, and look forward to continuing this important bipartisan work together.

Today's hearing is an important opportunity to advance our understanding of a key component of competition online, the role of data and privacy. Over the past year, several leading international competition authorities and antitrust experts have published groundbreaking reports that have focused on this issue.

As these reports have noted, data is at the heart of competition online. For example, an exhaustive report by the Australian Competition and Consumer Commission concluded, and I quote, that "the breadth and depth of user data collected by the incumbent digital platforms provides them with a strong competitive advantage, creating barriers to rivals entering and expanding in relevant markets, and allowing the incumbent digital platforms to expand into adjacent markets," end quote.

The United Kingdom's Digital Competition Expert Panel, which was chaired by Professor Jason Furman, one of our esteemed witnesses here today, similarly reported that large troves of data, when combined with network effects, may tip markets in favor of a single dominant platform, killing off competition.

Data also plays an important role in the ability of startups to attract venture capital to compete with dominant firms in these markets. As part of a broader review of competition in the digital economy, a panel of experts led by Professor Fiona Scott Morton for the

Stigler Center at the University of Chicago, reported that investors often evaluate startups based on their access to data. As they explained, I quote, "a new entrant starved of data, quantitatively and qualitatively speaking, relative to a tech giant is at a significant competitive disadvantage, and investors will be unlikely to invest as they view that data deficit as insurmountable," end quote.

This has real consequences for entrepreneurs and startups that get locked out of the market and never get a chance to compete on the merits to offer new and innovative services. There's also broad agreement among antitrust experts that data can be abused by platforms for anticompetitive purposes. In some instances, these tactics have created an innovation kill zone around dominant firms. Whether its Facebook's use of Onavo to spy on its competitors, Amazon's ability to identify and clone popular products being sold in its marketplace, or the weaponization of API to block competitors, we know that the abuse of data has serious ramifications for competition.

This hearing also presents an important opportunity to examine the role of privacy and antitrust enforcement and competition online. There's a growing consensus among enforcers in the United States and abroad that privacy is an important dimension of competition online. While many online services claim to be free, we know that people pay in the form of their personal information and their attention, which are both critical for online advertising revenue.

In a statement submitted for the record for today's hearing, Dina Srinivasan notes that market consolidation allows dominant platforms to harm consumers, and I quote, by not—not by escalating prices, but rather by diminishing quality by eroding privacy terms, end quote.

Furthermore, as the U.K.'s Digital Competition Expert Panel has also reported, the misuse of data and harm to privacy is not only an indicator of low quality caused by a lack of competition, but it also can be used to cement a firm's dominance in the market as well. In other words, in a market that has vibrant competition, firms have strong incentives to respond to consumer demand by improving the privacy safeguards for their products. But without competition, incumbents have no incentive to deliver users' privacy.

I recently had the pleasure of discussing this with Shoshana Zuboff at the Harvard School of Business, who has recently written about the rise of surveillance capitalism. A point that she made that struck me is that the pattern of automating consumer behavior for more clicks and better predictions is itself a market externality. There is no consumer demand for this service.

Americans don't want to have their information systematically mined just so they can be shown another advertisement or nudged toward a political candidate, but in many cases, there is no escape from the surveillance because there's no alternative. People are stuck with bad options or no options at all, which is evidence of a market failure. Furthermore, companies that want to compete by offering services and products that do not rely on user surveillance are disadvantaged by this business model, which, in turn, reinforces the market dominance of the dominant firms. It's increasingly clear that the relationship between competition and privacy

is not either/or. They are mutually reinforcing concepts that must be at the forefront as we consider proposals to restore the internet to its full promise, and I approach today's hearing with these concerns in mind.

Before closing, I'd like to take one moment to thank Commissioner Vestager of the European Commission and Chairman Rod Sims of the Australian Competition and Consumer Commission for their statements submitted for today's hearing. Chairman Sims was originally scheduled to testify at this hearing, but due to an unfortunate change in our schedule, he's unable to attend today. Nevertheless, I want to thank him and his team for all of their hard work in advance of this hearing on this issue.

And now it is my pleasure to introduce today's witnesses for today's hearing. Our first witness is the Honorable Rohit Chopra, the Democratic commissioner at the Federal Trade Commission since 2018. Before joining the FTC, Commissioner Chopra was instrumental in establishing the Consumer Financial Protection Bureau. He worked on the agency's implementation team after the passage of the Dodd-Frank Act in 2010, and became the CFPB's first student loan ombudsman. He went on to serve as assistant director of the CFPB, and made significant inroads towards addressing the student loan crisis in the United States.

He was nominated by President Trump to serve as an FTC Commissioner on February 28, 2018, and was confirmed unanimously by the Senate on April 26, 2018. Commissioner Chopra received his B.A. from Harvard University and his MBA from the University of Pennsylvania.

Our second witness, Mr. Tommaso Valletti, has been a professor of economics at the Imperial College of London since 2007. Before that, he served as the chief competition economist for the European Commission for 3 years, where he focused extensively on competition and digital markets. He has served as a professor of economics and management at the University of Rome, where he still serves as a visiting professor of economics. Professor Valletti is also currently a research fellow at the Centre for Economic Policy Research and the Mannheim Centre of Competition and Innovation.

He received both his masters and Ph.D. from the London School of Economics. In addition to his work as an economist, Professor Valletti also received his flute diploma from the Conservatorio di Musica in Torino.

[Speaking foreign language.]

Our third witness is Jason Furman—that was an applause line; no—our third witness is Jason Furman, a professor of the practice of economic policy at the Harvard Kennedy School. Before joining the Kennedy School's faculty in 2017, Professor Furman served as chair of the Council of Economic Advisers during President Obama's second term. From 2009 to 2013, Professor Furman was an assistant to the President and principal deputy director of the National Economic Council. He currently serves as a nonresident senior fellow at the Peterson Institute for International Economics, as well as an adviser on digital market units for the U.K. Government.

Professor Furman received his B.A., M.A., and Ph.D. from Harvard University, as well as his master's of science from the London School of Economics.

Our final witness on the panel is Roslyn Layton. Dr. Layton is currently a visiting scholar with the American Enterprise Institute. She also serves as a visiting researcher at Aalborg University and as the vice president of Strand Consult in Copenhagen. Before her tenure with AEI, Dr. Layton worked as the director of search agency services at IBM Coremetrics. She has been published dozens of times in numerous publications, including Forbes, the U.S. News & World Report, and The Hill, and served on President Trump's transition team in 2016, helping to establish his Federal Communications Commission.

Dr. Layton received her B.A. from American University, her MBA from the Rotterdam School of Management, and her Ph.D. from Aalborg University.

We welcome all of the incredibly distinguished witnesses on our first panel. Thank you for participating in today's hearing. And now if you would please rise, I will begin by swearing you in.

Please raise your right hands. Do you swear or affirm under penalty of perjury that the testimony you're about to give is true and correct to the best of your knowledge, information, and belief, so help you God?

Let the record show the witnesses answered in the affirmative.

Thank you. You may be seated.

Please know that each of your written statements will be entered into the record in its entirety. Accordingly, I ask you summarize your testimony in 5 minutes. To help you stay within that time, there's a timing light on your table. When the light switches from green to yellow, you have 1 minute to conclude your testimony. When the light turns red, it signals your 5 minutes has expired.

Commissioner Chopra, you may begin.

TESTIMONY OF THE HONORABLE ROHIT CHOPRA, COMMISSIONER, FEDERAL TRADE COMMISSION; TOMMASO VALLETTI, PROFESSOR OF ECONOMICS, IMPERIAL COLLEGE BUSINESS SCHOOL; JASON FURMAN, PROFESSOR OF THE PRACTICE OF ECONOMIC POLICY, HARVARD KENNEDY SCHOOL; AND ROSLYN LAYTON, VISITING SCHOLAR, AMERICAN ENTERPRISE INSTITUTE

TESTIMONY OF THE HONORABLE ROHIT CHOPRA

Mr. CHOPRA. Thank you, Mr. Chairman, Ranking Member Sensenbrenner, and members of the subcommittee. My name is Rohit Chopra, and I serve as the Federal Trade Commissioner.

Oversight from Congress is a pillar of sound, transparent government, and I've been honored to testify many, many times before Members of Congress, including before Chairman Elijah Cummings, whose energy and passion will be missed by so many of us.

Today's topic could not be more important or timely, as it seems almost daily we learn of problems stemming from the lack of competition. To this end, I think we need to focus on four ways that

companies undercut competition: concentration, conflicts of interest, contracts, and capture.

Market power is concentrated with a few giants in so many industries. Conflicts of interest allow these dominant firms to sometimes rig the market in their favor at the expense of upstarts and new businesses that fairly compete. One-sided take-it-or-leave-it contracts and online terms of service impose self-serving regulations on consumers and small businesses. And all too often, the government is too captured by those incumbents who use their power to dictate their preferred policies.

In my testimony, I discuss how competition in the technology market is structured around data, a valuable asset with very unique economic features we need to take into account. Our personal data is powering the profits and dominance of tech companies that offer basic services like email, search, or photo sharing that are not truly free. Fortunately, many of my colleagues around the world are also pushing forward. Reports from regulators in Australia, the United Kingdom, the European Union are must reads for this committee and everyone concerned about the future of our digital economy.

In the United States, as you know, our efforts are a work in progress, and I agree that we need to take a fresh look at our policies and guidance. And as we do, it is important that the Federal Trade Commission conduct a rigorous review of quantitative market data and an analysis of the financial incentives driving market-distorting behavior.

Since joining the Commission, I have argued that the FTC should be using our authority under section 6(b) of our act to get the data we need to effectively police these markets and report our findings to you and the public.

When it comes to enforcement, I am more optimistic now that scores of States attorneys general, both Republican and Democrat, are teaming up to investigate anticompetitive conduct in the digital economy. In this moment, it is all hands on deck, and I stay in constant communication with them. Decades ago, our State AGs played a pivotal role in ending Microsoft's choke hold over the future of the internet. And without that action, there would likely be no Google, no Facebook, and no Amazon.

While the FTC's recent settlements with Facebook and Google's YouTube included fines that made for great headlines, they did little to fix the core problems that fueled these companies' data abuses. Big fines are not big penalties for the world's biggest companies, and as we have seen time and again, when a company can simply pay a fine from its ill-gotten gains, this isn't a penalty; this is an incentive.

As Congress, Federal antitrust enforcers, and State attorneys general all pursue their investigations, we will need to pursue remedies that reduce concentration, eliminate conflicts of interest, rescind abusive contract terms against small businesses and consumers, and limit capture. For example, recent scholarship has revealed that antitrust actions that separated lines of business or required interoperability of standards or ordered more patents available for public use after anticompetitive conduct, all led to massive innovation, small business entry, and economic growth. These are

useful tools in the toolbox for policymakers and enforcers to consider when looking to both remedy and prevent harm.

In conclusion, while some believe that lax enforcement and absentee government are the ingredients of innovation, history teaches us it's the opposite. Without a vigilant and active government promoting competition, markets cannot thrive. Sometimes that means providing corporations with benefits like limited liability, license contracts, and other opportunities, but free and fair markets won't work without meaningful consequences for law breakers, and inaction is a price we simply cannot afford to pay.

Thank you, Mr. Chairman.

[The statement of Mr. Chopra follows:]

UNITED STATES OF AMERICA
Federal Trade Commission
WASHINGTON, D.C. 20580

Office of Commissioner
Rohit Chopra

Written Testimony of
FTC Commissioner Rohit Chopra*

Before the U.S. House of Representatives
Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law

Hearing on Online Platforms and Market Power, Part 3:
The Role of Data and Privacy in Competition

October 18, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and Members of the Subcommittee, thank you for holding this hearing as part of the bipartisan investigation into online platforms and market power. I am honored to offer my perspective during this critical moment in history.

The data-driven digital marketplace now touches almost every facet of the human experience: in our homes, our workplaces, our schools, our hospitals, our cars, and even our relationships and our understanding of the world. The list is endless.

Around the globe, there is a growing consensus that today's tech titans operating data-intensive platforms pose a threat to innovation and to new business formation. Government studies and reports from the European Commission, the United Kingdom, Australia, and other major economies are raising more questions about whether companies like Google, Amazon, and Facebook are choking off competition.

We cannot and *should not* live in a country where the corporate royalty of the economy can create market conditions that makes it nearly impossible for new businesses to get off the ground or to compete. Without meaningful competition, we will miss out on the promises of the digital economy.

As the Committee continues its investigation, it will be important for members of Congress to evaluate evidence with several things in mind, including:

(1) Data has certain economic features that are unique and unlike other assets.
(2) Most online services are not actually "free." While consumers and businesses are not paying with dollars, they are paying with data.

* This testimony represents my own views and not necessarily those of the Commission or any other individual Commissioner.

(3) Competition is not a click away. Today's tech titans are wholly integrated throughout the digital world, such that people and businesses cannot avoid them.

Data as an Asset

Firms throughout the economy are desperate for our data. It's not just the Big Tech companies or telecommunications companies like Comcast, AT&T, and Verizon. Even the automotive industry is recognizing that collecting and monetizing personal data can be extremely lucrative. Data is clearly an economic asset, since it can produce cash flow over time. Data, however, is unlike other assets and instruments of value.

First, it is not a finite resource, like precious metals or minerals. In fact, more personal data is created every second. Our location, our searches, and our conversations can all be catalogued.

Second, data is not "consumed" in the traditional sense. If I use grain to make a loaf of bread, that grain cannot be used for something else. Data is different: it can be copied and shared. When one company monetizes the information that the data provides, other actors can extract value out of it, too.

Third, data gets more valuable as you collect more of it. It has increasing marginal returns. As you collect data across a larger swath of the population, you don't just glean insights on an individual person or business, you can also glean valuable insights on others that interact with them or share common characteristics.

For example, Amazon recently purchased the Whole Foods grocery chain. Amazon can now connect your purchase history online with your purchases in stores. Because the company knows even more about what you buy, it can make more accurate predictions about you. For example, Amazon can more easily predict when you're on a diet, when you're sick, when you're expecting a new baby, or a whole slew of other conditions and life events. This allows companies like Amazon to adjust offerings – and even prices – based on relevant predictions of what you want to buy and how much you're willing to pay for it.

As consumers, workers, and citizens, we do not know the extent to which our personal data is being collected by firms and third parties, so even if we wanted to, we could not choose to provide it to another company. The exclusivity of data collection has given a significant advantage to the companies that have been collecting data the longest, have the ability to collect the most types of data from the most people, or have control over a unique data set. In each of these circumstances, the inability to replicate gives data owners control of a key asset. New entrants face significant barriers to entry because they lack the insights from historical data that they can't reproduce. New companies also lack the ability to collect data on the same scale and scope that incumbents can collect it.

The unique economic features of data have considerable implications for competition. Since data-intensive digital platforms connect buyers and sellers, consumers with advertisers, riders with drivers, and other similar transaction partners, an unregulated market is likely to tip toward a handful of platforms, or even just one. As more users join on a platform, it becomes even more

valuable. For example, take the case of Uber, the ride-hailing app that operates on a closed, proprietary platform. As more riders were lured to the platform, this attracted more drivers, which increased availability. Since it is clunky for riders to check many different apps, their best bet is to use the platform that everyone else is using. This is known as a network effect. Network effects are also strong when it comes to search, social media, and so many other digital services.

Paying with Data, not with Dollars

If you go to a car dealership and exchange your station wagon for a used SUV, that is a trade. You would never say you got the SUV "for free." But, too often, we mislabel online services as "free."

Companies like Google and Facebook are not charities. They operate massively profitable behavioral advertising businesses built on extracting enormous amounts of data from users. When you watch a YouTube video or scroll through stories on Instagram, this is not the equivalent of reading a newspaper. The behavioral advertising model relies on constant collection of personal data, even while you're consuming content. These services do have a price, and you are paying for them with your data.

While the price that people pay in dollars is "zero," Google and Facebook reap billions of dollars from us. In 2018, Google generated $116 billion in advertising revenue.[1] That same year, Facebook pulled in $55 billion.[2] The profit margins far exceed those in other key industries of the economy. This means that we are handing over extremely valuable assets to these companies. An economist might say that the real price of using these services should be negative – that is, they should be paying us.

The true economic value that is exchanged with digital platforms is hard for consumers and businesses to measure. In addition, consumers and businesses using these platforms have no bargaining leverage, and they participate by "agreeing" to complex and draconian terms of service. Digital platforms can usually change these terms at any time, granting themselves more ability to collect and use data more expansively and more intensely. This is the equivalent of a price hike.

In a competitive market, these price hikes would be hard to impose. But, in an uncompetitive market, companies can focus on blocking new entrants and limiting choice to protect their dominance and pricing power.

Competition is Not a Click Away

Twenty years ago, it seemed almost unimaginable that a few companies could dominate the web. After all, it was open and non-proprietary. With such low barriers to entry, the next innovator could offer up a better online service; competition was just a click away. In 2004, the website that would eventually become Facebook launched, and I was one of its first users. It was a clear

[1] Alphabet Inc., Annual Report at 27 (Form 10-K) (Feb. 5, 2019).
[2] Facebook Inc., Annual Report at 44 (Form-K) (Jan. 31, 2019).

alternative to MySpace, and importantly, this new social network offered far more privacy, since it allowed users to better control who would see their personal information.

Sadly, many investors and entrepreneurs have come to realize that this isn't really a possibility today. Competition is no longer a click away. Big Tech is now embedded throughout the digital world. These firms have integrated horizontally, vertically, diagonally – and across the web in ways so subtle, you'd need to be able to understand computer code to realize you were being tracked. These platforms have become ubiquitous and unavoidable.

Earlier this year, journalist Kashmir Hill chronicled her attempts to block Google, Amazon, Facebook, Apple, and Microsoft from her life.[3] Hill discovered that Amazon controls 23 million IP addresses, preventing her from even accessing certain government websites.[4] Her ability to communicate, engage in commercial transactions, and access basic information was sharply curtailed. If the internet were truly competitive, people could vote with their feet and select services that offer privacy and anonymity.

Much of this unavoidable surveillance is spurred by the financial incentives of online behavioral advertising, a market big tech firms also dominate. Behavioral advertising promises to target ads to the users most likely to engage with them. Advertisers pay for that engagement – the clicks, likes, video views, and sales conversions. Here, advertisers face the same conundrum as users: participate on Big Tech's terms or not at all. And like users, sitting on the sidelines comes at a high cost. Businesses put themselves at a significant disadvantage if they chose not to advertise. For example, companies that don't advertise on Google may find the link to their website buried after paid ads from their competitors or may not show up when people search for local businesses.

Absent vigorous competition in online advertising, advertisers won't have the leverage to demand transparency. This advertising model has virtually no independent oversight or accountability mechanisms. An advertiser can tune in to watch its television ad or listen to its radio ad, buy a newspaper or magazine to see its print ad, or drive by to look at its billboard ad. With contextual online advertising, advertisers can see the digital ad by visiting the website they pay to advertise on.

But the same is not true when you are, for example, paying to get women who like soccer and green shirts to watch your ad on Instagram. As an advertiser, you don't have access to data on which users watched your ad or whether they match your desired profile. Absent a proactive action off the platform like making a purchase or attending an event, advertisers can't easily verify that the engagement took place. Advertisers have few ways to determine if their ad spends match the value provided. Many wish they could independently verify that they are getting the engagement they are paying for and that they are engaging with real people, not bots and fake accounts.

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[3] Kashmir Hill, *Goodbye Big Five*, GIZMODO (2019), https://gizmodo.com/c/goodbye-big-five.
[4] Kashmir Hill, *I Tried to Block Amazon From My Life. It Was Impossible*, GIZMODO (Jan. 22, 2019), https://gizmodo.com/i-tried-to-block-amazon-from-my-life-it-was-impossible-1830565336.

This is not a theoretical problem. Last week, Facebook agreed to pay millions in a settlement with advertisers, after allegedly inflating the amount of time it said users spent watching videos by allegedly as much as 900 percent.[5] These inflated numbers didn't just harm advertisers. Many also believe that Facebook's false video metrics convinced news outlets to lay off print journalists so they could heavily invest in capitalizing on a supposedly burgeoning video audience.

Advertisers aren't alone. App developers also few choices on reaching users. As more of our digital lives go mobile, app stores are now a critical gateway to participate in society and the economy – but app stores don't look anything like an open internet. Operators of app stores impose taxes and regulations on app developers, who are often completely dependent on these stores for distribution. This raises concerns about how operators of app stores might preference their own apps over those created by competing developers.

The Committee's investigation should seek to detail the consequences of this digital dominance. I am particularly concerned that many investors are reluctant to allocate capital to innovators that seek to challenge and disrupt this dominance. Instead, investors tell me they prefer to fund companies that can eventually be sold an incumbent. This distorts digital innovation and the progress that comes along with it.

Taking Action

Last year, the Federal Trade Commission convened a series of hearings examining a range of competition and consumer protection issues in digital markets. The FTC staff has outlined next steps for these hearings, including policy outputs and deliverables.

My top priority is to ensure that our path forward is grounded in reality. In my tenure as commissioner, I have actively advocated for approaching policy and enforcement with rigorous, quantitative understanding of how these markets actually work. The Commission does its best work when it comes to the table with deep knowledge and expertise of a particular market, rather than a superficial or theoretical approach. To this end, I hope that the Commission will pursue work based on Section 6(b) of the Federal Trade Commission Act,[6] which allows the agency to conduct industrywide investigations and studies and making its findings available to the public.

Given its authority to prohibit unfair methods of competition and unfair or deceptive trade practices, the FTC is uniquely positioned to tackle the concerns associated with digital platforms. The twin goals of competition and consumer protection are inextricably linked. Most state attorneys general also have statutory authorities related to competition and consumer protection under their "mini-FTC Acts."

Competition. Antitrust litigation by the FTC, Department of Justice, and state attorneys general can halt exclusionary practices and anticompetitive mergers. If firms engage in behavior for the

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[5] Eriq Gardner, *Facebook to Pay $40M Under Proposed Settlement in Video Metric Suit*, THE HOLLYWOOD REPORTER (Oct. 7, 2019, 6:33 AM), https://www.hollywoodreporter.com/thr-esq/facebook-pay-40-million-under-proposed-settlement-video-metrics-suit-1245807.

[6] 15 U.S.C. §§ 41-58.

purpose of impeding entry or stifling an upstart, antitrust law should intervene. Many dominant players in the technology industry are extremely acquisitive, gobbling up companies of all sizes. However, if these acquisitions substantially lessen competition, they are unlawful. Unfortunately, antitrust enforcement is slow and costly. In the past, high-profile cases have taken years to investigate and litigate. In today's environment, this is problematic. We need to figure out ways to act more quickly to prevent harms to innovation.

In addition, if enforcers uncover unlawful acquisitions or conduct, it is typical to seek asset divestitures as a remedy – but divestitures and spinoffs may be just one piece of the puzzle. We will also need to think carefully about remedies as they pertain to the unique characteristics of data. As such, remedies that eliminate barriers to entry and open access without sacrificing privacy will be particularly compelling.

When assessing remedies, we have to be mindful of the nuances of how data moves through the digital world. We need to be cautious when applying behavioral remedies that require significant supervision or that might be difficult to assess compliance. Considering the sophistication, scale, and scope of mass data collection, it can be difficult to enforce requirements to limit the use of data, or to give people the right to see and delete their data. Companies are collecting millions of data points at every moment and the government doesn't have the resources or the technical expertise to monitor whether data is being used solely for its intended purpose. And how would a person know if their large data has truly been deleted? Violations of these requirements are usually only detected when a large-scale disaster happens, or when problems are intermittently brought to light by journalists and whistleblowers.

In light of these challenges, I believe that remedies should not be directed at the data itself, but rather the structural incentives that are leading to the problems in the first place. We have allowed the next generation of the internet to develop as a series of walled gardens that are owned and operated for the benefit of a few dominant players. These companies decide who gets access and who doesn't, and impose taxes and regulations on participants. Behavioral data remedies do little to alter this fundamental structure or to stop privacy-related issues from happening. For example, Facebook immediately and repeatedly violated the FTC's 2012 Order on its data use and sharing practices. The recent proposed settlement gave a lot for Facebook to celebrate. Its business model remained intact, and its executives were all let off the hook. Like an unwieldy schoolyard bully who has been lightly reprimanded, the bad behavior will continue the minute the teacher's back is turned.

In our economic history, we have seen government interventions that facilitate open technology yielded enormous benefits for American consumers. For example, in 1956, the government remedied the anticompetitive conduct of American Telephone & Telegraph (AT&T) and Western Electric by ordering that the system's intellectual property be made available for public use.[7] This decision unleashed innovation that would eventually lead to the birth of the internet. More recently, the government conditioned the America Online (AOL) and Time Warner merger by requiring that the dominant AOL Instant Messenger chat platform become interoperable,

[7] *United States v. Western Electric Co.*, Civ. Action No. 17-49 (D.N.J. 1956).

spawning new competition and innovation.[8] The Microsoft antitrust case demonstrated the power of unbundling dominant operating systems from apps that sit on top of it.

We've also seen this in other industries. Decades ago, we laid the foundation for free and open capital markets by separating banking from commerce, which prevented Wall Street from discriminatory lending practices that would have distorted industries across the economy.[9] In Hollywood, the big studios were banned from owning cinemas, leading to more access to distribution.[10] Importantly, these structural separations did not require complicated oversight and micromanagement, and we can learn from them as we consider remedies for the marketplace problems of today.

Any remedies should reconsider providing government benefits to companies that continue to abuse them. This could include opening up the intellectual property rights to underlying technologies that power a marketplace. It could also include voiding certain one-sided, take-it-or-leave it contract terms that are typically enforced by our courts. These benefits provide significant value to companies, and should not continue to benefit those that break the law.

Policymakers should also look at brightline rules and outright bans wherever feasible. Complicated rules often work in favor of those that are already dominant and can pay lawyers to get around them. For example, we should consider whether companies, particularly repeat offenders or dominant players, should be allowed to collect and monetize certain data at all. Historically, we have banned some of this behavior. For example, telephone companies were not allowed to eavesdrop on our phone calls and then sell the information they gleaned.[11]

Outside of litigation, the FTC can engage in competition rulemaking, defining what constitutes an unfair method of competition.[12] These types of rules don't need to place any substantive obligations on firms, but the rules can spell out what type of conduct is lawful or unlawful, creating more certainty. The rulemaking process also allows a diverse set of stakeholders to participate, rather than just a government plaintiff and a single corporate defendant. Competition authorities around the world have recognized these benefits.[13] In fact, some have already begun to draft rulemaking that addresses the growing concerns associated with digital platforms.

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[8] Mem. Op. and Order, In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner Inc. and America Online, Inc., Transferors, to AOL Time Warner, Inc., Transferee, F.C.C. 01-12, (Jan. 11, 2001).

[9] We have seen how the weakening of structural separations in banking has led to negative consequences for both financial stability and economic growth. *See e.g.*, Saule Omarova, *The Merchants of Wall Street: Banking, Commerce, and Commodities*, 98 MINN. L. REV. 265 (2013).

[10] Of course, today, this is not the most pressing conflict of interest that we see in Hollywood. New "packaging deals" pioneered by talent agencies appear to be particularly problematic. *See United States v. Paramount Pictures, Inc.*, 334 U.S. 131 (1948).

[11] 47 U.S.C. § 222 (c) (1).

[12] Comment of Commissioner Rohit Chopra on Hearing #1 on Competition and Consumer Protection in the 21st Century (Sept. 6, 2018), https://www.ftc.gov/public-statements/2018/09/comment-commissioner-rohit-chopra-hearing-1-competition-consumer.

[13] *See, e.g.*, AUS. COMPETITION & CONSUMER COMM'N, DIGITAL PLATFORMS INQUIRY: FINAL REPORT (2019), https://www.accc.gov.au/focus-areas/inquiries/digital-platforms-inquiry/final-report-executive-summary.

Consumer Protection. Competition cannot solve all problems, especially when dominant firms can cheat consumers and businesses. Unfair or deceptive practices can also be motivated by a firm's desire to maintain its monopoly or dominant position.

To halt and redress unfair or deceptive trade practices, the FTC and state attorneys general can investigate, sue, and often seek penalties for unlawful conduct. There is one particular menace in today's marketplace that warrants serious attention from policymakers and regulators: the click-through contract.

When it comes to dominant players with significant market power, consumers and businesses have no bargaining leverage in a take-it-or-leave-it contract. Fortunately, the FTC has a history of banning certain unfair contract terms.[14] New consumer protections in Australia and New Zealand also confront suspicious contract terms. Laws in some jurisdictions specify certain contract terms that are inherently suspect, while also providing a general framework for condemning new terms that may emerge. Understandably, the public has little trust in the efficacy of click-through terms of service, and we will need to evaluate whether existing agreements violate the law or need to be regulated.

Conclusion

Congress must reject the narrow thinking of the past that we hear too often from Washington lobbyists singing from the song sheet of monopolists and other dominant incumbents. Markets do not thrive when the government is completely absent. Our country's history has shown that we can foster innovation and create wealth with rules and laws that promote competition and eliminate conflicts of interest, rather than allowing a handful of actors to dominate and impose their own regulations on the market.

If you believe in the promise of discovery and invention to improve lives and advance human progress, you should be concerned that today's digital market may be choking off new entrants and innovation. Today's landscape is not simply a reflection of engineers and entrepreneurs, it also the result of government policies. If the federal government and the states did not pursue its case against Microsoft over twenty years ago, many of the major players in today's market would not exist. Confronting anticompetitive conduct will not mean the end of digital products and services; it will mean unlocking even greater innovation and entrepreneurship that benefits families and communities around the world with more choices and more opportunity.

[14] Rohit Chopra, Prepared Remarks at the Forum on Small Business Financing (May 8, 2019), https://www.ftc.gov/system/files/documents/public_statements/1519282/opening_remarks_for_small_business_forum.pdf.

Mr. CICILLINE. Thank you, Commissioner.
I now recognize Dr. Valletti for 5 minutes.

TESTIMONY OF TOMMASO VALLETTI

Mr. VALLETTI. Mr. Chairman, ranking member, and members of the subcommittee, good morning, and thank you very much for inviting me. My name is Tommaso Valletti, and I am professor of economics at Imperial College in London. Between September 2016 and August 2019, I was the chief competition economist of the European Commission. In that role, I led the economic analysis of several cases, involving digital platforms, including Google, Facebook, Amazon, Apple, Microsoft, and others.

Today, I would like to make four points. My first point is obviously about data. Some commentators have argued that data is a new oil. Others have gone to the opposite extreme by claiming data is as common as water, as air. These sweeping generalizations are not very useful. It is self-evident that data is key to digital platforms, and also, only a few gatekeepers are in a position to control the tracking and linking of behaviors across platforms, online services, and websites. They can combine several data sets and create superprofiles of individuals. This is the market for individual attention where the analysis has to be conducted.

As an example, if we open, all of us, in this very moment our Facebook accounts, if you had one, and we just looked at the ads popping up, you would see totally different ads. This is completely different from traditional media; there would be individual ads.

Unfortunately, the debate over the practical importance of data is not helped by the lack of published empirical studies in the field of competition economics. The large digital players have not made any data available through independent researchers ever. I know already the cynical rebuttal to this, paraphrasing Mozart, that one could say, come on, "cosi fan tutte"; they're all like that. This will not be true. I can think of telecoms, of pharma, of airlines that can immediately name several data sets, often anonymized, that would be available to independent researchers to analyze competition in those sector. It really is paradoxical we know so little from this so-called data economy, which is sitting on unprecedented amounts of data.

My second point concerns the extent to which enforcers should consider privacy concerns under competition law. My answer is yes. Privacy is at the core of the economics of digital platforms, and competition is shaped around it. Competition, generally speaking, takes place along several dimension, price being only one of them. Quality, choice, innovation are also important aspects for competition and for consumers. In fact, when dealing with digital platforms, it does not make sense to focus on prices as prices have been set at zero by choice.

The business model is to give something away for free in order to monetize in other related market; advertising, in particular. Hence, quality will often be very relevant focus of competition. Lack of competition, conversely, will lead to reduced quality. In this case, a reduction in privacy protection.

My third point is that privacy degradation can lead to real consumer harm. This can arise in different ways: Data breach, identity

theft, but also consumer profiling that is not done in the interest of consumers. Part of the problem is that digital incumbents have the ability to impose terms of service that are not well understood but still accepted by consumers because of a lack of alternatives. This is already an indication of market power.

Who has actually read lengthy and obscure privacy terms? What do they mean? Think of common phrases like "we may collect your information for marketing purposes" or "we may share your data with trusted businesses." Consumers see the instant benefits of clicking yes, but cannot assess the implications of giving away their data that are bundled by design to the service. These practices increase information asymmetries and undermine the role played by consumers and by competition.

My last point and my conclusion to all this is that antitrust cases involving data and privacy can be run. Lower quality can be seen in competition law terms as an exploitative conduct. In Europe, this is captured by the current law. In other jurisdictions, it is not. Like in the U.S., it is not. Still, it would be wrong to ignore exploitative conducts. Data, privacy, and competition are not separable. Diminished competition on privacy should be considered in any assessment of the state of competition and of market power of online platforms.

Lower data protection can also lead to the standard category of exclusionary behavior. Here, the chain goes from dominance to bad privacy terms. You get a data advantage compared to rivals. Money is being made. This money can be used to exclude competitors or to leverage into neighboring markets. Actually, tying with other digital products can further enforce the data advantage of the dominant incumbent by cross-linking the data collected across services, creating quite a vicious circle. These are conducts that could, in my personal opinion, should be investigated.

Thank you for your time, and I look forward to your questions.

[The statement of Mr. Valletti follows:]

Testimony of Tommaso Valletti, Ph.D.

Professor of Economics

Imperial College Business School

Imperial College London

Before the

House Judiciary Committee

Subcommittee on Antitrust, Commercial, and Administrative Law

On

"Online Platforms and Market Power Part 3:

The Role of Data and Privacy in Competition"

October 18, 2019

Chairman, Ranking Member, and Members of the Subcommittee, thank you for inviting me to testify today. My name is Tommaso Valletti and I am Professor of Economics at Imperial College Business School in London, UK. Between September 2016 and August 2019, I was Chief Competition Economist of the European Commission (DG COMP). In that role, I led the economic analysis of several cases involving digital platforms that are relevant for the issues that we are discussing today. In particular, I presided over the issuing of Google Shopping, the investigation and issuing of Google Android, the investigation and issuing of Google AdSense, and further investigations related to Google's local search, Apple's App Store, Amazon Marketplace and Facebook.

My views are only personal and do not represent in any way those of the European Commission. Still, I think that it is important to note that Europe has been at the forefront in the policy area concerning digital platforms, whereas US antitrust has been more reluctant to intervene. Europe has at times been looked at as a lagging economy with some jealousy vis-à-vis US tech giants. In reality, these are important issues that need to be tackled irrespective of the geographic origin of a particular company. In my experience, there is no anti-US sentiment in European competition enforcement, and all the evidence points to the contrary.[1]

European competition policy towards platforms is based on sound economics, and Europe has led the way in realizing that there are potential problems related to digital platforms that can be also dealt with through antitrust enforcement. It is encouraging to see the attention this view is getting in the US now, and I applaud the current focus on these matters. There is in fact a widespread climate of reflection around the world, as evidenced by the many reports that are issued and hearings that are held on online platforms across jurisdictions. Interesting discussions are also happening, for instance, in France, Germany, the UK, as well as in Australia and Japan. These reports and hearings explore how competition authorities should meet the challenges arising from analyzing competition among platforms and show a high degree of convergence when it comes to identifying these challenges. The most important ones are (i) understanding the role of data, (ii) scrutinizing acquisitions of innovative start-ups by the incumbents, (iii) analyzing the source of platforms' market power, and (iv) supervising how platforms compete in markets with strong network externalities and returns to scale (especially in the absence of multi-homing, or protocol and data interoperability). It is inspiring to see this convergence of views and I very much hope that there will now be concerted action on these issues, given the global scale and size of the companies involved.

During my testimony today I will focus on what I see as the most important issues in the debate:

1. My first point is that data collection and privacy protection are at the very core of the business model of many online digital platforms. Little is known about data use and consumer preferences over privacy because of a conscious decision by the very same incumbent platforms not to disclose any data to independent researchers.

[1] See Anu Bradford, Robert J. Jackson and Jonathon Zytnick, "Is E.U. Merger Control Used for Protectionism? An Empirical Analysis", Journal of Empirical Legal Studies (2018). The authors analyse over 5,000 decisions by the European Commission between 1990 and 2014 and find no evidence that the Commission has used its authority to protectionist ends.

2. My second point is that privacy is a problem relevant for competition law.
3. My third point is that degradation of consumer privacy can lead to objective costs for platform users.
4. My fourth and last point is that there are several plausible theories of harm involving data and privacy protection that can be investigated.

My first point concerns the importance of data. The collection and use of personal data are key features of digital markets and has created significant benefits for consumers. Yet, they also pose considerable challenges, especially in concentrated markets and in the presence of market power. Some commentators have argued that data is the new oil. Others have gone to the opposite extreme by claiming data is as common as water. These sweeping generalizations are not useful. It is self-evident that data is key to digital platforms, and that some applications imply real-time knowledge of consumer behaviour as well as cross linkages across apps that only very few digital players have access to. Only a few digital gatekeepers are therefore in a position to control the tracking and linking of those behaviors across platforms, online services and websites: they can combine several datasets and create "superprofiles" of individual users. Ultimately this implies that real-time targeted advertising is done at the level of each individual consumer. This is the market for individual "attention" where the competitive analysis often has to be conducted.[2]

Unfortunately, the debate over the practical importance of data and the linkage to platforms' market power is not helped by the lack of published empirical studies on these matters in academic journals in the field of economics. I conducted a simple exercise, counting the number of published articles in the so-called "top 5" journals in economics[3] over the 5-year period 2014-2019 that used primary data from one of the top 5 digital companies (Google, Apple, Facebook, Amazon and Microsoft that collectively go under the acronym of GAFAM) to tackle a question related to competition or competition policy. These are companies that are collectively worth several trillion dollars and sit on an unprecedented trove of data that would allow us to shed light on these questions in a much more detailed fashion. Given that empirical work is the gold standard for economic studies, one would expect a large interest from economists worldwide in such studies. Even so, there are virtually *zero* published papers in the competition arena using the relevant data from these platforms.

This is not an academic curiosity, but it is the intentional outcome of data access choices made by the large digital players. The lack of access also implies that there is de facto no system of revolving doors between these companies and academia when it comes to young economists: if you are a young scholar and cannot publish, you are not going to come back to academia after an experience at one of the GAFAM.[4] Possibly even worse, generations of bright

[2] See Andrea Prat and Tommaso Valletti, "Attention Oligopoly", 2019. http://dx.doi.org/10.2139/ssrn.3197930. We propose a metric of consumer "attention" and argue that, when the market of digital platforms becomes concentrated, "attention" becomes a scarce resource for advertisers and only more expensive consumer products are ultimately shown to platform users, to the detriment of consumer welfare.

[3] These are: American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics and Review of Economic Studies.

[4] Microsoft Research is an exception, but again there are no published outcomes in competition economics over the period I considered.

academic economists have avoided investigating empirically the field altogether, as they anticipated that their efforts would not lead to publishable work. Because of this, academics have stopped asking relevant questions about GAFAM for too long, and the external understanding of digital issues has not much advanced empirically, compared to the internal knowledge of GAFAM that are therefore several steps ahead of anyone else, including the regulators. This lack of academic scrutiny also plagues the interpretation of the very few available studies coming from other data sources, so the debate necessarily remains at some vague abstract level, missing all the necessary empirical details of each case.[5]

A relevant example is the so-called "privacy paradox" – the idea that consumers care about preserving whatever privacy they have, but few actually take steps to share less data online. This observation is sometimes used to argue that one should not worry about privacy, as consumers "reveal" that they do not really care much about privacy. In reality, it is hard to draw such conclusions about people's values from their actions (this is the so-called "revealed preference approach" in economists' jargon). That is because consumers' choices are shaped by very complex factors, which in the current case often include a very poor understanding of data practices. Consumers de facto face a pervasive and invisible collection of their personal information. Who has actually read lengthy and obscure privacy policy terms? Even if you have, what do they mean? The main issue is the lack of transparency about current and future data practices and the ability to understand the effects of such practices (think of common phrases like "we may collect your personal information for marketing purposes", or "we may share your personal data with affiliates and trusted businesses"). Clearly, a revealed preference approach where the "user is king" cannot apply if the consumer cannot properly compare the possible future costs to present benefits, as the very same consumer is prevented from understanding these future costs. Consumers see the instant benefit of saying "yes" to opaque privacy terms, as there is an immediate reduction in transaction costs plus a reduced risk of losing some functionality of the platform, but cannot assess the implications of giving away their data that are bundled by design to the service they want.

Academics have been trying to get an idea about consumers' preferences by conducting surveys and experiments. Alas, also in this case one cannot infer much from surveys that involve at most a few thousand individuals being asked questions or taking actions they do not fully comprehend. Consumers' valuations of data privacy are shaped by factors like the wording of the questions they are asked, the information they are given, and the range of choices they are presented with. A top scholar in this field, Professor Alessandro Acquisti of Carnegie Mellon University, after having devoted almost two decades studying this phenomenon, concludes that consumers' behavior and preferences are not a reliable indicator of how consumers value their own privacy, let alone how society as a whole should value it.[6]

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[5] One should not presume that the same happens in every other industry. On the contrary, with airlines, pharmaceuticals or telecommunications to name just a few, datasets are available to analyze their competitive landscape. Where individual data have been collected, these are anonymized following established protocols.

[6] While of course every quote has to be read in a wider context, I would like to cite Prof. Acquisti *verbatim*: "Even subtle changes in the way privacy trade-offs are presented to individuals can cause radical changes in people's valuations of their data or the importance of keeping their data protected. One of the conclusions of my research

Notwithstanding these empirical limitations, my second point concerns the extent to which competition authorities should consider privacy concerns *also* under competition law, besides privacy law or consumer law. First, these approaches are not mutually exclusive as one does not exclude the other. Second, I will argue that privacy is at the core of the economics of many digital platforms, and competition is shaped around it. The possible degradation of consumer data protection can result from market power, and it will undermine the competitive process as well as lead to detriment to consumer welfare. I also believe that several tools for intervention are already available, and one just needs to apply them.

Why is privacy a competition problem? For several reasons. Let me start from the obvious observation that competition takes place along several dimensions, with price being only one of them. Quality, choice, and innovation are also important aspects for competition and for consumer welfare. In fact, when dealing with digital platforms (Facebook and Google in particular), where business models have been consciously built around supposedly "free" services, in order to monetize in other tied markets (advertising in particular), it does not make much sense to focus the competitive assessment on prices, as these have been set at zero by choice. Quality, however, will often be the relevant locus of competition. Lack of competition, in many markets, will lead to higher prices and reduced quality. In the context of "zero" prices, the reduction in quality due to monopolization can become even more pronounced. A reduction in consumer data protection and consumer privacy is precisely a fitting example of such a reduction in quality.[7]

My third point is that privacy degradation can lead to an objective detriment to consumers. This can arise in different ways: e.g., through risk of data breach, identity theft, or customer profiling that is not done in the interest of consumers (e.g., scoring that can lead to discrimination, being shown more expensive search results, marketing based on vulnerability, risk analysis, etc.). These are all objective costs related to lower privacy and lack of competition. Part of the problem is that the giant digital incumbents have the ability to engage in "concealed" data practices,[8] that is, they impose terms of service with weak privacy protection that are not well understood but still accepted by consumers because of a lack of alternatives – this is an indication of their market power. These practices undermine the role played by consumers, as they increase information asymmetries. They also undermine the competitive process in a way that can be particularly acute in digital markets. Digital markets already tend to exhibit features that make it difficult for new rivals to compete with dominant incumbents (e.g., network effects create barriers to entry). Concealed data practices make successful entry even less likely, both due to the competitive advantages enjoyed by the

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is that it's probably fruitless to try to pinpoint with a single number the value of privacy." OneZero, September 17th, 2019; https://t.co/6ktswjhqz.

[7] There exists a detailed case study about Facebook and its privacy policies. In the mid-2000s, when Facebook was an upstart social media platform, it tried to differentiate itself from the market leader, Myspace. In particular, Facebook publicly pledged to protect privacy. But as competition with Facebook began to disappear (also helped by Facebook's acquisition of Instagram in 2012 and WhatsApp in 2014), Facebook revoked its users' ability to vote on changes to its privacy policies. See Dina Srinivasan, "The Antitrust Case Against Facebook", Berkeley Business Law Journal, vol. 19, 39-101 (2019).

[8] Katharine Kemp, "Concealed Data Practices and Competition Law: Why Privacy Matters" (2019). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3432769.

incumbent as a result of weak data protection, and due to the concealed nature of data practices that make comparisons of alternatives difficult to perform. Consumers are not able to contrast improved quality offered by rivals when they cannot make real comparisons. Similarly, consumers will not pay more to avoid a cost which cannot be evaluated.

My fourth and last point is about theories of competitive harm. Lower quality, which is the counterpart to high prices, can be seen in competition law terms as an exploitative conduct. In Europe, this is captured by the law against abuse of dominance under Article 102. In other jurisdictions it is not. Still, it would be wrong to ignore exploitative conduct because, as I just argued, lower privacy protection affects the core perimeter of competition among digital platforms: data, privacy and competition are inexorably linked. Diminished competition on privacy quality should therefore be taken into account in any assessment of the state of competition, and market power, of digital online platforms. Ultimately, one would like to see more competition in the market. With more competition (including competition over privacy terms), it would probably become clear that consumers are currently "underpaid". If there is competition, it may ensue that the competitive price for personal data would not be zero, but that consumers should actually be compensated to permit the collection of their personal information.

Lower data protection can also lead to the standard legal category of exclusionary behaviour which undermines the competitive process. Imagine, as argued above, that the dominance of an incumbent digital platform allows it to impose restrictive terms of service and loose privacy terms. Consumers will then have to accept them, because of a lack of alternatives. The incumbent will thus acquire a data advantage compared to its competitors (which is magnified by the absence of interoperability and data portability). The incumbent then entrenches its dominant position, which allows it to extract rents (increased advertising revenues) and to impose even more restrictive privacy policies on consumers. As a result, leveraging in neighboring markets becomes easier: the rents enjoyed by the incumbent can be partly spent to "bribe", for instance, phone manufacturers to accept pre-installation or exclusivity of the incumbent's services, leading to foreclosed entry by competitors. Tying with other digital products will further strengthen the data advantage enjoyed by the dominant incumbent by cross-linking the data collected across services, creating a vicious circle.[9]

Limited data protection can therefore lead to both exploitative and exclusionary conduct by dominant platforms. These are all conducts that could, and in my opinion should, be investigated.

Thank you for your time. I really appreciate the opportunity to be here today, and I look forward to your questions.

[9] Other exclusionary practices can easily be envisaged. Think of conducts where a dominant firm excludes privacy-enhancing apps from its platform. Or acquisitions of rivals that have been innovating on privacy, and so forth.

Mr. CICILLINE. Thank you, Dr. Valletti.

I now recognize Dr. Furman for 5 minutes.

TESTIMONY OF JASON FURMAN

Mr. FURMAN. Thank you, Mr. Chairman, ranking members, and members of the committee. My name is Jason Furman. I'm a professor of the practice of economic policy at the Harvard Kennedy School. I recently chaired the U.K.'s Digital Competition Expert Panel, which produced a report unlocking digital competition. One of our recommendations was that the U.K. establish a digital markets unit, and I'm currently serving as an unpaid adviser to the U.K. Government as they move forward with accepting that recommendation that my panel made.

Today, of course, I'm testifying with my own views and ideas drawing on the report that we did. I thank you for your kind comments about it.

I want to make four points in my testimony. The first is that the major digital platforms are highly concentrated and that that concentration is likely to persist. It's due to a combination of factors: economies of scale and scope, the way that data can serve as a barrier to entry, behavioral biases on the part of consumers who don't shift the way we think they should, the importance of access to capital and brands.

Many of those individually are present in many markets, but the combination of them and the extremes of all of them is unique to the digital platforms and makes it very difficult to have competition in the market. The question of whether there can be competition for the market is a more speculative one, but there's a number of reasons, including the persistence of the major platforms, to believe that that competition for the market will be difficult absent policy changes.

My second point, which was covered by Tommaso, is that this has cost to consumers. The services aren't free. Consumers might have been compensated; they're paying in the form of data, they're losing out on quality and variety, and the lack of competition stunts innovation. The question is what we should do about this. Some of the reasons why you have only a few platforms is because of the benefits that consumers get from scale and scope. You want to preserve the ability of consumers to have those benefits. Some of the reason, though, is because of unfair competition and because of what's not organic growth due to efficiency but mergers that have been improved often without very much scrutiny.

So the key to policy is to preserve the good while enabling as much competition, because competition is the source of innovation and lets the private sector drive that innovation.

To that end, my third point, is that merger enforcement needs to be more robust in the digital sector. Much of the growth we've seen has not been organic growth due to efficiency, but has been acquisitions. There have been essentially no errors in blocking an acquisition that would have been beneficial to consumers, but there probably have been errors in allowing acquisitions to go forward that have ultimately harmed consumers.

An approach should include more resources for the DOJ Antitrust Division and the FTC so that they have the technical exper-

tise to deal with this. That merger analysis can't just focus on short-run, static effects, but also on potential competition, innovation, and take very seriously data as a barrier to entry. And third, the increasingly high bar for blocking mergers probably needs to be addressed in a legislative manner with some form of shifting the burden of proof.

Finally, my fourth point is that even with all of that, merger enforcement, that won't be sufficient to deal with, you know, the horses that have already left the barn. Antitrust scrutiny can help, but it can also be slow. It can have a hard time addressing, you know, behavioral remedies, and that's why I proposed in the U.K., and I think it would make sense in the United States, the establishment of a digital markets unit. I'm agnostic about whether this is a new body or whether it's an existing body, like the FTC. What's important is the functions.

The first would be a code of conduct to ensure no anticompetitive conduct that was backed up by enforcement authority. The second function would be systems with open standards and data mobility, which would enable more entry and competition. And the third function would be a greater degree of data openness. And I think with this approach, we could avoid some of the more extreme market disruptive steps, ensure consumers get all the benefits of fair competition, but also enable new entrance to compete, enter the market, and even deliver further benefits above and beyond what we've seen to date.

Thank you.

[The statement of Mr. Furman follows:]

Prepared Testimony for the Hearing "Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition"

Jason Furman
Professor of the Practice of Economic Policy, Harvard Kennedy School

U.S. House of Representatives
Committee on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law

October 18, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and Members of the Committee:

Thank you for the opportunity to testify on the important topic of online platforms and market power. I am a Professor of the Practice of Economic Policy at the Harvard Kennedy School where I focus on a wide range of economic policy issues. I recently chaired the Digital Competition Expert Panel for the UK government that produced a report titled *Unlocking Digital Competition*.[1] I am currently advising the UK as they move forward with a key set of recommendations from this report, including the establishment of a Digital Markets Unit to act as a pro-competition regulator. Many of the recommendations in our report are applicable to the United States and I appreciate the opportunity to share some of those ideas with you today.

In my testimony today I will make four points:

1. The major digital platforms are highly concentrated and, absent policy changes, this concentration will likely persist with detrimental consequences for consumers.

2. More robust competition policy can benefit consumers by helping to lower prices, improve quality, expand choices, and accelerate innovation. These improvements would likely include greater privacy protections given that these are valued by consumers. However, it is not clear that competition will be sufficient to adequately address privacy and several other digital issues.

3. More robust merger enforcement should be part of the solution to expanding competition, including better technical capacity on the part of regulators, more forward-looking merger enforcement that is focused on potential competition and innovation, and legal changes to clarify these processes for the courts.

4. A regulatory approach that is oriented towards increasing competition by establishing and enforcing a code of conduct, promoting systems with open standards and data mobility, and supporting data openness is essential. This is because more robust merger enforcement is too late to prevent the harms from previous mergers and antitrust enforcement can take too long in a fast moving market.

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[1] Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf.

I also want to recommend to the Committee the recommendations in the recent report by the University of Chicago's Stigler Center Committee on Digital Platforms on the economy and market structure, many of which dovetail with the suggestions in the report I chaired and with the recommendations in my testimony today.[2]

I will now elaborate on each of my four points.

Point #1: The major digital platforms are highly concentrated and, absent policy changes, there is a high likelihood that this concentration will persist with detrimental consequences for consumers.

The major online platforms including online search, mobile operating systems, digital advertising and social media are each dominated by two players. Moreover the two players in each of these markets are generally drawn from the same five major companies. A number of economic features of digital markets have helped to greatly reduce what economists call "competition in the market" by leading to tipping that results in a winner-take-most situation. These economic features include the combination of economies of scale and scope, the network externalities associated with having many users on the same platform, behavioral biases on the part of consumers, the data advantages of incumbents, the importance of raising capital, and brands. While many of these individual features are found in a wide range of markets, their combination in digital markets is unique.

It is more difficult to provide a definitive answer to the question of whether there is "competition for the market" in the digital sector. This is the idea that even if at any given moment only one or two major platforms are viable, over time these incumbents can be toppled and replaced by newer and more innovative competitors. Many of the dominant technology companies of the past seemed unassailable but then faced unexpected competition due to technological changes that created new markets and new companies. For example, IBM's dominance of hardware in the 1960s and early 1970s was rendered less important by the emergence of the PC and software. Microsoft's dominance of operating systems and browsers gave way to a shift to the internet and an expansion of choice. But these changes were facilitated, in part, by government policy in particular antitrust cases against these companies, without which the changes may never have happened.

Similar changes have been seen in the platform space, including, Google replacing Yahoo and Facebook replacing MySpace. However, these and other similar examples all took place in the early days of the World Wide Web. Moreover, to the degree that the next technological revolution centers around artificial intelligence and machine learning, then the companies most able to take advantage of it may well be the existing large companies because of the importance of data for the successful use of these tools. New entry may still be possible in some markets, but to the degree that entrants are acquired by the largest companies with little or no scrutiny,

[2] Available at https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure-report.pdf?la=en&hash=E08C7C9AA7367F2D612DE24F814074BA43CAED8C.

anticompetitive behavior is tolerated, and open standards are limited, the channel of competition for the market is not fully operative.

Point #2: More robust competition policy can benefit consumers by helping to lower prices, improve quality, expand choices, and accelerate innovation.

This lack of competition is costly. Consumers may think they are receiving "free" products but they are paying a price for these products in a number of ways. First, the competitive price for some of these products might have been negative, so the fact that consumers are not being paid for the use of their data may reflect a failure of competition. Second, to the degree that the highly concentrated advertising market results in higher ad prices than would otherwise be the case, these higher costs are passed along by sellers in the form of higher prices for consumers. Third, consumers pay in the form of quality reductions. Finally, consumers pay in the form of reduced innovation in a world in which the major platforms have reduced incentives to innovate and incumbents have distorted incentives to make more incremental improvements that can be incorporated into the dominant platforms rather than more paradigmatic changes that could challenge these platforms.

Competition policy is very good at helping consumers get more of what they want. To the degree that public policy interests are aligned with those of consumers that means that competition policy can be an effective tool in increasing social welfare. That is generally the case in the economy and the digital sector is no exception. Many consumers want more privacy. Right now with so few platform choices they have limited options in this regard—a consumer can delete Facebook, for example, but will not have another place to go to connect with her friends. More choice would create more incentives for privacy protections.

There is an alternative perspective on privacy that is the basis for the European Union's General Data Protection Regulation (GDPR), which is that privacy is grounded in human rights and is generally applicable— it is not just something that should be provided to the degree that consumers want it in a competitive marketplace. This perspective would say that in addition to ensuring robust choices for consumers, regulators should also explicitly set minimal standards and rules for privacy, based on these human rights concerns or the worry that consumers will not be sufficiently attentive for competition to serve their needs. The United States already has such rules in areas like healthcare and banking and understanding whether a generalized set of privacy rules is necessary—as a complement to competition policy and taking into account their impact on competition—is an important issue to resolve.

Beyond privacy there are some issues that cannot be solved by competition. Some consumers value harmful content, like child pornography or instructions on assembling weapons of mass destruction. Competition, by itself, would deliver more of this content. While competition is an essential component of policy towards digital platforms, these other issues make clear that competition cannot be the only element of such a strategy.

Point #3: More robust merger enforcement should be part of the solution to expanding competition, including better technical capacity on the part of regulators, more forward-looking merger enforcement that is focused on potential competition and innovation, and legal changes to clarify these processes for the courts.

Competition policy generally recognizes a distinction between companies that grow organically, presumably reflecting efficiencies, and companies that grow through mergers, where regulators need to weigh the efficiencies against the harms from lessened competition.

In the last decade, Amazon, Apple, Facebook, Google, and Microsoft combined have made over 400 acquisitions globally. Many, if not most, of the major features of these companies have not been developed internally but acquired. Many of these acquisitions are small and almost certainly efficiency enhancing, but several have been quite big—the largest being Microsoft paying $26.2 billion for LinkedIn.

Merger control is subject to two types of errors: false positives, when a merger that should have been allowed to go through is blocked, and false negatives, when a merger that should have been blocked is allowed to go through. No enforcement can be perfect given all of the uncertainties inherent with forward-looking merger assessments, so some balancing of these types of errors is necessary.

To date, there have been no false positives in mergers involving the major digital platforms, for the simple reason that all of them have been permitted. Meanwhile, it is likely that some false negatives will have occurred during this time. This suggests that there has been underenforcement of digital mergers, both in the United States and globally. Remedying this underenforcement is not just a matter of greater focus by the enforcer, as it will also need to be assisted by legislative change. Had such a change been in effect it is likely that the vast majority of these mergers would still have gone through based on their minimal impact on competition and their potentially large benefits for consumers. But some would likely have been blocked, resulting in more competition today.

A better approach involves three elements. First, the Federal Trade Commission (FTC) and Department of Justice's Antitrust Division need expanded resources to develop greater technical expertise in the digital space. Economics and law are essential, but so is computer science. Doing this will require more staff and an increased focus on digital expertise.

Second, merger analysis cannot simply be focused on short-run, static price effects, but must also consider how the effects on innovation in the future. This can involve consideration of the role of data as a potential barrier to entry and the role of potential competition in the market. This is further complicated by the fluid definitions of digital markets, which continue to evolve over time. Economists have tools to assess some of these issues, but in many cases this can be very difficult and can lead to some ambiguity and uncertainty in any given case.

Third, in recent decades courts have established an increasingly high bar for blocking mergers. This is likely inappropriate in the economy as a whole, but it is especially problematic in the digital sector where a strong presumption in favor of mergers runs up against the necessity of

considering what are inherently more speculative—but still very real and important issues—like potential competition and innovation. As a result, the legal standards for merger review need to be clarified, either more generally or specifically for the digital space, including shifting some of the burdens of proof.

Point #4: A regulatory approach that is oriented towards increasing competition by establishing and enforcing a code of conduct, promoting systems with open standards and data mobility, and supporting data openness is essential.

Expanded merger enforcement would be helpful but it is not sufficient since many of the horses have already left the barn. Antitrust scrutiny of the major platforms, like the valuable work being undertaken by this Committee and the efforts by the FTC and Department of Justice, are important as well. But in a fast moving technological landscape none of these efforts are sufficient to ensure adequate competition—by the time enforcement happens the competition may have been wiped out and the major platforms have moved on. Moreover, the fines associated with enforcement may not be a sufficient deterrent, especially when they are levied for very specific conduct and do not set a clear precedent for other companies operating in the future.

That is why my panel recommended the establishment of a "Digital Markets Unit," a step the UK government announced it is taking and that I am currently helping them to implement. I believe this recommendation is fully applicable in the United States. I will describe the three main functions that regulation should undertake, recognizing that this could be housed in an existing regulator like the FTC or in a new body like the "Digital Authority" floated by the Stigler Center commission.

The first function is a code of conduct that would apply to companies that were deemed to have "strategic market status," a designation that would be applied based on transparent criteria that would be re-evaluated every three to five years and would be focused not just on traditional criteria like market shares but also on the degree to which a platform acted as a "gateway" or a "bottleneck." Companies with strategic market status should be subject to a code of conduct that would be developed through a multi-stakeholder process and should be enforceable. The elements of the code of conduct would be similar to existing antitrust law, including ensuring that business users are provided with access to designated platforms on a fair, consistent and transparent basis; provided with prominence, rankings and reviews on designated platforms on a fair, consistent, and transparent basis; and not unfairly restricted from, or penalized for, utilizing alternative platforms or routes to market. Importantly, smaller businesses and new entrants would not be subject to these rules—the goal of these rules is the establishment of a level playing field but not inhibiting innovation and choice by emerging competitors.

The second function is promoting systems with open standards and data mobility. These steps would benefit consumers by allowing them to access and engage with a wider range of people in a simpler manner, fostering more competition and entry—including enabling consumers to multi-home by using multiple systems simultaneously or to switch more easily to alternative platforms. This step is not self-executing, you cannot just order it and expect it to happen. It will

require hard work to identify relevant areas, like messaging or social networks, collaboration with companies on necessary technical standards, and careful consideration to ensure that it is done in a manner that is compatible with other objectives like protecting privacy. Much of this is happening already, including through initiatives like the Digital Transfer Project organized by many of the major tech companies. Companies do not, however, have a fully aligned incentive to facilitate competition through open standards so further pressure can help by providing further incentive for private efforts to continue to become even more robust and/or by creating a more formal regulatory requirement.

The third function is data. Companies active in the digital economy generate and hold significant volumes of customers' personal data. This data represents an asset which enables companies to engage in data-driven innovation, helping them improve their understanding of customers' demands, habits and needs. Enabling personal data mobility may provide a consumer-led tool that will increase use of new digital services, providing companies with an easier way to compete and grow in data-driven markets. However, in some markets, the key to effective competition may be to grant potential competitors access to privately-held data. Such efforts, however, need to be very carefully balanced against both commercial rights and concerns about privacy. Digital platforms are already making an increasing amount of data open. Continuing to encourage this is important but so is understanding additional steps that could foster more open data.

Thank you very much for your work on these important issues and I look forward to your questions.

Mr. CICILLINE. Thank you, Dr. Furman.

I recognize Dr. Layton for 5 minutes.

TESTIMONY OF ROSLYN LAYTON

Ms. LAYTON. Good morning, and thank you.

Chairman Nadler, Chairman Cicilline, and Ranking Member Sensenbrenner, I'm honored to join these distinguished panelists today and to contribute to this important inquiry on data and privacy. And I also want to recognize and thank the committee staffers for all their work to prepare for this hearing. And this testimony represents my own views.

As Professor Valletti lays out, we know very little about the economics of privacy, the number and severity of privacy violations, the quantification of harm, and how many violations regulation would deter. Without these key points of information, it's ill-advised to build a command and control regulatory regime which presumes that regulators are in the know. The best numbers that I have comes from Sasha Romanosky at RAND, who estimates that there are a few hundred information privacy violations per year, which is actually a small number given the size of the digital economy.

Given that good policy information's not available, regulatory advocates look for other arguments to justify their preferred approach, such as competition. Now many well-intentioned policies are promoted on this premise that they will level the playing field, but we must look at the actual effects, not just the theory and argumentation, however compelling it may be.

Now, my testimony introduces an engineering concept of control points. Just as a linchpin keeps a wheel from sliding off an axle, harnessing a control point is a powerful, efficient way to govern a system.

Now, Commissioner Chopra suggests that there's a corporate royalty controlling our economy. Well, similarly, there's a regulatory royalty controlling our politics.

The conventional wisdom that the regulation follows market failure, the reality is that regulation follows market success. It's no surprise that antitrust authorities around the world and across the U.S. are looking at the American tech sector, because that's where the money is. This is a source of political power because it brings revenue to various States through litigation fees. And we can see the activities of state attorneys general who wish to make national policy by using the bully pulpit of their State. Fortunately, Congress can temper the self-interested actors so that no one State can dictate the commercial terms of our national economy.

I'm extremely grateful that this Congress is considering updating the privacy framework for the digital age. We can learn a lot from the European Union, which has had a two-decade natural experiment in regulating the tech economy. The long-term trends and outcomes are clear by looking at the European Commission Digital Scoreboard and the Euro stats surveys. While large enterprise moves along, small and medium-sized companies have a hard time growing. They don't invest in information technology and they transact little across borders.

After 18 months of the GDPR in effect, we can see that the largest advertising platforms have gained market share, while their fledgling ad tech rivals have lost ground. GDPR imposes a set of fixed costs across all enterprises. Only the largest players can afford the costly requirements of lawyers' fees, chief privacy officers, audits, impact assessments, software updates and so on. Less than half of all companies can comply with these regulations that cost $3 million per firm. And one-fifth of companies will never comply. And consumers are no better off. Online trust is at its lowest point since 2006.

In contrast, the United States welcomed 40,000 new internet startups last year alone. We have been fortunate to have a single national market from our founding and a 220-year tradition of carefully constructed bottom up privacy rules that were democratically decided and based upon real world harms.

The CCPA with its 77 regulations on enterprise has 22 more obligations than the GDPR. A preliminary cost-benefit analysis prepared by the California Department of Justice suggests that costs exceed benefits by a factor of 14. It notes $70 billion in startup and running cost for compliance. Most of these costs go to privacy lawyers and consultants. The consumer benefits are estimated generously at a mere $5 billion.

Now, it's hard to see what's progressive about giving a windfall to the privacy bar at the expense of consumers and small business. These are companies with 500 employees or less. They make up 99 percent of the California businesses. These are the companies who are going to bear the brunt of regulations which are dreamed up by the regulatory royalty in a mere month.

Now, the appeal to justify this regulation on human rights is part of an attempt to avoid the forthright discussion about the costs.

Now, in closing, there's a right way and there's a wrong way to do privacy protection. GDPR and CCPA are the wrong ways. Good regulation should cost little to implement. It should be easy to understand. I appreciate that this committee is considering alternatives. If we're concerned about competition, we should stop adopting rules that unwittingly strengthen the largest players. In the end, I'm optimistic because the market we're talking about today is maybe a third of our national economy. The other 70 percent of our economy is where our opportunities are. That is where the data revolution has not come. That is where we have the opportunities to grow, where we can transform lagging industries in health and transportation.

So the important part is if we want these kind of new companies to emerge, we have to—and we want to replace the status quo, we have to make sure that we don't kill it in the cradle by regulation that stops the innovator at the gate.

[The statement of Ms. Layton follows:]



Statement before the House Judiciary Committee
Subcommittee on Antitrust, Commercial and Administrative Law
On Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition

Data and Privacy Inquiry: Control Points in Technology and Policy

Roslyn Layton, PhD
Visiting Scholar

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Chairman Nadler, Ranking Member Collins, Subcommittee Chairman Cicilline, Ranking Member Sensenbrenner, and members of the subcommittee, thank you for the opportunity to discuss digital markets. It is an honor. I am heartened by your bipartisanship. I commend the detailed and focused preparation by committee staff in advanced of this hearing. If Congress is to make meaningful and appropriate laws, it must undertake these inquiries. Digital markets are complex field, and there is value to mapping its many dimensions and inviting different perspectives. This testimony reflects my own views and research carried out at Denmark's Center for Media and Information Technologies at Aalborg University. As a mother of three Danish-American children who are European citizens, I also have a personal and academic interest in why European policies are failing to stimulate European-made internet innovation and reducing consumer trust online.

The objectives of this digital markets inquiry are to (1) document competition problems in digital markets, (2) examine whether dominant firms are engaging in anticompetitive conduct, and (3) assess whether existing antitrust laws, competition policies, and current enforcement levels are adequate to address these issues. Additionally, the subcommittee seeks feedback on how and whether data either enable or deter market entry and how privacy may affect competition and antitrust enforcement.

Digitization challenges traditional antitrust analysis because of complexity and change.[1] Indeed the writings of Judge Louis Brandeis have been popularized of late to justify new-fangled antitrust approaches to large technology companies. However, just as Brandeis was skeptical about so-called big business, he was also concerned about big government.[2] As such, it is inconsistent to advocate dismantling enterprise while growing government.

Interestingly, Brandeis' key argument against large enterprise was that it was inefficient, but that critique does not describe today's technology firms, which are extremely efficient. These companies are highly innovative, continue to increase output, and deliver increasing value to end users. It is not in their interest to behave anticompetitively—at least in an *overt* way. However, I am concerned about their *covert* practices, their activities that do not in themselves rise to the level of antitrust violations but lead to conditions and settings that favor their continued dominance. Namely, I am concerned about how they influence public choices on internet policy and technology. Moreover, some large American tech firms have put Americans' safety, security, and privacy by bending to the will of the Chinese government in requiring data processing in China and with Chinese tools.

I will use the engineering concept of control points to describe this covert behavior. Just as a linchpin keeps a wheel from sliding off the axel, harnessing a control point is a powerful, efficient way to govern a system. As these platforms grow and gain economies of scale, the more easily they manage control points in the system, adding more capability with seemingly less effort. One need not control the system if one can just manage its control point. I will describe how the companies leverage control points in technology and public policy to gain advantages in the marketplace. Moreover, I will demonstrate how regulatory interventions, however well-intentioned, such as data protection, privacy regulation, and net neutrality, have strengthened the market positions of these companies. Many well-meaning policies are promoted on the

premise that they will "level the playing field," but we must look at the actual effects, not just the theory.

Moreover, I am skeptical to opportunistic, election season, media-seeking calls to break up "big tech". I am hard-pressed to find successes from government intervention. For example, American folklore alludes to the 19th-century railroads as justification for regulatory intervention, but the creation of the Interstate Commerce Commission itself was a product of rent seeking, reflecting the political prioritization of powerful agricultural interests over that of transport, not consumers.[3] The government intervention in Microsoft changed little; Microsoft is today the largest technology company on earth with more than $1 trillion in market capitalization. Perhaps the most successful intervention was one that never happened--IBM. New modes of computering are what bested Big Blue, not enlightened regulators.

Consider telecommunications. The Bell Telephone Company and the American government agreed on a regulated national monopoly to ensure "universal service" in 1913. Regulators were tasked with setting prices to ensure "fairness." Naturally the regulator that wanted to protect the entity on which its existence was predicated, so Bell earned excessive profits. However, consumers suffered unnaturally high prices and could only buy their phone from approved carriers. Finally, the Department of Justice broke up the collusion. However, competition was ultimately driven by new technologies in cable and mobile wireless, not governmental intervention.

The airline industry followed a similar pattern. Until deregulation in 1978, airlines in America operated under a government sanctioned oligopoly, a cartel for airmail delivery, passenger routes, and transport rates. Partial deregulation of the airline industry in the US and sunset of its outdated regulation led to a 45% decline in consumer airline ticket prices from 1978 to 2008, a doubling of passengers, a quantum leap in airline productivity, and the emergence of low-cost carriers.

It's hard to see past the dominance of the large tech-platform companies today -- but if we regulate them like monopolies, they will be around a lot longer than without the help of regulation. Today's tech giants came to prominence with better products and services that unseated their heavily regulated rivals in television, radio and print. Yet once the web firms gained critical mass, they blocked potential competitors through classic telecom rules like "network neutrality" obligations and anti-discrimination policies that were applied to the telecom operators but not to them. These rules have given the tech titans a free ride along the information highway. They force consumers to pay the full cost of their communications, rather than have it subsidized with advertising. Just as ads let Google and Facebook offer free services, it could lower the price of internet service. This innovation would give advertisers credible alternatives to the reigning platforms. That's why the tech giants and their globally coordinated advocates have fought vehemently against it, aborting its birth by lambasting it as "non-neutral". The rules were designed by the internet industry and maintained for its benefit. But such "regulatory capture" is not abnormal. Economic history is replete with eye-popping examples of sector-specific regulations that perpetuated monopolies rather than tempered their dominance.

As we can see some 18 months after the promulgation of the European Union's exalted General Data Protection Regulation (GDPR), Google, Facebook, and Amazon have gained market share while their fledgling ad tech rivals have lost ground. Only the largest players can afford the GDPR's costly requirements for lawyer fees, staff hires, software updates, and 45 other requirements. Many studies suggest that European consumers are worse off from the GDPR. The EU's morass of privacy laws, regulations, directives, and disclaimers are not lessening data breaches or the proliferation of Chinese apps, which operate in brazen defiance of European rules.

Policies such as GDPR, net neutrality and other misguided regulation have strengthened Silicon Valley dominance, and the California Consumer Privacy Act (CCPA) will likely extend it further. If we want the reign of the platforms to end, we should accelerate the rollout of new technologies and lower barriers to entry to new technologies such as 5G, artificial intelligence, blockchain, and so on.

Technology as a Control Point

A company's governance of control points, whether they are in the platform's network or not, can strengthen a platform. Control points are not the same as network effects, the increased value that a platform enjoys as more people use it. The governance of control points is an important component of understanding the complexity of online systems. I will provide examples of control points including operating systems, developer tools, digital book pricing, third-party contracts, and the DoH, the so-called domain name server (DNS) over secure hypertext transfer protocol (HTTP), unilateral efforts by Google and Mozilla to subsume a vital part of internet protocol into their proprietary networks.

Google, Facebook, Amazon, and Apple offer platforms or digital ecosystems with a foundational architectural superstructure on which modules or applications can be added to extend the services. This co-creation among the platform owner, users, and developers tussles between generative innovation and infrastructure control.[4] Some of these generative characteristics include leverage (the extent to which tools make possible a set of activities that would be impossible or prohibitively expensive otherwise), adaptability (the scope of uses tools can be put to and the ease to which they can be modified to extend this range of uses), mastery (ease to adopt tools by a broad audience), accessibility (ease of access to the tools and the information on how to use them), and transferability (degree to which the instrument can be deployed for new uses).[5]

While many radio, TV, and print outlets blame online players for displacing and disrupting their revenue, online platforms have improved the experience for consumers and advertisers. They have also expanded the media market, creating entirely new channels of distribution out of ones and zeros. More broadly, online players have invested billions of dollars to attract users and to make the online experience compelling, while many brick-and-mortar retailers have failed to make the physical shopping experience more pleasant and convenient. It feels like work to drive to a mall, find a parking space, walk a long distance to a store in surroundings

with offending music and lighting, and then interact with a disinterested employee.[6] Indeed, it is personalization based on personal information that makes the online experience compelling and convenient.

However, personalization is not unique to the online world. Many can remember the shopkeeper who recognized you, knew which products to recommend based on your relationship, and tailored unique offers to you based on your preferences. The difference today, of course, is that the knowledge of relationship is documented in code and strengthened with other sources of information. It was possible to do this in the past, but it was costly and time-consuming. Moreover, many forms of consumer tracking today did not exist in the past, notably mobile device tracking. Indeed, online brands are attempting to build a brick-and-mortar presence with their coded knowledge.[7]

Some suggest that the ability to amass data itself is a barrier to competition; however, today's innovators and entrepreneurs have multiple ways to access large databases whether free, open source projects, or via commercial databases. Indeed, there are significant costs and risks to warehouse data, and many firms find it preferable to purchase data in the market, rather than host the data themselves.

Access to data is important for machine learning. Leading financial analyst and physicist Richard Windsor explains that while media hype focuses on the killer apps of new technologies that

> . . .it's the smaller, simpler and deadly dull projects that are likely to see real success in the short to medium-term. . . boring things like saving money on electricity and basic automation where the money is going to be made. . . Deep learning, at its heart, is a system for statistically separating characteristics of data such that when these characteristics occur again, they can be recognized. . . Furthermore, the algorithm needs to be shown every combination and permutation that is possible before it can be relied on with 100% accuracy. This means that the ideal task needs to have both a finite and a stable dataset in order for deep learning to work well.[8]

A similar concern is expressed that some platform owners have disproportionate ability to mine their own data warehouses. However, this can't be true in all cases because platforms make much of their proprietary data and capabilities available through application program interfaces (APIs). The analog example is the grocery story that creates a house brand or white label brand based upon information it has about its customers and vendors. However, not all product categories are successes, and stores may focus on quality rather than price.[9]

Control Point Examples in Digital Markets

The operating system (OS) is the software that supports a computer's basic functions. Operating systems were originally designed as digital operating manuals; they did not collect or track user behavior for marketing purposes. Developers use operating systems to access baseline data about the workings of an application. This information is frequently called telemetry: data

to monitor performance remotely, especially crashes and errors. Finding and improving deficiencies help improve the system through patches, updates, and successive versions. Transforming the operating system from a mere analytics dashboard to a commercial marketing system is part and parcel of the realization of modern smartphones. While may antitrust discussion focus on the monopoly of Android-enabled devices, many forget that Android replaced the Nokia smartphone with its Symbian operating system, a platform that many thought was unbreakable. With 5G, we can begin to see creative destruction as smartphones will be supplanted by the Internet of Things.

Operating systems are the subject of considerable conflict. The Apple iOS platform ecosystem offers a rich field for research with millions of devices, over half a billion users, and millions of apps. An information systems analysis examined 4,664 technical articles published from 2007 to 2011 on the topic of contested innovation on the iOS operating system.[10] Some 30 incidents were cited as disputes between Apple and other actors over "boundary resources," the interface between the platform and developer. These incidents emerged over time, and many are ongoing today and reflect the general nature of the rivalry over sharing resources, notably Apple's rules about the language in which third-party apps must be written, how to migrate its customer base to new devices and systems, and even controversial judgments about whether some apps are politically unacceptable.

Android, by far the world's most popular operating system, has been the focus of antitrust investigations abroad related to the bundling of the operating system with Google's suite of applications, the legality of derivative versions of the operating system, and alleged exclusionary licensing of its operating system. The efficacy of these approaches in promoting innovation and alternatives remains to be seen, and there are some questions as to whether the EU properly applied competition law.[11]

The Android OS serves as the "brain" of a device containing the information of the system, all the inputs and outputs of the device, notably the log of calls and messages and the bank of photos, videos, contacts, and calendar. Android records the users' keystrokes, words, and viewed images. Android sees the information a user types before it is encrypted. Android sees the decrypted message once it's received. Android sees all browsing data, the URLs entered, search terms, pages visited and specific clicked items, logins, time spent on content, file uploads and downloads, IP address, bookmarks, app user history, and more. It has location history such as the device location, coordinated with cell tower information, Wi-Fi, and Bluetooth.

Android's capabilities extend to data collected by sensors, webcams, microphones, and any other mobile attachments. In the earlier versions, app developers were able to access, profile, and track "persistent" identifiers such as the Android ID, International Mobile Equipment Identity number,[12] hardware addresses, and SIM serial card number.[13] The advertising ID is the user's digital marketing fingerprint that is consistent across the apps and devices they use. With the "advertising ID" asset, Android can work more closely with app developers and advertisers to provide more relevant advertising to the user and monetize the experience. Android assigns

unique and global advertising identifiers, more comprehensive than cookies, to devices and allows apps to access that unique identifier for each device running the operating system.[14] These data are collected and processed from users, both to make the systems and applications work better and to provide insights to advertisers. Data from the operating system may be combined with personal data from other systems for marketing, research and development, and so on. For these reasons, the Android operating system can be provided to the end user without an out-of-pocket cost.

Facebook offers interesting jurisdictional questions because most of its users are outside the United States, and it attempts to tailor many of its offerings to local tastes. It hosts a variety of points of control that both enable users and developers to engage and share and allow Facebook to impose discipline. Facebook hosts many competing applications in platform, such as YouTube, Twitch, games, monetary transaction, and music. These apps can be experienced without leaving Facebook. While users enjoy the experience because they like to share it with their friends, it allows Facebook to capture additional personal data that can be used for ad monetization. Given the platform's capabilities, which can allow content to go viral, Facebook is constantly managing distribution, and it is critiqued on the one hand for not immediately blocking fake accounts or for not immediately stopping violent, terrorist content and on the other for not distributing social content widely enough. Facebook has made major investments in human and artificial intelligence for content and developer moderation, but it appears that the platform grows faster than its capability to manage, and the company has suffered in its earnings as a result.[15] Facebook's internal limitations and shortcomings represent opportunities for competitive alternatives. Hill Holliday's survey of Generation Z (those born since 1994) shows that so-called digital natives, who are estimated to comprise 40 percent of U.S. consumers by 2020 and of whom more than 90 percent use social media platforms, found that more than one-half had switched off social media for extended periods and one-third had canceled their social media accounts.[16] Users cited time wasting as the reason for quitting twice as often as a concern about privacy. While service providers don't like the high rates of churn on their platforms,[17] they are indicative of a competitive market in which consumers find it easy to leave and try other platforms with different features.

Amazon's relentless focus on data has reinvented the retail experience and provides an important source of competition to Google in product search. Amazon was able to incubate with a unique set of factors such as the investors who were comfortable with losses while it gained market share and profitability; the dearth of sales tax; brick-and-mortar competitors that shouldered many labor, environmental, and other regulations it did not; and regulatory decisions that deterred retailers from mergers that would have otherwise increased its competition. Amazon's control points include digital book pricing, an area in which it attempted to be price maker, but a challenge from publishers has changed how prices are negotiated.[18] As a platform for third parties, Amazon faces conflicts over contract terms, alleged cannibalization with white label products, and proliferation of banned, unsafe, and mislabeled products.[19] Similar concerns have been raised around Amazon Web Services (AWS), for example that it mines the data of retailers for insights to improve its own ecommerce.[20] However a bad rap for AWS is boon to its competitors IBM, Oracle, Virtustream, Microsoft, CenturyLink, RackSpace, and others which can

set up service level agreements to avoid such practices.

The notion of control points embraces "co-opetition,"[21] the idea that firms both cooperate and compete in the marketplace and suggests that firms and industries converge, develop, and create value in unexpected ways.[22] To describe this process David Teece's 1986 paper "Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy"[23] is essential. He observed that most innovations are not products themselves. They must be combined with complementary assets before they can be marketable products. Such partnerships lower barriers to entry and provide rewards to an innovator upfront.

Firms make partnerships or "join complementary assets" (e.g., content provider and broadband provider) to make applications known. Most applications on their own have little to no value, or will almost never be found, unless they are joined with their complementary asset. Thus, a specialized asset may be an operating system that runs on a mobile phone, such as Apple iOS or Android. A co-specialized asset may be a 4G mobile network for the Apple iPhone, its complementary asset. Many iPhone features cannot be realized unless the phone is connected to the appropriate 4G mobile network (e.g., Siri or Uber).

Marketing is a type of complementary asset. For many firms the cost on getting online is nominal: fees of hosting, storage, and servers. Where they face major barriers may be competition from other content, applications, and services, not to mention being findable on platforms such as search engines, social platforms, and app stores. The practices of search engine optimization and app store optimization are designed to help firms overcome these intermediaries.

Further, Teece's paper attempts to predict whether the innovator will succeed. To determine who wins, one needs to examine (1) appropriability—how easy is it to leverage knowledge, ease of imitation, intellectual property, etc.—and (2) complementary assets—who owns what (generic, co-specialized, or specialized). Teece also distinguishes between invention and innovation (ability to do something better than the state of the art), the latter of which adds value to users and economy. This is analogous to incremental and fundamental innovation.

Teece observes that innovating firms frequently fail to win the profits of their innovation and that the owner of the intellectual property does not necessarily get the benefit. It goes instead to customers, suppliers, or competitors—the actor which has the best fit of complementary assets. He gives the examples of EMI having developed the CAT scanner but competitors succeeding to commercialize it; RC Cola having developed diet soda but both Coca-Cola and Pepsi succeeding; Bowmar introducing the calculator but HP and Texas Instruments commercializing it; and Xerox developing the fundamental innovations that Apple managed to commercialize.

To overcome this, incumbent firms would be wise to get a position in the complementary asset market. Frequently it is not the firm that is first to market that wins, but rather that which is third, fourth, and so on. In any case, the need to work with complementary firms is reflected in the presence of joint ventures, coproduction agreements, cross-distribution arrangements, and technology licensing.

Teece also describes two stages of scientific evolution, the pre-paradigm stage and the paradigm stage. In the pre-paradigm stage, there are competing ideas, and designs are fluid. In the paradigm stage, designs become accepted, codified, and standardized. One design emerges as best (e.g., Model T, IBM 360, Douglas DC-3). Once design emerges, competition shifts to price away from design. Scale and capital then become important. Innovation can still occur but may be in niches. This model tends to characterize large consumer markets.

Few industries have the benefit of strong appropriabilities. Most of the time the appropriability is weak, so the innovator needs a business model to make its innovation known. In the pre-paradigm stage, innovators need to allow their designs to "float" to get enough of a market test to see whether they can work. In the pre-paradigm stage, the focus is on the winning design. Production is low (few users), so it does not yet make sense to deploy specialized assets. There are no scale economies, and price is not necessarily an issue. With the move to the paradigm stage, investment becomes irreversible. Once the design becomes standardized, then the importance of complementary assets takes over.

Marketing and distribution are a key complementary asset. This was demonstrated with the PC market. Many companies made computers, but few succeeded because of the scale required to sell to companies across the US (i.e., need a large sales force, get on retail shelves, etc.). So, the strategy is to sell to the big provider (e.g., IBM). In any case, Teece concludes that strategic partnerships frequently do not work for the reasons he cites.[24]

IBM's success in the PC market was related to joining the complementary assets, many of them generic. It made more sense for IBM to find them in the market than to develop them in-house. IBM's key asset relative to the generic inputs was its strong brand, which engendered credibility with customers, plus its formidable marketing and distribution network.[25]

Complementary assets are not a one-size-fits-all solution; rather it requires that each actor pursue the relevant partnership. This contrasts to the overrated policy prescription of data portability. While porting a phone number from one mobile operator to another may make sense, data from a social network do not necessarily map to an online marketplace.[26] An economic experiment with college students in the EU found that data portability was their least valued "right" of the GDPR.[27] This speaks to the lack of testing and evidence before the adoption of the GDPR and a common mistake made by policy elites to assume that users desire their preferred solutions. Instead policymakers should focus on ensuring that the marketplaces encourage innovation and experimentation.

DoH in the Mozilla and Chrome Web Browser

Another control point is the DNS, the naming system for computers, services, or other resources connected to the internet or a private network. Normally, DNS is a separate service from the platform, but platforms can also exert control on points outside their network.

DNS is characterized as a feature of the decentralized and modular architecture of the internet. Many different entities provide DNS service, and it is at the forefront to fight cyberattacks,

block malicious traffic, and limit the spread of child exploitation, terrorism, and other illegal activities. DNS is also the technology that allows parents to exercise controls to protect their children and families and a range of privacy-enhancing tools that are deployed today. DNS also enables the content delivery network industry.

One of the many privacy-enhancing technologies is encryption, techniques for secure communication in the presence of third parties. Encrypted internet traffic has hit an all-time threshold of over 72 percent of all network traffic, up from 55 percent in Q3 of 2017.[28] Google has been leading the charge for encryption, and while its operating system can see the data before and after it is encrypted, it encrypts its browser traffic so that no other parties can see it.

With a simple update to their code, Google can bypass the user's local DNS and send encrypted traffic to the central Google or Mozilla server instead, as Mozilla recently announced it plans to do soon in the US.[29] While we should encourage technological efforts to improve privacy, DoH puts even more of the internet under Google's domain and dramatically changes the internet's decentralized character. Google and Mozilla[30] offer that the move is a mere default setting to which the user can opt out and that they offer parent DNS solutions and "safe search" options. Undoubtedly, DoH makes business sense for Google and Mozilla, and some users may welcome the change. However, the furtive nature of the rollout appears to violate the spirit of the multi-stakeholder internet community. Security analysts have observed that centralizing traffic to Google's or Mozilla's DNS creates a new but needless central point of attack, breaks many parental controls, disrupts enterprise content filtering solutions, and interferes with malware detection systems. Moreover, it can exacerbate challenges for law enforcement, which has hitherto relied on DNS information. However, the lucrative new opportunities for global data monetization by large platforms is likely driving the DoH effort.

AEI's Shane Tews observes:

> Centralized encrypted DNS is a new model of internet business that goes beyond online advertising; it's a play by companies looking to exploit user behavior for their own monetary gain, cloaked as an effort to improve security and privacy. Of course, the information in these transactions can also be shared or sold with various unnamed third parties for predictive analytics and other purposes.[31]

It is not clear whether disadvantaged parties could take legal action against Google and Mozilla for an activity that turns off their traffic in an instant, but it exemplifies that vast power that can be wielded, outside of the platforms, with a mere coding tweak.

Public Policy as a Control Point

Technology can create lock-in effects but can be overcome by innovation and design. Policy and regulation, on the other hand, are more powerful control points because they can be cemented by rule of law.

Data Protection and Privacy Regulation

A policy control point is the EU's GDPR. It stipulates that any entity in the world using a European's data must comply with 45 specific regulations including hiring a chief privacy officer; purchasing a GDPR compliant software system; submitting annual audits and impact assessment to the authorities; at users' request, delivering services to users without their participation; and, at moment's notice, producing, rectifying, erasing, or transferring a user's data, among other requirements. European politicians proffered that this regime would level the playing field with Big Tech and put users in control, but 18 months after its implementation, we find that largest US tech firms have *increased* their market share, the ad tech competitors of these firms have lost market share, many small- and medium-sized (SMEs) firms have exited, and Europeans' trust online is at the lowest point since 2006. Less than half of all applicable firms comply given the high cost, some $3 million per firm. Indeed, the data protection authorities are flooded with complaints, many generated by bots, and moreover most complaints focus on billing issues with financial and retail providers, which are already covered under other laws. Europeans rarely exercise any of their 17 newly invented data protection "rights."

Since the implementation of the GDPR, Google, Facebook, and Amazon have increased their online advertising market share in the EU.[32] Three things have happened.[33] First, the high cost of GDPR compliance is a fixed cost; large, profitable firms can absorb this, but it falls harder on SMEs. Second, many advertisers and publishers have stopped using tracking tools that compete with Google and Facebook, giving a greater share of the market to the established players. Third, users are less likely to try new platforms and tools, sticking instead with the "devil they know" in the incumbent players because they perceive that the larger companies have more resources to comply with the regulation.

The GDPR has affected the downstream advertising market as well. Given the scope of Google's advertising platform and its affiliates on syndicated networks, its compliance with the GDPR has caused ripple effects in ancillary markets. Independent ad exchanges noted prices plummeting 20 to 40 percent.[34] Some advertisers reported being shut out from exchanges.[35] The GDPR's complex and arcane designations for "controllers" and "processors" can ensnare third-party chipmakers, component suppliers, and software vendors that have never interfaced with end users, as European courts have ruled that any part of the internet ecosystem can be liable for data breaches.[36] One online publisher called the GDPR the "Google Data Protection Regulation" and explained, "We have suddenly become even more dependent on Google, while other exchanges are hurting."

For those who study the empirical outcomes of regulation, the GDPR's perverse outcomes are surprising. As Nobel economist George Stigler observed more than 40 years ago, "Regulation is

acquired by industry and operated for its benefit."[37] There was an expectation that large fines would deter the platforms' business, that companies would be less aggressive in data collection, and that a space would open for small firms, but as *Politico* reported, large firms with financial and regulatory resources have "gamed" the system. Rules that were supposed to empower citizens have instead helped "Big Tech."[38]

However, disruptive innovation which would allow startups to topple the giants is probably not the goal of most European policymakers. Instead these elites likely prefer a predictable, long-lasting, and *highly regulated* oligopoly under government control conforms to their ordoliberal preferences. This contrasts with American notions of a free and fair marketplace in which startups have a shot for success without being unduly burdened by regulation. That fact that so many Europeans entrepreneurs come to the US to launch their business is a testament to this fact.

Some 40,000 internet startups in the US were founded in 2018 alone.[39] However, this a staggering number is likely to fall with the promulgation of the CCPA, what I call the GDPR-heavy because it adds 77 new regulations to enterprise, 22 more than the GDPR. The largest platforms would prefer to extend the GDPR to the US, rather than to adopt the CCPA, which has some overlapping but slightly different provisions. Indeed, Microsoft has reportedly asked US policymakers for the GDPR to be extended.[40] When large players start asking for regulation on themselves, their motivation is probably not to create competition in their own market.

The California Department of Justice and Office of the Attorney General recently issued a cost benefit analysis of the CCPA legislation and its own supplementary regulation. It notes the total initial compliance cost of $55 billion, 1.8 percent of California's gross domestic product in 2018, and another $16 billion in the coming decade.[41] About half of surveyed firms expect costs to run between $100,000 and $1 million, with vast majority of the fees going for legal services. The report also notes that 99 percent of California companies have fewer than 500 employees, meaning that costs will fall hardest on the firms with the least amount of resources and employees.[42]

Even with sophisticated modeling and economic projections, there are no scenarios in which benefits either meet or exceed costs with the CCPA. The most generous models suggest consumer benefit could amount to $1.6–$5.4 billion over time based on experiments in which consumers report willingness to pay for privacy features. Other cost benefit models suggest conservatively that the costs of the CCPA exceed benefits by a factor of four.[43]

As such, the policy will be a drag on the economy and is likely to hasten the SME exodus from the state. For a state that bills itself as a progressive leader, California is transferring massive wealth to the privacy and plaintiff bars, key advocates for the CCPA. If the goal was to help consumers, then it would be better to provide rebates to customers than fees to lawyers. The report reiterates the findings of the GDPR with the expectation of a similar impact with the CCPA noting,

> Small firms are likely to face a disproportionately higher share of compliance costs relative to larger enterprises. Conventional wisdom may suggest that stronger privacy regulations will adversely impact large technology firms that derive most of their revenue from personal data, however evidence from the EU suggests the opposite may be true. Over a year after the introduction of the GDPR, concerns regarding its impact on larger firms appear to have been overstated, while many smaller firms have struggled to meet compliance costs. Resources explain this dichotomy as large technology companies are often several steps ahead of both competitors and regulators.[44]

When startups and small players exit, existing large companies which can afford to comply will take the market share of the firms that exited. This is what happened in the EU and is what will happen in California if the CCPA is not preempted. Academic studies of other industries over time have noted that entry regulation is a barrier to entrepreneurship.[45][46]

Not only can complex regulation reduce enterprise, it tricks consumers into believe the marketplace is trustworthy. Indeed "complex regulatory frameworks create the illusion of a well-controlled system," notes a recent report of Scientific Board of the European Financial Systemic Risk Board.[47] Similar unintended consequences have been noted in other industries, particularly banking and finance as the report describes,

> Excessively complex regulations contribute to increased systemic risk in several ways. First, complex regulatory frameworks create the illusion of a well-controlled system, while at the same time creating incentives for regulated entities to game the system. Second, such a framework risks missing contingencies that are not well understood, e.g. because of a lack of historical experience. An "over-fitted" regulatory system may not be well equipped to address "unknown unknowns". Third, when risks materialize, the combination of hard-to-understand interactions between different regulations and a wide array of regulatory tools can make policy responses convoluted and difficult to judge. It can also hamper the accountability of regulators and supervisors. Finally, excessive regulatory complexity can encourage the transfer of risks to institutions outside the regulatory perimeter, creating an environment where systemic risk is amplified more than it would have been if risks had remained within the perimeter.[48]

Public policy should promote firms to use data, not punish them for improving products and services for their customers. Indeed, the trouble with today's economy is not that there is too much use of data, but too little. A lack of "information intensity" is holding back the so-called other 70 percent of American economy, sectors such as transportation and health care, the latter of which consumes almost one-fifth of gross domestic product.[49] Outside of certain applications, the traditional healthcare industry is woefully inefficient; digital industries, on the other hand, are eight times more productive and innovative. If the US does not innovate these other sectors, other nations will beat us to it. China is already on track with an "Internet Plus" policy which supports the digitization of industries, including healthcare and government.[50]

While policies such as the GDPR and CCPA claim to promote competition, they both have the effect of increasing barriers for new market entrants and reducing competition. When they were founded, Google, Amazon, Facebook, Apple, and Microsoft enjoyed permissionless data collection and processing innovation; the next wave of innovators will not. So, we can only expect to drag out the dominance of these large firms which now enjoy government-promoted protection from competition. A detailed discussion of the effects of the GDPR and CCPA is submitted to the subcommittee in a separate report, as it exceeds time allotted this hearing.

Internet Regulation

Public policy is a salient control point in the marketplace, and its value is so well established that is has been enshrined by Tullock's paradox.[51] It notes that the cost of rent-seeking is small relative to the gains.[52] While the size of the public affairs budgets of the big tech companies can make for an interesting story or two in the press, a few million dollars is relatively little compared to their total operations, which number in the trillions of dollars. It makes good economic sense for the companies to spend a few million on public affairs to win favorable public policy, for the costs of developing fundamental innovation and associated products and services is in the billions. For more than a decade, control point subterfuge by the tech companies fooled policymakers into thinking that America's 5,441 internet service providers were a threat internet openness. The entire US broadband industry, some $300 billion, is still smaller than the market capitalization of any one of the internet giants. And still, many policymakers have supported a distorted notion that the internet giants should be shielded from competition.

My doctoral research investigated net neutrality policy across 53 countries during the period of 2010–16 to test the hypothesis that countries that adopt hard, bright line net neutrality rules should experience an increase in locally developed mobile app development innovation in their national economy.[53] Following the net neutrality tenets, I expected to see those countries adopting rules would experience greater competition to established edge providers. However, I discovered the opposite. In fact, net neutrality in practice works to cement the market position of existing giants. In no country that has adopted hard net neutrality rules have we seen any platforms emerge to challenge Google, Facebook, or Amazon. In fact, the only places that has produced meaningful competitors to these firms are Russia and China, and these countries have no net neutrality rules at all. If we followed the net neutrality predictions, we should have seen global platforms emerge from Brazil and India, which have had hard net neutrality rules for years. Tomasso Valletti has also described the ambiguous effects of this policy.[54]

Google, Amazon, Facebook, Microsoft, and to a lesser degree, Apple, have lobbied hard in the US and other countries on this issue. They have succeeded to enshrine the norm that disproportionately large senders of traffic pay little to nothing for the cost of networks while the end user pays the full network cost regardless of whether she visits those sites. Moreover, the policy restricts competition by prohibiting startups and end users the freedom to partner to tailor ser-

vices to their individual wants, needs, and budgets. If it was not for the Noerr-Pennington doctrine, which allows the industrial sector to work collectively for favorable price controls, these platforms would likely be guilty of collusion and restraint of trade.

Policy Considerations

Stop Promoting Regulation That Strengthens the Largest Players

If we are concerned about competition and market entry, we must stop making high-cost policies that give Big Tech an unfair advantage. This testimony documents how many well-intentioned regulations delivered the opposite of their intended effect. The high cost of compliance has turned into a market barrier that only the richest companies can afford. As a result, nascent competitors have either stagnated or exited the market while the large companies gained market share. I urge Congress not to adopt the GDPR, or its US imitator, the CCPA, whose financial impacts are likely to be even more detrimental to the US than the GDPR is to Europe.

If the California law is promulgated, it will likely be challenged in court on free speech grounds and will ultimately be struck down as unconstitutional. Moreover, the CCPA threatens to torpedo more than two-dozen hard-fought privacy laws with existing regimes and regulators overseeing the health and insurance sectors, to name just two industries. To keep the US from devolving into 50 conflicting layers of privacy regulation and destroying interstate internet commerce, Congress should preempt the CCPA with evidence-based policy instrument that complement, not supplant, existing law.

Rational Privacy Protections

Evidence-based policy is a rational, linear process to make decisions based upon an evaluation of problems and possible solutions, the collection of information about the possible solutions, and the measurement and comparison of expected outcomes. Had California used an evidence-based approach, it would have conducted randomized, controlled trials to test the efficacy of the 185 provisions rather than slop together a laundry list of feel good rules, as it did over a few weeks.[55] The policy process should be informed by competing approaches with associated assessments *before* legislation is made, not after. Ideally the bill would undergo Congressional scoring and/or review by the Office of Management and Budget for additional rigor.

I appreciate the efforts of this committee, notably Ranking Member Collins,[56] to explore rational, rule-of-law-based methods to protect consumers' privacy and encourage innovation without burdening small- and medium-sized enterprise. Such an approach preserves Constitutional rights and freedoms including interstate commerce; honors the single national market created by our founders; and protects the legal system from rent-seeking and abuse by the plaintiff bar and litigation financiers who wish to profit off the largesse of the tech industry. Most consumers never the rents of class action lawsuits, as winnings go overwhelmingly to the attorneys bringing the cases.[57]

Congressman Collins' proposal[58] dovetails with the "Privacy Bill of Rights" presented by the

2012 Obama White House, a sound privacy framework built on the principles of individual control, transparency, respect for context, security, accuracy, and accountability and strengthened enforcement at the Federal Trade Commission (FTC).[59] President Obama's proposal supported using multi-stakeholder processes to develop enforceable codes of conduct through Section 5 of the FTC Act. Moreover, the Obama administration was adamant about the need for preemption of state laws that would contradict the national standard. Plan architect Cameron F. Kerry describes how it would have functioned,

> The bill of rights articulated seven basic principles that should be legally enforceable by the Federal Trade Commission: individual control, transparency, respect for the context in which the data was obtained, access and accuracy, focused collection, security, and accountability. These broad principles are rooted in longstanding and globally-accepted "fair information practices principles." To reflect today's world of billions of devices interconnected through networks everywhere, though, they are intended to move away from static privacy notices and consent forms to a more dynamic framework, less focused on collection and process and more on how people are protected in the ways their data is handled. Not a checklist, but a toolbox. This principles-based approach was meant to be interpreted and fleshed out through codes of conduct and case-by-case FTC enforcement—iterative evolution, much the way both common law and information technology developed.[60]

Sadly, Silicon Valley thwarted this visionary plan.[61] It is likely that had the US adopted this plan in 2012, it would have beat the EU to the privacy punch and avoided much of the current state of fallout.

University of Washington Law professor Jane Winn offers a helpful overview of US information law, noting how the US focused on risk-based laws which allow innovation except where risk justifies precaution versus the EU where the bureaucracy administers unilateral control rights.[1] She explains that the US approach is an attempt to strike a balance between the public demand for protection from harm with the public demand growth and innovation, and making legislation when there is a clear misuse of information to harm individuals. Citing the low rate of compliance of EU firms with information laws (both the 1995 EU Data Protection Directive and the GDPR), Winn explains that European governments and businesses have an "attitude of calculated indifference toward the challenge of achieving real compliance" and reluctance to compete on digitization. She observes, "American businesses are more likely than their European counterparts to try to use technology innovation as a source of competitive advantage."

Winn describes important historical points where consumer choice and business innovation have allowed the United States to emerge as the global leader in making digital transformation accessible to individuals and the punctuating legislation. For example in prior centuries, one of the first things European immigrants did upon arriving to the US was to borrow money for new

[1] Winn, Jane, The Governance Turn in Information Privacy Law (July 11, 2019). Available at SSRN: https://ssrn.com/abstract=3418286

clothes so that they could blend in with Americans.[2] "Consumerism and the power to construct a new identity with consumer credit remain inextricably woven into the fabric of American democracy," she writes. When Congress enacted the world's first fair information practices law to protect American consumers' power to borrow money, the Fair Credit Reporting Act of 1970, "it was acting in response to the high level of concern among American consumers that the migration of paper credit bureau records to computers might needlessly restrict their access to credit." If there is an "fundamental right" enshrined in American legislation, it is the "right of American consumers to borrow freely to finance their present consumption...in most European countries, there is often a deep ambivalence or even hostility toward American-style consumerism and the culture of easy access to consumer credit that makes it possible," notes Winn.

A related issue in the 1970s was a deep distrust of the US government from the Vietnam War and Watergate which threatened to deter signups to the new Medicare and Medicaid programs. The Secretary of Health, Education and Welfare commissioned a report to determine what the federal government needed to do to restore trust, resulting in the groundbreaking 1973 HEW Report on Computers, Records and the Rights of Citizens and the subsequent Privacy Act of 1974 which contained the first mention of "fair information privacy practices" or FIPPS ever articulated anywhere in the world. FIPPs was "a way to restore the necessary balance between the interests of individuals in how their data is processed on the one hand, and the interests of organizations and the public generally in how that data is processed on the other." What has allowed the Privacy Act to endure is not the notion of privacy as a fundamental right of individual control (an idea it rejects), but rather the *mutual interest* of the individual and the government to maintain the accuracy and reliability of the personal information with the use of FIPPS as a guide. Congress has since made many information privacy laws for specific areas, still in effect today, depending on the harm at risk with the issue at hand. [3]

Winn advises a new framework of information governance that simultaneously addresses privacy and disclosure in a flexible, dynamic way. Congress can borrow elements of other U.S. laws that have been very successful in other contexts, such as the way the way regulators work with voluntary, consensus standards organizations to create concrete, certifiable standards for the specific business practice in question. Unlike industry self-regulation, "accredited" standards are certified by the American National Standards Institute and organizations adopting these official standards must observing the due process requirements contained in a document known as "ANSI Essential Requirements." ANSI standards are already employed today successfully

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[2] Lendol Calder, Financing the American Dream: A Cultural History of Consumer Credit (1999).

[3] This includes Family Educational Rights and Privacy Act of 1974, the Right to Financial Privacy Act of 1978, the Video Privacy Protection Act of 1988, the Telephone Consumer Protection Act of 1991, the Driver's Privacy Protection Act of 1994, the Health Insurance Portability and Accountability Act of 1996, the Children's Online Privacy Protection Act of 1998, and the Gramm-Leach-Bliley Act of 1999.Other examples of risk-based information privacy laws are the Privacy Act, ERISA; the National Labor Relations Act; the Internal Revenue Act; the Bank Secrecy Act; HIPAA; the Family and Medical Leave Act; the Genetic Information Nondiscrimination Act; the 21st Century Cures Act; the Occupational Safety and Health Act; the Telemarketing and Consumer Fraud and Abuse Prevention Act; CAN-SPAM Act; Electronic Communications Privacy Act (including the Wiretap Act, Stored Communications Act and Pen Register Act; the Cybersecurity Information Sharing Act; and the Whistleblower Protection Act.

across many industries. A key advantage compared to the EU's blanket rights approach is that standards are explicit, technical, and measurable and therefore can ensure stricter compliance.

To enable the transition for the millions of firms to which the integrated, national information framework would apply, Congress could authorize federal regulators to confer "safe harbor" status to organizations adopting the rigorous standards along with limited preemption for inconsistent state laws. Notably such rules allow the FTC to impose stricter rules when warranted on certain firms and industries, rather than to saddle every startup with obligations designed for a trillion-dollar platform. Most important, Winn describes why the traditional US approach to privacy has been the best avenue to deliver democracy and actual privacy on the ground, not just on the books.

> Cloaking European-style data protection law in the language of fundamental rights short-circuits the democratic process of balancing the costs and benefits of different regulatory strategies. . . Having insulated themselves from democratic accountability with a fundamental rights narrative, EU institutions are now reaping a whirlwind of populist and nationalist movements across Europe that are openly hostile to European institutions. . . For those who have never faced the challenge of creating and sustaining a culture of compliance, EU-style data protection law appears to be a much simpler, clearer solution to the problem of information governance than a messy, ambiguous risk-based approach. It is only when the challenges of achieving actual compliance is taken into account that the democratic character of the American risk-based model becomes clear.

Congress is right to focus on competition in the tech sector, but it won't achieve this with from third rate platforms mandate by government fiat. Instead Congress should hasten the next technological revolution which will supplant the current incumbents. This can be done through policy that supports investments and incentives for next-generation technologies and removes the market barriers to entrepreneurship, innovation, and enterprise. Here the focus should be on fast-tracking 5G, the internet of things, artificial intelligence, blockchain, and security technologies.

In summary rational privacy legislation could consist of (1) framework that protects Americans' Constitutional rights and freedoms for speech and commerce; (2) strengthened authority and budget for the FTC to develop risk-based privacy standards for the online economy (this would also include budget for more economists and technologists at the agency); (3) safe harbors that allow companies to migrate their operations to those standards, (4) investments and incentives for the development of privacy-enhancing technologies, and (5) consumer education and competency training.[62]

I am heartened by the bipartisanship in Congress today with the opportunity to make a meaningful framework that builds on proven American success and scientific evidence. I thank the committee for this opportunity to testify, its willingness to engage a range of participants, and its openness to new ideas and frameworks. I look forward to your questions.

Notes

[1] Mark A. Jamison, *Applying Antitrust in Digital Markets*, September 9, 2019, https://ssrn.com/abstract=3427450.
[2] Brandeis, L. D., & Lewis, C. M. (1934). *The Curse of Bigness: Miscellaneous Papers of Louis D. Brandeis*. Viking Press.
[3] Roslyn Layton, "Avoiding the Regulatory Bait and Switch of Common Carriage," AEIdeas, April 25, 2019, http://www.aei.org/publication/avoiding-the-regulatory-bait-and-switch-of-common-carriage/. See also Jenny Bourne, *In Essentials, Unity: An Economic History of the Grange Movement* (Ohio University Press, 2017).
[4] Ben Eaton et al., "Distributed Tuning of Boundary Resources: The Case of Apple's iOS Service System," *MIS Quarterly: Management Information Systems* 39, no. 1 (2015): 217–43.
[5] Ben Eaton, Silvia M. Elaluf-Calderwood, and Carsten Sørensen, "The Role of Control Points in Determining Business Models for Future Mobile Generative Systems," IEEE, 2010.
[6] Omar Abbosh, Paul Nunes, and Larry Downes, *Pivot to the Future: Discovering Value and Creating Growth in a Disrupted World* (PublicAffairs, April 23, 2019).
[7] Flavio Palaci, Ramy Sedra, and Anand Rao, "Digital-Native Retailers Are Giving Physical Stores a Radical Makeover," Strategy+Business, January 18, 2019, https://www.strategy-business.com/article/Digital-Native-Retailers-Are-Giving-Physical-Stores-a-Radical-Makeover?gko=7f0a1.
[8] Richard Windsor. "Artificial Intelligence – Dull delivers." Radio Free Mobile. September 5, 2019. https://radiofreemobile.com/2019/09/05/artificial-intelligence-dull-delivers/
[9] Hoch, S. J., & Banerji, S. (1993). When do private labels succeed?. *MIT Sloan Management Review*, *34*(4), 57.
[10] Supra Eaton 2015
[11] Bergqvist, Christian and Rubin, Jonathan, Google and the Trans-Atlantic Antitrust Abyss (March 18, 2019). University of Copenhagen Faculty of Law Research Paper No. 2019-73. Available at SSRN: https://ssrn.com/abstract=3354766
[12] The International Mobile Equipment Identity is a number, usually unique, to identify 3GPP and iDEN mobile phones and some satellite phones.
[13] John E. Dunn, "Thousands of Android Apps Bypass Advertising ID to Track Users," Sophos, February 19, 2019, https://nakedsecurity.sophos.com/2019/02/19/thousands-of-android-apps-bypass-advertising-id-to-track-users/.
[14] Android Software Development Kit, "Android Software Development Kit License Agreement," Android, http://developer.android.com/sdk/terms.html; Tune Help, "Google's Advertising Identifier," February 21, 2014, https://help.tune.com/marketing-console/googles-advertising-identifier/; and Apple SDK agreement.
[15] Richard Windsor, "Facebook—the Long Hard Road," Radio Free Mobile, June 3, 2019, http://radiofreemobile.com/2019/06/03/facebook-the-long-hard-road/.
[16] Hill Holliday, Meet Gen Z: The Social Generation, http://thinking.hhcc.com/?utm_campaign=Thought%20Leadership%20%E2%80%94%20Gen%20Z&utm_source=Press%20Release (last visited June 25, 2018).
[17] Connie Hwong, Why Churn Rate Matters: Which Social Media Platforms Are Losing Users?, Verto Analytics, May 4, 2017, https://www.vertoanalytics.com/chart-week-social-media-networks-churn/.
[18] Amazon, "Apple eBooks Antitrust Settlement," https://www.amazon.com/gp/feature.html?ie=UTF8&docId=1002402851.
[19] Alexandra Berzon, Shane Shifflett, and Justin Scheck, "Amazon Has Ceded Control of Its Site. The Result: Thousands of Banned, Unsafe or Mislabeled Products," *Wall Street Journal*, August 23, 2019, https://www.wsj.com/articles/amazon-has-ceded-control-of-its-site-the-result-thousands-of-banned-unsafe-or-mislabeled-products-11566564990.
[20] See
https://www.wsj.com/articles/wal-mart-to-vendors-get-off-amazons-cloud-1498037402
https://www.cnbc.com/2017/06/21/wal-mart-is-reportedly-telling-its-tech-vendors-to-leave-amazons-cloud.html
https://www.cnbc.com/2017/08/29/target-is-moving-away-from-aws-after-amazon-bought-whole-foods.html
https://www.ciodive.com/news/dramatic-or-justified-retailers-fears-push-cloud-customers-from-aws-to-mi/543273/
[21] Brandenburger, A. M., & Nalebuff, B. J. (2011). *Co-opetition*. Crown Business.
[22] Arthur H. Copeland, "Book Review: Theory of Games and Economic Behavior," *Bulletin of the American Mathematical Society* 51, no. 7 (July 1, 1945): 498–505.
[23] David Teece, "Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy," *Research Policy* 15 (June 1986), http://www4.lu.se/upload/CIRCLE/INN005/Teece_Reflections.pdf.

[24] Roslyn Layton and Silvia Monica Elaluf-Calderwood, "Zero Rating: Do Hard Rules Protect or Harm Consumers and Competition? Evidence from Chile, Netherlands and Slovenia" (Rochester, NY: Social Science Research Network, August 15, 2015), http://papers.ssrn.com/abstract=2587542.

[25] Roslyn Layton and Silvia Monica Elaluf-Calderwood, "Free Basics Research Paper: Zero Rating, Free Data, and Use Cases in Mhealth, Local Content and Service Development, and ICT4D Policymaking" (Rochester, NY: Social Science Research Network, September 27, 2016), https://papers.ssrn.com/abstract=2757384.

[26] Inge Graef, Sih Yuliana Wahyuningtyas, and Peggy Valcke, "Assessing Data Access Issues in Online Platforms," *Telecommunications Policy* 39, no. 5 (June 2015): 375–87.

[27] Maciej Sabolewski and Palinski Michal, "How Much Consumers Value Online Privacy? Welfare Assessment of New Data Protection Regulation (GDPR)" (International Telecommunications Society Conference, Passau, July 31, 2017).

[28] John Maddison, "More Encrypted Traffic Than Ever," Fortinet Blog, December 10, 2018, https://www.fortinet.com/blog/industry-trends/more-encrypted-traffic-than-ever.html.

[29] Selena Deckelmann, "What's Next in Making Encrypted DNS-over-HTTPS the Default," Mozilla, September 6, 2019, https://blog.mozilla.org/futurereleases/2019/09/06/whats-next-in-making-dns-over-https-the-default/; and Zak Doffman, "Firefox Plans Controversial New Encryption Setting for Millions, and Update Starts This Month," *Forbes*, September 8, 2019, https://www.forbes.com/sites/zakdoffman/2019/09/08/firefox-announces-major-new-encryption-default-to-protect-millions-of-users/.

[30] Over 90 percent of Mozilla's revenue comes from Google, as a result of the Mozilla Firefox browser setting Google as the default search engine. It is unclear what the terms of the agreement with Cloudflare are to make them the default DoH resolver for Firefox. Cloudflare has recently filed an initial public offering. See Stephen Shankland, "Google-Firefox Search Deal Gives Mozilla More Money to Push Privacy," CNET, November 27, 2018, https://www.cnet.com/news/google-firefox-search-deal-gives-mozilla-more-money-to-push-privacy/; and Jordan Novet, "Web Security Company Cloudflare Files to Go Public," CNBC, August 15, 2019, https://www.cnbc.com/2019/08/15/cloudflare-s-1-ipo-filing.html.

[31] Shane Tews, "Should Big Tech Be the Sole Operator of the Internet's Domain Name Infrastructure?," AEIdeas, June 25, 2019, http://www.aei.org/publication/should-big-tech-be-the-sole-operator-of-the-internets-domain-name-infrastructure/.

[32] Mark Scott, Laurens Cerulus, and Laura Kayali, "Six Months in, Europe's Privacy Revolution Favors Google, Facebook," *Politico*, November 27, 2018, https://www.politico.eu/article/gdpr-facebook-google-privacy-data-6-months-in-europes-privacy-revolution-favors-google-facebook/. Other articles that discuss this include Sam Schechner and Nick Kostov, "Google and Facebook Likely to Benefit from Europe's Privacy Crackdown," *Wall Street Journal*, April 23, 2018, https://www.wsj.com/articles/how-europes-new-privacy-rules-favor-google-and-facebook-1524536324; Alex Webb, "Google's Mortal Enemy Does It a $95 Billion Favor," Bloomberg, July 20, 2018, https://www.bloomberg.com/opinion/articles/2018-07-20/google-s-mortal-enemy-does-it-a-95-billion-favor; and Alex Webb, "Google and Facebook Turn on the Fake Riviera Charm," Bloomberg, June 25, 2018, https://www.bloomberg.com/opinion/articles/2018-06-25/google-and-facebook-turn-on-the-fake-riviera-charm.

[33] James Campbell, Avi Goldfarb, and Catherine Tucker, "Privacy Regulation and Market Structure," *Journal of Economics & Management Strategy* 24, no. 1 (2015): 47–73.

[34] Jessica Davies, "'The Google Data Protection Regulation': GDPR Is Strafing Ad Sellers," Digiday (June 4, 2018), https://digiday.com/media/google-data-protection-regulation-gdpr-strafing-ad-sellers/.

[35] Catherine Armitage, "Life After GDPR: What Next for the Advertising Industry?," World Federation of Advertisers, July 10, 2018, https://www.wfanet.org/news-centre/life-after-gdpr-what-next-for-the-advertising-industry/.

[36] European Union, Judgment of the Court (Grand Chamber), June 5, 2018, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:62016CJ0210&qid=1531145885864&from=EN.

[37] George Stigler, "The Theory of Economic Regulation," *Bell Journal of Economics* 2, no. 1 (1971): 3–21.

[38] Mark Scott, Laurens Cerulus, and Steven Overly, "How Silicon Valley Gamed Europe's Privacy Rules," *Politico*, May 22, 2019, https://www.politico.eu/article/europe-data-protection-gdpr-general-data-protection-regulation-facebook-google/.

[39] TIA Cyberstates 2019

[40] Andrea O'Sullivan, "Now Microsoft Supports an American GDPR. Which Tech Giant Wouldn't?," *Reason*, May 28, 2019, https://reason.com/2019/05/28/now-microsoft-supports-an-american-gdpr-which-tech-giant-wouldnt/.

[41] Berkeley Economic Advising and Research, "Standardized Regulatory Impact Assessment: California Consumer Privacy Act of 2018 Regulations," State of California Department of Justice Office of the Attorney General, August 2019, http://www.dof.ca.gov/Forecasting/Economics/Major_Regulations/Major_Regulations_Table/documents/CCPA_Regulations-SRIA-DOF.pdf.

[42] Ibid p. 31

[43] Roslyn Layton. "The costs of California's online privacy rules far exceed the benefits." AEIdeas. March 22, 2019. https://www.aei.org/technology-and-innovation/the-costs-of-californias-online-privacy-rules-far-exceed-the-benefits/

[44] Supra Berkeley p. 31

[45] Klapper, L., Laeven, L., & Rajan, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of financial economics*, *82*(3), 591-629

[46] Kotsios, P. (2010, March). Regulatory Barriers to Entry in Industrial Sectors. In *International Conference on International Business*.

[47] "Regulatory complexity and the quest for robust regulation." European Financial Systemic Risk Board. Reports of the Advisory Scientific Committee. No 8. June 2019.

[48] Supra p. 2

[49] Bret Swanson. "Securing the Digital Frontier: Policies to Encourage Digital Privacy, Data Security, and Open-Ended Innovation." AEI. May 2019. https://www.aei.org/research-products/report/securing-the-digital-frontier-policies-to-encourage-digital-privacy-data-security-and-open-ended-innovation/

[50] http://english.gov.cn/premier/news/2015/03/13/content_281475070887811.htm

[51] Tullock, G. (1967). The welfare costs of tariffs, monopolies, and theft. *Economic Inquiry*, *5*(3), 224-232.

[52] Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American economic review*, *64*(3), 291-303

[53] Roslyn Layton, *Which Open Internet Framework Is Best for Mobile App Innovation? An Empirical Inquiry of Net Neutrality Rules Around the World*, Aalborg Universitet, 2017, https://doi.org/10.5278/vbn.phd.engsci.00181. A summary is available at Roslyn Layton, "Does Net Neutrality Spur Internet Innovation?," American Enterprise Institute, August 23, 2017, https://www.aei.org/research-products/report/does-net-neutrality-spur-internet-innovation/.

[54] Greenstein, S., Peitz, M. & Valletti, T. (2016). *Net Neutrality: a fast lane to understanding the trade-offs*. NBER Working Paper 21950.

[55] See Eric Goldman, "An Introduction to the California Consumer Privacy Act (CCPA) (July 9, 2018)," Santa Clara University, https://ssrn.com/abstract=3211013 or http://dx.doi.org/10.2139/ssrn.3211013.

[56] Doug Collins, "Collins Releases Principles to Protect Online Data Property and Privacy," House of Representatives Judiciary Committee, July 10, 2019, https://republicans-judiciary.house.gov/press-release/collins-releases-principles-to-protect-online-data-property-and-privacy/.

[57] Martin Redish, Wholesale Justice: Constitutional Democracy and the Problem of the Class Action Lawsuit. Stanford Books, 2009. https://www.amazon.com/Wholesale-Justice-Constitutional-Democracy-Stanford/dp/0804752753

[58] Doug Collins, "Collins Releases Principles to Protect Online Data Property and Privacy," House of Representatives Judiciary Committee, July 10, 2019, https://republicans-judiciary.house.gov/press-release/collins-releases-principles-to-protect-online-data-property-and-privacy/.

[59] Office of the Press Secretary, "We Can't Wait: Obama Administration Unveils Blueprint for a 'Privacy Bill of Rights' to Protect Consumers Online," White House, February 23, 2012, https://obamawhitehouse.archives.gov/the-press-office/2012/02/23/we-can-t-wait-obama-administration-unveils-blueprint-privacy-bill-rights.

[60] Cameron F. Kerry. "Why protecting privacy is a losing game today—and how to change the game." Brookings. Thursday, July 12, 2018 https://www.brookings.edu/research/why-protecting-privacy-is-a-losing-game-today-and-how-to-change-the-game/

[61] Natasha Singer, "Why a Push for Online Privacy Is Bogged Down in Washington," *New York Times*, February 28, 2016, https://www.nytimes.com/2016/02/29/technology/obamas-effort-on-consumer-privacy-falls-short-critics-say.html.

[62] Layton, Roslyn, How the GDPR Compares to Best Practices for Privacy, Accountability and Trust (March 31, 2017). Available at SSRN: https://ssrn.com/abstract=2944358

Mr. CICILLINE. Thank you, Dr. Layton.

And we'll now proceed under the 5-minute rule. I now recognize the chair of the full committee, Mr. Nadler, for 5 minutes.

Chairman NADLER. Thank you, Mr. Chairman.

Professor Valletti, over the last 10 years, the five largest tech platforms have acquired over 400 companies globally without any real challenge from antitrust enforcers. Professor, is there any evidence to suggest that this de facto exemption from antitrust scrutiny was a mistake?

Mr. VALLETTI. Well, this is my personal opinion, of course——

Mr. CICILLINE. Would you please use your microphone?

Mr. VALLETTI. Yeah, sorry. This is my personal opinion, of course. I do think that there has been a sort of antitrust immunity, in general, in the tech sector for far too long. Google and Facebook have acquired hundreds of companies, as you said, and very few have been vetted. There's some technical reasons sometimes. For instance, you notify some mergers only by the certain threshold, and the threshold is dictated on the turnover of companies in the past 3 years when it comes to digital platforms, but also pharmaceutical companies. These turnovers are not yet there and so you don't have the tools to intervene.

But yes, I do think we have severely underenforced in the merger area, which means not necessarily that those mergers were bad, but we should have investigated them for sure.

Chairman NADLER. Professor Chopra, would you comment on the same question?

Mr. CHOPRA. Well, I actually wonder quite a bit what would our world look like if Google had not bought YouTube or Amazon had not bought Zappos or many of these acquisitions that many believed could grow on their own to be their own big giant. And I agree that underenforcement can really kill innovation and kill entry, because when it's harder and harder to break in, that's just bad for small business and it's bad for all of us.

Chairman NADLER. Thank you.

And, Professor Valletti, what should antitrust enforcers be doing to ensure the dominant platforms are not swallowing up actual and potential competitors?

Mr. VALLETTI. The simplest answer is run cases or open cases and investigate. The point is that—there is a response that some entrepreneurs want to be bought. This is an exit strategy. They want to cash on their own innovation. My point is not that this shouldn't happen, but simply that dominant companies should not be allowed to buy those. They can be bought by someone else.

So what can be done is to run more cases, open, use financial evaluation, run through internet documents. The chairman before mentioned Onavo, a spyware that Facebook was using to buy some rivals. So there's a lot of things that we can do to improve.

Chairman NADLER. Thank you. And you've also argued that a dominant platform can use its privacy policy to entrench its dominance. Can you explain how that strategy works?

Mr. VALLETTI. So there are different ways. One way could be, for instance, a company which is dominant doesn't have alternatives. That's why it is dominant, because you cannot find alternatives. So this dominant company, you need the service, we'll ask you to sign

up for whatever they ask you. You don't see through the terms, you don't know where your data is going, you don't know what's going to happen with your data. Your data are going to be used to monetize somewhere else, maybe even with yourself in a future period, in the present period with—I don't know. If it is something genetic, it will be even—your offsprings.

So money is going to be made from this hypertargeted advertising. Once you have money, you can do lots of strategies to preserve your dominance.

Chairman NADLER. Okay. Can you explain why you view privacy an appropriate factor to consider under competition law?

Mr. VALLETTI. Yes. Because the locals of competition are multifaceted. Can be prices, can be innovation, can be quality. And since consumers seems okay about privacy, I would say this is one of the primary things that a healthy competitive market should actually give, healthy privacy to individuals.

Chairman NADLER. Thank you.

And, Professor Furman, in your view, is big data creating entry barriers that prevent entrepreneurs from raising capital and breaking into technology markets?

Mr. FURMAN. Yes, I think big data is creating entry barriers. And if you tried to guess what the next industry is going to be, we've had a succession from IBM to Microsoft to Google, et cetera. The next is likely to be AI machine learning, and the companies best poised to take advantage of that are the ones that are the large incumbents now. So the wave of disruption——

Chairman NADLER. They're larger because they have the data.

Mr. FURMAN. Because they have the data, exactly, which is what's needed for this next stage in the economy.

Chairman NADLER. And that may lead to my next question, which is, why is data still a barrier to entry even though it's nonrivalrous?

Mr. FURMAN. It's nonrivalrous, but there are companies that keep that data and keep that data to themselves. They have economies of scale. There's things you can do once you have large amounts of data that are even much, much more than you could do with a medium or a small amount of data. And I think a lot of that is a function of public policy choices we've made about what data is and is not open.

Chairman NADLER. To compete with them, a new entrant would have to assemble its own data starting from way back?

Mr. FURMAN. Yes, they would, Congressman.

Chairman NADLER. Thank you very much.

I yield back.

Mr. CICILLINE. The gentleman yields back.

Votes have been called. We're going to have the gentleman from Colorado, Mr. Buck, be recognized for 5 minutes, then we'll adjourn, with the indulgence of the witnesses, and come back immediately after votes. And we apologize for the interruption.

Mr. Buck.

Mr. BUCK. Thank you.

And I want to thank the chair of the committee and the chair of the subcommittee for holding this hearing. I really appreciate this opportunity.

Dr. Layton, couple of quick questions, and I'm going to go real basic because that's about my understanding of this area. If I am sitting in front of my desktop and I want to go to the U.S. House of Representatives' website, I type in something on my browser, U.S. House, up pops the area. I click on that, and a resolver—I want to make sure my friends understand I used the word "resolver," not revolver. I'm not trying to get into a gun debate here, but a resolver then takes me to the website that I'm looking for. And my understanding is that recently we have had a change in that to add encryption to the area.

Can you explain why the change was necessary and where we're going with that?

Ms. LAYTON. So I think the issue that you're talking about is the DNS over HTTPS protocol. It's a new standard being proposed by Google and Mozilla. Just let me frame this, this issue. I've discussed it in my testimony, but I think that it's a great example of where we have a challenge with our privacy regulation between the person's right to privacy and the public's right to know.

So we've seen from GDPR and other things like this that a number of valuable resources that we've had on the internet for law enforcement, for copyright protections, for public information, they have been masked and clouded because of techniques taken on by regulation. But in this particular case where you're looking at what's called the DoH, the D–O–H, is that in an effort to encrypt the traffic, which people want to do to protect their privacy, it is changing the architecture of the internet, which used to be very distributed and modular. So a number of parties would perform this redirect task that you talk about——

Mr. BUCK. When you say a number of parties, we're talking about tens of thousands.

Ms. LAYTON. Tens of thousands, CBNs—and they're very important, because individuals can put certain settings and preferences, whether they want to block malicious content, and also, law enforcement uses these things to find various criminals and so on. But all of that would be subsumed into—would be—all of that information that number of parties use today would be lost.

Now, the reason it's done, because Google and Mozilla want to be able to get marketing data in that process and pull that control point, as I describe, into their own network, where normally it would reside outside of their network. So this is just a coding tweak that can upset that entire balance that we've built up to date over all these decades.

Mr. BUCK. So would we no longer have tens of thousands of providers in this particular area?

Ms. LAYTON. I think it would eliminate the CBN industry overnight, I mean, just by one mere coding tweak. So it's quite staggering how much a simple click like that can—or not a click, but a coding tweak can change it. Now, there are some users who may like it, who they want to have—I want my whole experience to be in Google; fair enough. But the other, for all of those——

Mr. BUCK. They have that choice now, don't they?

Ms. LAYTON. Well, they have a default now; you're absolutely right. You can choose safe search, you can choose these different settings. But what we're making worse off are all of the law en-

forcement, parents, families who are trying to set up permissions to protect their own privacy and their own—you know, their own preferences.

Mr. BUCK. Okay. And how many—do we have any idea how many of these providers there will be in the future? Will it just be three or four or will we once again——

Ms. LAYTON. Well, I mean, the sort of—I mean, you can imagine, you could have a kind of world where, you know, Google consumes the internet just because of the way that things are coded. I mean, more and more things could be encrypted. Seventy percent of the internet is encrypted today largely because consumers want to have, you know, more privacy. But prior to encryption, large platforms can look at the data that's there and they are able to use that to get the marketing information.

So I don't have the number of how many DNS resolvers are available today, but there would be many fewer. It is one of the services offered by ISPs. It's offered by a number of other parties out there.

Mr. BUCK. Mr. Chopra, any thoughts on that?

Mr. CHOPRA. Well, Congressman Buck, I think you're raising some important questions about who gets to decide this. If it's when we just have one or two browsers that dominate the market and can make coding tweaks maybe for self-serving purposes, that's something we have to be wary of. Conflicts of interest with this level of market power have to be top of mind, because it's not just about our economy. Like Dr. Layton said, it raises questions about how do we protect children, how do we enforce our laws?

And to me, I think these types of regulations should be decided by Congress, not necessarily a company with a conflict of interest.

Mr. BUCK. Okay. Thank you very much for your time.

And I yield back.

Mr. CICILLINE. I thank the gentleman.

The chair will now recognize the gentleman from Georgia who's anxious to ask questions before the break.

Mr. JOHNSON. Thank you, Mr. Chairman.

And I thank the witnesses for being here today, especially Mr. Valletti. Dr. Valletti, long journey, thank you.

Many big tech companies have touted their data portability as the reason they can't be anticompetitive, but few, if any, are truly interoperable.

Professor Furman, interoperability is different from portability, isn't it?

Mr. FURMAN. Yes, it is. It enables you to operate—multi-home operate on multiple systems simultaneously.

Mr. JOHNSON. And would you agree that one of them promotes more competition than the other?

Mr. FURMAN. Yes. I think the technical details about how—I use the word systems with open standards and data mobility. There's ways to do that that really enable switching and multi-homing and ways to do it that frustrate the ability to do that.

Mr. JOHNSON. How can interoperability promote competition?

Mr. FURMAN. It enables consumers to have more choices, to switch more easily, to use multiple services. It also enables new en-

trants to come in and build on a lot of the things and networks that you've already accumulated on the incumbents.

Mr. JOHNSON. And, Doctor, what would it look like to have a social media platform be truly interoperable? And do you believe that that can happen without government intervention?

Mr. FURMAN. I'll give you an example of one that is truly interoperable right now, which is email. If email had been invented by a single company, it would have had its own protocols and you could only email other people who used that same company's email and you couldn't use people that used different email systems. I don't worry when I email someone about what company they're on, whether they're on the email system or not. That's a true form of interoperability that enables more choice and more competition.

Mr. JOHNSON. That's a great example.

Commissioner Chopra, one could argue that privacy violations and other monopolistic behavior is incentivized by the ad-based model; meaning that more data a company has—the more data that a company has, the more data a company can collect and the more dominant it can become.

Can you speak to some of the compounding problems with the ad-based model?

Mr. CHOPRA. Well, one of the objections I had to the FTC's settlement with Facebook for the company's early and repeated violations of a law enforcement order was their desire to maintain their dominance by collecting more and more and more data because, guess what, it gets more valuable as you get more. I talk about this in my testimony. And we need to start thinking, not just about ticky-tack privacy rules, but what's the reason why companies invade our privacy. And one of those reasons is the behavioral advertising model, which is not of an ad we all get, but it's an ad targeted at one person and it's often manipulative.

And so we have to think about how these businesses are incentivized and structured if we want to get to the root cause of massive surveillance in our economy today.

Mr. JOHNSON. Thank you.

And, Mr. Chairman, I'll, in the interest of time, yield back so that my other colleagues will have an opportunity.

Mr. CICILLINE. I thank the gentleman.

I want to recognize Mr. Buck for a unanimous consent request before we recess.

Mr. BUCK. Thank you, Mr. Chairman.

I ask unanimous consent to have two letters entered into the record addressing the issues associated with centralizing domain name systems, the first from CTIA and CTA and USTelecom and the second from 20 different child advocacy groups.

Mr. CICILLINE. Without objection.

[The information follows:]

MR. BUCK FOR THE RECORD

September 19, 2019

The Honorable Lindsey Graham
Chairman
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Dianne Feinstein
Ranking Member
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Jerrold Nadler
Chairman
Committee on the Judiciary
United States House of Representatives
Washington, DC 20515

The Honorable Doug Collins
Ranking Member
Committee on the Judiciary
United States House of Representatives
Washington, DC 20515

The Honorable Roger Wicker
Chairman
Committee on Commerce, Science,
and Transportation
United States Senate
Washington, DC 20510

The Honorable Maria Cantwell
Ranking Member
Committee on Commerce, Science,
and Transportation
United States Senate
Washington, DC 20510

The Honorable Frank Pallone
Chairman
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

The Honorable Greg Walden
Ranking Member
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

The Honorable Ron Johnson
Chairman
Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, DC 20510

The Honorable Gary Peters
Ranking Member
Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, DC 20510

The Honorable Bennie G. Thompson
Chairman
Committee on Homeland Security
United States House of Representatives
Washington, DC 20515

The Honorable Mike Rogers
Ranking Member
Committee on Homeland Security
United States House of Representatives
Washington, DC 20515

Chairmen and Ranking Members:

We would like to bring to your attention an issue that is of concern to all our organizations. Google is beginning to implement encrypted Domain Name System lookups into its Chrome browser and Android operating system through a new protocol for wireline and wireless service, known as DNS over HTTPS (DoH). If not coordinated with others in the internet ecosystem, this could interfere on a mass scale with critical internet functions, as well as raise data competition issues. We ask that the Committee seek detailed information from Google about its current and future plans and timetable for implementing encrypted DNS lookups, as well as a commitment not to centralize DNS lookups by default in Chrome or Android without first meeting with others in the internet ecosystem, addressing the implications of browser- and operating-system-based DNS lookups, and reaching consensus on implementation issues surrounding encrypted DNS.

DNS acts as a telephone directory for the Internet and has historically been broadly dispersed, on a de-centralized "local basis." When an end user types in the name of a website (*e.g.*, www.wikipedia.org), the end user's Internet Service Provider or other provider performs a "DNS look-up" by consulting a directory that translates the website name into a string of numbers that is used to connect the end user to the website. End users can choose a DNS provider other than their ISP, and many customers do so, in particular enterprise customers who manage their own private networks.

Google is unilaterally moving forward with centralizing encrypted domain name requests within Chrome and Android, rather than having DNS queries dispersed amongst hundreds of providers. When a consumer or enterprise uses Google's Android phones or Chrome web browser, Android or Chrome would make Google the encrypted DNS lookup provider by default and most consumers would have limited practical knowledge or ability to detect or reject that choice. Because the majority of worldwide internet traffic (both wired and wireless) runs through the Chrome browser or the Android operating system, Google could become the overwhelmingly predominant DNS lookup provider.

While we recognize the potential positive effects of encryption, we are concerned about the potential for default, centralized resolution of DNS queries, and the collection of the majority of worldwide DNS data by a single, global internet company. By interposing itself between DNS providers and the users of the Chrome browser (> 60% worldwide share) and Android phones (> 80% worldwide share of mobile operating systems), Google would acquire greater control over user data across networks and devices around the world. This could inhibit competitors and possibly foreclose competition in advertising and other industries.

Moreover, the centralized control of encrypted DNS threatens to harm consumers by interfering with a wide range of services provided by ISPs (both enterprise and public-facing) and others. Over the last several decades, DNS has been used to build other critical internet features and functionality including: (a) the provision of parental controls and IoT management for end users; (b) connecting end users to the nearest content delivery networks, thus ensuring the delivery of content in the fastest, cheapest, and most reliable manner; and (c) assisting rights holders' and law enforcement's efforts in enforcing judicial orders in combatting online piracy, as well as law enforcement's efforts in enforcing judicial orders in combatting the exploitation of minors. Google's centralization of DNS would bypass these critical features, undermining important consumer services and protections, and likely resulting in confusion because consumers will not understand why these features are no longer working. This centralization also raises serious cybersecurity risks and creates a single point of failure for global Internet services that is fundamentally at odds with the decentralized architecture of the internet. By limiting the ability to spot network threat indicators, it would also undermine federal government and private sector efforts to use DNS information to mitigate cybersecurity risks.

For these reasons, we ask that the Committee call upon Google not to impose centralized, encrypted DNS as a default standard in Chrome and Android. Instead, Google should follow the Internet Engineering Task Force best practice of fully vetting internet standards, and the internet community should work together to build consensus to ensure that encrypted DNS is implemented in a decentralized way that maximizes consumer welfare and avoids the disruption to essential services identified above.

Sincerely,

CTIA
NCTA – The Internet & Television Association
US Telecom – The Broadband Association



September 17, 2019

The Honorable Lindsey Graham, Chairman
The Honorable Dianne Feinstein, Ranking Member
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Jerrold Nadler, Chairman
The Honorable Doug Collins, Ranking Member
Committee on the Judiciary
United States House of Representatives
Washington, DC 20515

The Honorable Roger Wicker, Chairman
The Honorable Maria Cantwell, Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate
Washington, DC 20510

The Honorable Frank Pallone, Chairman
The Honorable Greg Walden, Ranking Member
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Chairmen and Ranking Members:

The undersigned advocacy organizations write to bring to your attention a potentially dangerous new plan by Google, Mozilla, and others that could exacerbate the spread of exploitative content on the Internet, including, but not limited to, online grooming for sexual abuse and sex trafficking and the solicitation and distribution of child sexual abuse images (i.e., child pornography). These changes would also make it more difficult to filter harmful content using, for example, parental controls.

While regulators and watchdogs across the globe are actively working to restrict the spread of exploitative content online, we have recently learned that this plan, which is scheduled to be implemented beginning this month in the United States, could do the opposite: Make it exceedingly difficult to find and prevent online crimes against children.

Known as DNS over HTTPS (DoH), the plan backed primarily by Google, and in partnership with Mozilla/Cloudfare, is being pitched as a privacy technology to make web surveillance more difficult through encryption of DNS queries and by masking them as encrypted web traffic. DNS, often described as the telephone directory for the Internet, is the system through which an Internet web address such as House.gov is resolved to the underlying IP address that computers use to route the request (143.231.249.141).

Historically, the DNS functionality has been dispersed among many players around the globe on a de-centralized basis, a key feature of the Internet's design that has helped make it highly resilient over the past few decades. These players have included third-party DNS providers, network operators, and ISPs. But under the new centralized and encrypted DoH plan, a small handful of players led by Google can, in essence, take over DNS resolution for the overwhelming majority of DNS requests on the Internet each day.

Moreover, these companies plan to accomplish this by imposing it on users by default. Google, for instance, would eventually encrypt all DNS traffic from users of its Android operating system and Chrome browser, thus making the company *the* centralized encrypted DNS provider for the majority (70% in the U.S.) of the Internet.

Last May, in the United Kingdom, Internet safety watchdogs and the National Cyber Security Centre initiated emergency crisis talks with Google, Mozilla, and others, fearing that the companies' unilateral implementation of DoH would make it impossible to detect and block harmful material, including child-abuse images and terrorist propaganda.

The Internet Watch Foundation (IWF), a U.K.-based charity focused on minimizing the online availability of child sexual abuse content (also known as child pornography), has warned that this planned implementation of DoH's encryption protocol could be catastrophic for two reasons: 1) perpetuating online child abuse by making online crimes against children harder to track by law enforcement and Internet watchdogs, and; 2) making it harder to remove illegal content normally blocked by network operators, ISPs, and other third-party DNS providers under British law.

Fred Langford, the deputy CEO of IWF remarked that under the proposed DoH plan, millions of images and videos of child sexual abuse could suddenly be unshielded from public view. Currently, IWF provides ISPs and investigators a "block list" of live webpages of child sexual abuse used by DNS resolvers to prevent millions of criminal images from being made available on the Internet. Langford believes that DoH's forced and centralized encryption could soon render such tools obsolete by hiding user "requests," bypassing filters and parental controls, and making globally criminal material freely accessible.

Here in the U.S., under the current de-centralized DNS regime, Internet watchdogs and law enforcement can, with appropriate court orders, ask those provisioning DNS for vitally important information – what websites are hosting child sexual abuse images, for instance.

While in theory the same information could be requested from Google and Mozilla/Cloudflare under a DoH regime, the forced encrypted nature of the DNS requests may make it impossible for these companies to assist legitimate investigations or even block illegal content even if they wanted to, given the short period of time they purportedly retain logs. Cloudflare, for instance, has previously said that it

only logs DNS requests for 24 hours before deleting them. Additionally, some existing controls in use today by parents and schools will no longer work, creating confusion and allowing harmful illegal content to spread before solutions can be formulated.

To be clear, our aim is not to demonize technology, and we clearly recognize that Internet users' data should be secure. Furthermore, we are not calling for DoH to be banned, and we acknowledge that Internet encryption can serve useful security and privacy purposes.

While Google and others are rightly striving to protect privacy, they have failed to prioritize child safety by not adequately accounting for the potential unintended consequences of encryption. Although Google claims filtering technology will be unaffected by these rollouts, third party technology, child development, sexual exploitation, and law enforcement experts are alarmed by the rollout of these changes without sufficient subject matter consultation on whether those claims will prove accurate.

We therefore strongly urge you to look into the unforeseen consequences of the plan by Google, Mozilla/Cloudfare, and others to initiate DoH technology and seek ways to delay its implementation until potential unintended consequences to child safety have been thoroughly investigated and addressed.

Sincerely,

Craig Cobia
Co-Founder
Citizens for Decency, Idaho

Erin Walker & Chelsea Winterholler
Co-Directors
End Exploitation Montana, Montana

Benjamin Nolot
Founder & CEO
Exodus Cry, California

Bethenee Syversen
Founder & Executive Director
ExPOSE, New Hampshire

Katey McPherson
Founder
Get Screen Smart, Utah

Heather Cowan
Owner
Kids Go For Gold, Utah

Melody Bergman
Founder
Media Savvy Moms, Virginia

Patrick Truman
President & CEO
National Center of Sexual Exploitation, Washington, DC

Jesse Siegand & Sarah Siegand
Co-Founders
Parents Who Fight, Tennessee

Brittany Homer
Creator & Host
Raising Today's Kids, Montana

Vauna Davis
Founder & Director
Reach 10, Utah

Staci Sprout
LICSW, CSAT, Owner r.evolution psychotherapy, Author of
Naked in Public: A Memoir of Recovery From Sex Addiction And Other Temporary Insanities
Washington State

Derek VanLuchene
Founder & President
Ryan United, Montana

Linda Smith (U.S. Congress 1994-1998)
Founder & President
Shared Hope International, Vancouver, WA, Washington, DC

Robin Reber
Admissions Director
Star Guide Wilderness, Utah

Stacie Rumenap
President
Stop Child Predators, Washington, DC

Autumn Burris
Founder & Executive Director
Survivor's for Solutions, Colorado

Susan Ingram
President
Walk Her Home, Pennsylvania

Kimberly Perry
Founder
We Stand Guard, North Carolina

Deanna Lambson
Founder & Director
White Ribbon Week, Utah

Mr. CICILLINE. The committee will stand in recess and come back into session immediately after votes. And I thank the witnesses for their indulgence.

[Recess.]

Mr. CICILLINE. Ms. Jayapal.

Ms. JAYAPAL. Thank you, Mr. Chairman. Thank you all for your very, very informative testimony.

You've all touched on this, but a common refrain that we hear from tech companies is, during the course of this committee's investigation but also just on my own because I have many of them in my district, is that they can't possibly be violating antitrust laws. And the primary argument is that it's because many of their products are either cheap or free, and, therefore, consumers are inherently benefiting. Now, you all have, in different ways, talked about this. To me, the big question, of course, is free really free? And consumers, I think, it's increasingly clear are paying for the products that they use. They're paying in data. They're paying in privacy that they give up and often don't know that they're giving up. And then, of course, the big tech companies then use that data to build these massive empires of information about consumers which then give them spectacular advantage over newcomer businesses, allow these companies to scrutinize every aspect of people's lives, create and sell the products that have the best chance of being successful in the marketplace. It's almost a bulletproof advantage.

Dr. Valletti, you mentioned the acquisitions and the history of acquisitions. As of 2018, Facebook had made 67 unchallenged acquisitions, Amazon had made 97 unchallenged acquisitions, and Google had made 214 mostly unchallenged acquisitions, and you presided over the EC's—EU's investigation of Google, Amazon, and Facebook. Two questions. What kinds of access do these companies have to information about consumers as a result of those acquisitions? And then you talked about the thresholds being one of the potential problems for why investigations aren't opened. Do the thresholds of investigation need to change if we are to challenge some of these acquisitions?

Mr. VALLETTI. Thank you very much for the question, Congresswoman. Do the thresholds have to change? I'm very pragmatic. To the extent people have the powers to look into those acquisitions, that's fine by me, whatever is the method. I'm even in favor, in fact, of changing a little bit the structure of presumptions. When it comes to very strategic platforms with such a humongous market power, I would wonder whether, instead of asking the authorities to prove that there is something anticompetitive and then they could rebut with efficiencies, to change it and say: You guys are not going to merge with anybody unless you prove to us that this is going to create efficiency. So I would change a little bit the burden of proof.

In terms of investigations we are in, I cannot disclose information about any case, but my understanding of those cases is that some of the claims—we hear a lot of times the competition is one click away. There is all these fantastic options available. I didn't see that in the data at all. I didn't see anybody going and clicking on search results on page 2, so everybody being stuck with the defaults and—in the installations, so I saw a lot of stickiness. The

fact that some of us may actually make other choices doesn't represent the average consumer there. So it's ironic that somebody come from academia, the ivory tower, has to tell these companies: Look, there's a difference between theory and practice. In theory, they can do that, but in practice, consumers never actually act on those choices. They just follow defaults.

Ms. JAYAPAL. Thank you.

Commissioner Chopra, several of the dominant platforms serve both as critical gatekeepers while also competing with the businesses that are dependent on those platforms. Amazon, for example, runs a third party marketplace, but then it has its own private label goods. And both in committee and when I met with them recently, they really testified that this dual structure doesn't pose any conflicts of interest and say that it's common for retailers to offer private label products alongside third party products. What do you say to that, and what's your response to that?

Mr. CHOPRA. Well, I think that we hear these analogies of comparing it to grocery store cereals and the white label cereal, and it just doesn't work. I am so worried when I hear from investors and venture capitalists who say I'm not even going to fund a business that needs to distribute through these platforms because, guess what? As soon as it takes off, it will be copied, and all the business will be steered elsewhere, and that worries me for all of those small firms who want to enter. So we need to look deeply, and that's why I mentioned section 6(b) of the FTC Act to scrutinize the big picture. Of course, individual companies, we will look. If there's anticompetitive conduct, we have to go after it and fix it, but writ large across these markets, we all need to understand how this works so that we can figure out how to maintain our economy that is vibrant and thriving.

Ms. JAYAPAL. And related to that, just—my time has expired, but related to that, what are the tools the FTC is not using that you could be using?

Mr. CHOPRA. Well, there are so many things that Congress has equipped us with, and one of the pieces that I hope we will use much more aggressively and thoughtfully is competition rulemaking. It doesn't need to put any burden on any company, but it can clarify the law about what's legal and what's not so that we don't have to spend millions of dollars on paid economists and litigators that slow down decisions and ultimately may have harmed a lot of people in the process. We need to resuscitate the use of that tool.

Ms. JAYAPAL. Thank you very much.

I yield back.

Mr. CICILLINE. I thank the gentlelady.

I now recognize Mr. Armstrong for 5 minutes.

Mr. ARMSTRONG. Oh, fantastic. Thank you. I appreciate it.

Mr. CICILLINE. Walk into the room, and we immediately thank you, Mr. Armstrong.

Mr. ARMSTRONG. Yeah.

Ms. Layton, I just want to talk a little about data portability, and you say that it's overrated. Can you just explain that a little bit?

Ms. LAYTON. So I think that we have the premise of number portability. We know from the telecom world when you have—you

know, you're going to go from one mobile carrier to another, you want to take your phone number. That's fine. But I think when you look at the internet world where you have multiple kinds of platforms, so if you have social network data, that doesn't—from Facebook, it doesn't necessarily map to Amazon. So there's—the data is not really valuable to another platform.

The bigger thing, I think, and something that's come up in this hearing, I think we're overrating the value of data overall because as a person who worked in the analytics industry, I had interfaced with, you know, 2,000 companies that they actually after time, the data degrades. And if you are an innovator, it's less interesting for you to get a platform's data. If you're going to innovate, you want to do something new and different. So data portability is kind of the answer to heal all ills I think is overrated. I've also seen this in some of the economist studies of, you know, in GDPR as well, is that users also don't want value data portability.

Mr. ARMSTRONG. And I think that's—you know, and I've said that too. The basic framework is you should have control over your own data. But since I've been here, I've learned way more about this than before I became a member of Congress. It's part of the reason—I mean, it's fairly complicated as to what is there, and I think that's part of the reason. Like when you say consumers don't really necessarily see this as a benefit, is it because they don't understand what it is or because of how you said——

Ms. LAYTON. Well, for one thing, there are switching costs. I mean, I think it's a fair point that other panelists have raised, but I guess what I'd say is the value to having—you know, if we think that we should have five major search engines and five—you know, that this is—somehow that makes it competitive, what we—what makes competition in this industry is new technology, doing something better and different and more efficiently.

And so where I think we should focus on is that the innovators look at the other parts of the economy where the opportunities are. They're greenfields, in fact. It's not like the way that it is today will be this way forever.

Mr. ARMSTRONG. And then, I guess, when we talk about data portability, we're talking about it moving, right, I mean, in some form. And in other areas, there's an entire market niche of whether it's insurance, litigation, bills of lading, free on board, those types of issues. So, when you're dealing with this data portability, has anybody looked at the liability shift as we move from one person to the other? Because if there's a breach, which is—I mean, part of the privacy concern is breach of data, and it usually ends up with a credit card company or a bank, but if it's portable, I mean, more than one person is handling that data as it moves from—whether it's Microsoft, Amazon, Facebook to somebody else.

Ms. LAYTON. Yeah. That's—that is a fair point.

Mr. VALLETTI. If I may just——

Mr. ARMSTRONG. Yeah. And then my question is, along with that portability portion, is the cost of compliance not for large companies who, quite frankly, we've seen this—and I want to ask you a question about a Dodd-Frank analogy before I'm done. I mean, larger companies aren't necessarily scared of regulation. What they want is regulatory certainty. Smaller companies that employ four

or five people, when you're dealing with data portability, now have a compliance cost associated with that. While we're trying to regulate this, we have to be very concerned that we don't regulate—we don't have the inverse effect where the cost of—the cost of regulation makes it prohibitive.

Mr. VALLETTI. So I just want to jump in on this since it's been mentioned a few times is the European experience with GDPR and Californian solution now. Let me clarify first that this is very new, so having empirical evidence is a longshot because it's just been happening for a short period. GDPR, also, let's remind ourselves it's been introduced because it is a fundamental principle of privacy that individuals want to ensure. So any time we do a cost-benefit analysis, surely, we want to see the impact on firms, but, also, there is a benefit that we get if GDPR within the privacy regulation is enforced properly.

And the second point is I'm very skeptical when I hear some of these numbers, which are typically coming from, you know, institutions which are funded by Google, Facebook. European evidence is that Google and Facebook lost after on the advertising side after the introduction of GDPR. So it is a cost of compliance, but whether it's only the small firms, the narrative that you hear is from the big guys, not from the small guys.

Mr. ARMSTRONG. Well, except I'm going to bring an analogy back, and I'm just going to ask Mr. Chopra this. So when I go talk—we don't have big banks. We don't have, with the exception of some national companies, big business in North Dakota. I mean, we are a small business State. The single biggest thing I've heard, and this has been long before I've been here, in the decade or the 11 years since Dodd-Frank was introduced, is in our realm to regulate what we do think were really bad actors—and they were—Dakota Community Bank is caught up in that. So are there any lessons we can learn from how we did Dodd-Frank when we do this so in our quest to do whatever it is, we don't sweep up the little guys in regulation? I mean, if you have 37 compliance officers on the fifth floor and you go to 40, it's not the end of the world. If you have two employees, and you have to go to five employees, you may no longer have a local bank, so——

Mr. CHOPRA. Yeah. One thing I would really urge you to think about is complicated rules. They actually benefit those who have a lot of lawyers and lobbyists to get around it and lobby for exemptions. In my testimony, I talked about the importance of bright line rules and even bans because, you know what? When I—I've had those same conversations with community bankers. They will say: If I'm banned from doing it, fine, because that's really easy to understand. But if it's so complicated, guess what? The largest banks in the world, they find their way in and get their exemptions. They win, and the small guys lose, and that's not a system or a country I want to live in.

Mr. FURMAN. Mr. Chairman, I don't know if there's time for me to add to that because——

Mr. CICILLINE. No, no——

Mr. FURMAN [continuing]. Time.

Mr. CICILLINE. As long as Mr. Armstrong is interested.

Mr. FURMAN. Okay. Mr. Armstrong, I think you make a very important point, and I think you're absolutely right about worrying about the small businesses. I think sometimes in regulation, it's tricky because there's a tradeoff. So something that might be harmful for any size business to do, you make the rule, it's easier for the large one to comply than the small one, and you end up entrenching the incumbents.

In this area about competition, you can make sure that doesn't happen because if you're talking about rules, a code of conduct as I've proposed for digital markets unit to do—that you can't keep people off your platform; you have to let them on other platforms; you can't prioritize your own products—those rules would only apply to companies that I would just designate as having strategic market status. Only apply to the very largest companies.

If you're a small company and you want to prioritize your own products, you want to keep people off your platform, you want to make rules about what other platforms they go, you can do any of that. We're only worried about, if you have some bottleneck power, abusing it.

Mr. CICILLINE. Thank you, Dr. Furman.

I now recognize——

Mr. ARMSTRONG. Can I have unanimous consent just to put Ranking Member Collins' statement into the record?

Mr. CICILLINE. Without objection.

[The statement of Mr. Collins follows:]

MR. ARMSTRONG FOR THE RECORD

Statement of Congressman Doug Collins
Subcommittee on Antitrust, Commercial and Administrative Law
Hearing on ""Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition"
Friday, October 18, 2019

Thank you, Chairman Cicilline and Ranking Member Sensenbrenner for holding this hearing.

This is the third in a series of tech-sector oversight hearings we are holding this term. Several of the tenets guiding me in this investigation are especially relevant to today's hearing.

My first tenet is that innovation and competition in the tech sector have produced enormous value for consumers. We should keep existing companies' successes in mind as we consider any allegations of anticompetitive behavior in this sector. At the same time, we should seek to foster conditions that will keep competition and innovation very much alive.

Second, new legislative proposals that emerge from our inquiry cannot hurt the free market. We must view proposals to construct broad, new regulatory regimes with caution. Time and again, experience shows that regulatory solutions often miss the mark, solve problems less efficiently than free markets can and create new opportunities for anticompetitive companies to suppress competition through rent-seeking. All of that is particularly true when regulations are used to address evolving problems in fast-moving markets like today's tech sector.

Lastly, as I have stressed multiple times, big is not necessarily bad. There is no basis to punish successful innovators — for example, by repeatedly threatening to break them up — just because their success enables them to become big. Big online platforms often provide a gateway for other companies — including countless small businesses — to better reach their own consumers.

Each of these principles applies to the roles that data — particularly big data — and data privacy play and the ways to protect consumer data privacy.

I want to focus especially on the ways we can protect consumers' privacy. This is an issue that has rocketed to the forefront of our constituents' concerns, and, as such, it is imperative we find a better way to protect the privacy of online consumer data.

This summer, I released the principles that would guide me in drafting legislation to address privacy. My first principle is that we must recognize that the online data consumers generate across their devices begins as their property — not anyone else's, but *theirs*.

When consumers generate this data, they should have a powerful voice in who gets to use it, how much and under what conditions. Since it's their property, they should also determine the level of privacy surrounding their data.

Another principle that I want to emphasize today is that we must look for a legislative solution that is *much more* flexible and adaptive to the rapidly evolving online ecosystem than new governmental regulatory and enforcement regimes could ever be.

The American people don't need — nor do they want — new government bureaucracies and agency-imposed regulatory schemes controlling their online lives. We should empower consumers to protect their data and their privacy *directly*, as their own property. Once they are, I believe online service providers will respond with innovative ways to better serve consumers without threatening to over-intrude on consumers' data privacy.

One need only look at Europe's experience with the European Union's General Data Protection Regulation to see how true this is. Since the GDPR became effective, innovation and startup levels have plummeted, and big, entrenched market entities have only become larger and more entrenched at the expense of competitors and consumers.

Since I announced my privacy principles, we have been working diligently with stakeholders and experts to frame out the elements of effective, property-based privacy legislation. Results to date are encouraging, and I look forward to introducing this legislation in this Congress. I hope today's hearing can further illuminate the issues we should bear in mind as we work toward this goal.

I look forward to the witnesses' testimony and yield back the balance of my time.

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615 WORDS

Mr. CICILLINE. I now recognize the distinguished gentlelady from the State of Florida, Mrs. Demings, for 5 minutes.

Mrs. DEMINGS. Thank you so much to the distinguished gentleman from Colorado.

I want to thank you, Mr. Chairman, and thank you to all of you for being with us today. Thank you for your patience as we went to cast our votes.

I want to start with Mr. Chopra. In several of your statements and dissents, you've argued that the core problem that leads to dominant platforms—that leads dominant platforms to engage in serial privacy violations is their business model, which relies on monetizing user data and incentivizes Facebook and Google, for example, to engage in constant surveillance. What problems do you see with the behavioral advertisement business models?

Mr. CHOPRA. Well, I think we're seeing more and more evidence that behavioral advertising, again—that is, advertising to a demographic of one—exposes us to a whole lot of risks, including manipulation and shenanigans in our democracy. It is very, very profitable, though. Facebook earned $55 billion in revenue, Google even more. The advertising business is big, and I'm concerned that that behavioral advertising model is inconsistent with how we have thought about immunity online. Right now, we give broad immunities under section 230 of the Communications Decency Act. I support that immunity, but I don't know if it's consistent with this behavioral ad model and surveillance.

Mrs. DEMINGS. So, Mr. Chopra, what do you see as the solution? What role can—how can Congress play a greater role in dealing with this problem?

Mr. CHOPRA. Well, part of it, obviously, is through better privacy protection. I'll just speak about how I looked at the Facebook order violations, the repeated and early violations of that order. That settlement not only completely let executives off the hook, and they paid a small fine, and their stock went up. There's no substantive limitations on their use and sharing of data. And for repeat offenders, there needs to be some bans on this type of behavior because, if they're going to break the law, we have to look at the economic incentive that is driving it.

Mrs. DEMINGS. I think you said earlier that when you have billions and billions of dollars, $5 billion in a settlement is like—it's not much incentive to change your behavior. Is that——

Mr. CHOPRA. That's right. When you—when these—these big fines are not big penalties for big companies, and I worry it's not a penalty; it's an incentive.

I also want to urge Congress to think about how do we beef up individual liability. In the FTC's Facebook settlement, we did not depose Mr. Zuckerberg or Ms. Sandberg, but guess what? They got full immunity in the settlement. And if the court approves that, what kind of standard are we setting? And I just think that's fundamentally wrong.

Mrs. DEMINGS. Dr. Valletti, I want to ask you about that, but some have argued that heightened concerned about digital monopolies is misguided given that companies like IBM, Yahoo, MySpace, and BlackBerry were all once viewed as dominant but, ultimately, were taken over by new firms. And I know we kind of talked a lit-

tle bit without naming the specific companies earlier, but could you just kind of—do you agree with that view, or what's your feelings about that?

Mr. VALLETTI. It's almost an act of faith. Do we believe in dynamic competition? Sure, as a principle, but then I see the empirical evidence. When it comes to some selected platforms—I have in mind search; I have in mind social networks; I have in mind, perhaps, electronic marketplaces—this dominance has been going on for almost a decade. And so is that long enough to ever worry? I think, yes. I mean, in the long run, we are all dead, but I hope we will fix some problems before we are dead.

Mrs. DEMINGS. Well, thank you for that bit of hope and sunshine. In light of your—I'm going to move on to Dr. Furman.

In your view, how readily available is high quality data to new entrants? If an entrepreneur wants to launch a new search engine, for example, what challenges can he or she expect to face in light of Google's existing dominance? And I know we have kind of talked about this space, you know, protecting privacy, competition, but I just want to make sure it's clear to not just the people in Congress but to the listening public as well, who are directly being impacted by the decisions made.

Mr. FURMAN. Yes, Congresswoman. Google has a very good algorithm. Google also has a huge amount of data about how consumers search to train that algorithm. A bright kid in a garage could come up with a good algorithm, but they wouldn't have anything like that type of data in order to make it work nearly as well as Google works today.

Mrs. DEMINGS. Thank you.

And, Mr. Chair, if I could just—I'd also like to hear from Ms. Layton, just any response to either of the questions that I asked that you would just like to respond to.

Ms. LAYTON. Well, thank you. I appreciate that opportunity. I would agree with Dr. Furman that, when we look at artificial intelligence, that this is a greenfield. He's absolutely correct that a scientist sitting in the garage or in the lab could come up with a life-changing or transformative kind of algorithm.

In contrast to the other panelists, I don't believe that data is a bottleneck because of having been a person working in the industry, that the data that you collect, it degrades over time. So, if you're a new innovator, you will look for the spaces where you can—where there are opportunities. It's less interesting to look in the past. You want to look to the future to say: How would I—where could be a place where I would add value in the future? Healthcare. It is one of the most inefficient industries. It takes up one-fifth of our GDP. That is where we need to have data to make it more efficient and lower the cost.

So what I would like us to do is to look forward. I don't want us to adopt regulations that deter today's scientists from making tomorrow's innovations because they have to have all these permissions and releases from everyone. Now, they may not look at personal data. There's other areas where there's no personal data involved, you know, quantum computing, astronomy, and so on. And they may go in those fields, but probably the biggest area where we can create the benefit is on human health. And so, for example,

in Iceland, they have this amazing registry of genomic data that was collected over many decades. GDPR is putting all of that up in the air. Can you find the cancer treatments? Can you look at a lot of the new innovations? We don't know now because that was not collected under the GDPR environment. So, there again, that is a question that I would have. So health is an area where we need to see, are we putting the bottleneck on the innovation?

Mrs. DEMINGS. Thank you so much.

Thank you, Mr. Chairman.

Mr. CICILLINE. Thank you. The gentlelady yields back.

I now recognize myself for 5 minutes.

Commissioner Chopra, one of the questions that we are grappling with in this investigation is whether or not our antitrust agencies like the FTC have fallen short as an effective sort of cop on the beat in this digital marketplace and whether or not that is due to insufficient legal authority, whether it's due to weak leadership, or as I like to refer to it, the need for enthusiastic and creative leadership. Is it partly the result of regulatory capture? What is your view? What should we be thinking about as we look at this insufficient or sort of inadequate enforcement of our antitrust agencies, particularly FTC? What do you see as the source of that?

Mr. CHOPRA. Mr. Chairman, one of the things I reflect on a lot is, how did the FTC miss much of the subprime mortgage crisis that originated in the nonbank sector. The FTC was really the only cop on the beat there, and we saw what happened. So one of the things that I think I took away from what I've learned on that is, number one, we need to use the tools we have much more energetically. Two, we need to be much more analytical and not think in the world of theoretical economic models but real evidence and look at how markets actually work. So, of course, we can use more authority; we can use more resources. But the number one thing we need to do is energetically use the tools we have.

And for you to think about, and Dr. Valletti mentioned this too. Should we be thinking about changing presumptions? Should the largest firms on the planet, should the burden be on them to show why their merger or their roll up of tons of companies is in that interest? So there's ways you can change the way courts are acting, and I urge you to do that, but I also urge you to conduct oversight that makes sure agencies are using every tool you have equipped us with.

Mr. CICILLINE. Great. In February, Commissioner, you gave remarks to a conference at the University of Colorado where you said, and I quote: "Competition enforcement actions like the Bell Labs consent decree created the conditions for scores of startups to innovate and flourish. While we often focus on the cost of action and regulation, we should also be asking ourselves about the cost of inaction," end quote.

Do you believe enforcers or lawmakers should be considering remedies like the one imposed on Bell Labs, particularly since a lot of the focus of this investigation has been the impact of this market concentration on innovation startups, kind of the opportunity to make the next—space for the next great technology platform?

Mr. CHOPRA. Yeah. I appreciate that. One of your areas of inquiry in the investigation is whether spinoffs or divestitures of

firms may be useful, you know. Some colloquially call it breaking up. But there are many other remedies we need to think hard about. Should we be opening up intellectual property that has been abused by dominant firms, and how much could that incubate a new activity? There are many—there's all sorts of history about how we have pursued this and the benefits from it. Can we look to separate lines of business to end those conflicts of interest and create more economic activity? So we should work with you on all of that, but the discussion must be bigger than breakups. But, of course, breakups must be in the tool kit as well.

Mr. CICILLINE. I'm going to stay with you, Commissioner, because we're going to do a second round because, obviously, I couldn't question some of the other witnesses, but I want to transition to some of the recent privacy settlements at the FTC that I have criticized publicly. You recently dissented, along with Commissioner Slaughter, in the FTC settlement with Facebook. You stated that the settlement gives Facebook a lot to celebrate which was similar to what I said. Can you explain what your concerns are with the settlement? I know that you said in part that the $5 billion settlement was insufficient because it didn't address Facebook surveillance and manipulation-based business model, which is what incentivized Facebook to engage in order—to engage in the violations in the first place. What do you think the effective remedies would look like? What was your criticism of that, and what do you think the effective remedies would look like?

Mr. CHOPRA. So I think of this in multiple buckets. First, we should start with that this is the case of recidivism, repeat offender, so it's not just a first time oops. And in my view of the evidence, it was clear that there were multiple early violations, and there was knowledge of those. I think of it, number one, where is the individual accountability? The officers and directors who called the shots to violate the law so that they could put money in their own pockets, without individual liability, you will not see the level of deterrence you need, and the Federal Rules of Civil Procedure in our courts bind officers and directors to Federal enforcement orders.

Two, what is the actual conduct relief that goes at the core economic incentives? And to me, there should have been some real thought on actually banning some of the worst data collection use and sharing practices. And we have to think—of course, monetary relief is important, but U.S. consumers did not get a penny of that, so I'm not sure that headline $5 billion is going to do much.

Mr. CICILLINE. Thank you, Commissioner. My time has expired.

I now recognize the gentleman from—oh, I'm sorry. The gentlelady from Pennsylvania, Ms. Scanlon.

Ms. SCANLON. Thank you very much. I want to thank all our witnesses for joining us today and for your testimony.

You know, consumer privacy is an important issue for all of us, both as individuals and as Representatives for our constituents, but the way that data is collected and used by the large platforms obviously impacts the ability of consumers to maintain their privacy and the options they have to make informed decisions about their online activity.

Dr. Valletti, I wondered if you could expand a little bit on the third point that you made regarding privacy degradation leading to an objective detriment to consumers. And I think you said that imposing terms of service with weak privacy protection that is not well understood but is accepted by consumers because of a lack of alternatives, it has to do with market power. Can you just talk about that a little bit and any perceived remedies that you might suggest?

Mr. VALLETTI. So, on objective consumer harm, as I write in my written piece, it can be, you know, risk of data breach, identity theft, but interesting, also, consumer profiling, which is not done in the interest of a consumer, for instance, discrimination scoring or being shown more expensive results.

So, if you are, in this moment, your dishwasher breaks down, and you are going to type "dishwasher repair in my area," you're going to be shown one—most likely, one result with a nice graphic interface because it is a real-time auction that most likely Google will be doing, and who are they going to select? The one that pays the most because they get—they get a fee. We have lost—we have lost the original function of the internet to offer us choices because as I said, behaviorally speaking, consumers don't go to page 2, to page 3, and they don't—you just are hooked up. These devices are meant to keep us online as much as possible. So they learn about us, and then we buy whatever is the thing which is offered to us, and there is an underlying auction happening. There's only one platform that we know for that.

Of course, if you're looking for a car, that's a choice that would take a much longer kind of period, and so it's a bit different.

And for remedies, the most important thing I would start from is really try to think carefully about privacy, so having privacy regulations, which is done in the interest of American people, and it's American institutions that should come up with a solution.

Mr. CHOPRA. Congresswoman, with your permission, just one point. When Facebook started, there was another social media platform called MySpace.

Ms. SCANLON. I remember.

Mr. CHOPRA. And one of the—one of the reasons Facebook was able to unseat MySpace was partially on privacy and control of data, that you will be able to control who sees your information. We should want firms to compete on privacy. These changes to terms of service hidden in the fine print where they can collect more and more data and unilaterally impose these terms, that is a price hike. We are paying with our data, that valuable data, and more competition will also be critical to how we think about protecting privacy.

Ms. SCANLON. I'm wondering in other contexts we've seen that you can change the dynamic by having an opt-in rather than an opt-out. Is there any possibility of doing something like that in this sphere? So, for example, having to opt out of a savings plan rather than opting in.

Mr. CHOPRA. Well, we do know behavioral defaults are highly influential, and, typically, right now, companies get to take everything from you, and you have to figure out a way to opt out. It's, like, kind of like a full-time job with all the websites you have. So

shifting the burden to companies I think would be a great way to really reduce the burden on all of us. And, actually, if consumers want to share their data proactively and really want to renew that, let them tell that company and give them permission.

Ms. SCANLON. Okay. I've also had conversations with my kids and other constituents about the power over consumer data, putting that back in the hands of consumers, and the example that they like to talk to me about is moving your music library possibly from Apple to Spotify.

Mr. Furman, can you talk about the idea of implementing data portability and whether that's something that we should be exploring?

Mr. FURMAN. Yes. I think absolutely you should be exploring that, and it's not just downloading your data; it's really being able to port and move it over in a simple and transparent manner. The companies are making some progress in doing this through steps like the Digital Transfer Project. I think, in part, they're making that progress because they think regulation is coming, and they're responding to it. And to do this is not just simply passing a law and say you have to do it. You have to roll up your sleeves a little bit and go use case through use case, figure out how to balance the different concerns. But if you can do that, create a lot of value for consumers and more competition.

Ms. SCANLON. Okay. Thank you. I yield back.

Mr. CICILLINE. I thank the gentlelady.

I now recognize the gentleman from North Dakota, Mr. Armstrong.

Mr. ARMSTRONG. Thank you, Mr. Chairman. And I think Mr.—the chairman actually does have a MySpace account.

Mr. CICILLINE. I am that old; is that what you're saying?

Mr. ARMSTRONG. So Ms.—Dr. Layton, you seemed like you wanted to respond to that question, so I'll just give you a little chance.

Ms. LAYTON. Well, thank you for that.

And I just wanted to say, Ms. Scanlon, on the point—to let me piggyback on Dr. Valletti. He does have a paper looking at the prices for options. I think it's very interesting. I'm a person who—I managed 10 search engine marketers and have experience in this, and I think there's a fallacy to think that just because the ad appears at the top of the page in Google search, that it's the highest bid. Frequently, the best—that is the lowest paid bid because what is driving the price is very much the quality of the ad. It's how well it's written, whether the landing page where the ad goes to is relevant. So what Google is actually rewarding is the quality of advertising.

And, also, he brings an interesting case. A plumbing service wants to create an ad. Well, that is also an issue of who amongst the plumbing industry is organized to invest in Google. You know, and it could be this also reflects that the competition of the plumbing side. And the other part is, if you're the consumer, you want to have the information. That ad format actually gives you a lot of things to look at. So I only say that it isn't—it's not a fact that the highest, top level ads pay the most. In some fields, like asbestos, those key words could be worth $5,000 a click. The plaintiffs' bar, they're very clever around using that. But there's many other areas

that are not used at all, and the clicks could be assent, so it's hard to generalize that. You actually have to look at the data.

Mr. ARMSTRONG. And then I'm going to move into something a little different because, in your Senate testimony, you stated that GDPR has a risk identifying with respect to convicted felons successfully removing information from crimes in search engines, and your footnote on that stated that the Finnish court decision concluded the right to be forgotten provides convicted murderers the right to have publicly available information removed from Google listings. And I'm going—before I let you answer this for a second, I want to say I support Ban the Box. I think it's fantastic. I have some thoughts on that when we're done, but we also have a First Amendment. So let's take First Amendment issues aside. And just can you expound on that a little bit?

Ms. LAYTON. Yeah. So, again, you know, we don't translate the GDPR perfectly to the United States for those particular reasons, but we can—and, also, right to be forgotten has been pushed back by the European courts.

But this issue about people being able to expunge data that they don't like, well, you know, maybe it's a nice idea in theory, but it—we have—in the United States, we have a respect for the public's right to know. So, for example, what you've seen in the European Union are dirty politicians who have bad articles about them. They get removed from the media. They get removed from the Google searches. Murderers, child predators, you know, all of these terrible characters are able to weaponize the GDPR for those reasons.

Mr. ARMSTRONG. And I think that's one of the things with Ban the Box. We need to understand as Members of Congress is that still only gets you past the first stage. And you can ban anything from Google. You can ban it from a Facebook search, but I can tell you, my private investigator would find it in 3 seconds. So, if you go into the second stage of an interview and you're doing work for the Federal Government, you have to have a certain insurance designation, any kind of—as simple as a hazmat commercial driver's license. These are good concepts, but I think sometimes we use the availability of information as a scapegoat. What we really need—if we're serious about this, and I think if you're 19 and have a nonviolent felony on your record, the world we live in now compared to two generations ago is so different. You can never outrun that conviction. You just simply can't. If it happened in Dickinson, North Dakota, in 1970, you could move to Madison, Wisconsin, and start your life over because nobody from Madison, Wisconsin, was going to drive to the Stark County Courthouse and look up records. But we use this availability of information a little bit as a scapegoat because, like I said, any job you're applying for that has any kind of insurance issue, regulatory issue, framework issue is going to find it anyway.

So we need to address the fact, like, with companies, with insurance companies and say: Listen, we support this from a congressional level. There's broad bipartisan support. We also have to change insurance culture and hiring culture and allowing those things to happen and the fact that it's not a Google—it doesn't hit on a Google search doesn't mean it's not going to exist.

Ms. LAYTON. I agree.

Mr. VALLETTI. I think we are mixing a few things here. One thing is, you know, GDPR. One thing is right to be forgotten. The first step is for you to understand what you interpret as privacy. It is a boundary between your private self and the outside world. What do you think you want to share only with your family, with your community, with your friends, or not even with them?

When it comes to digital space, this idea that there is notice and choice, that we have borrowed from other industries is not out there any longer, so these boundaries are so blurred that you must look into that. You must have recognition of the problem.

Mr. ARMSTRONG. And I agree with that because, when we were talking about opt in and opt out, shortly after there was some congressional testimonies before I was here. You started seeing these windows pop up on your social media platform and yes and no. And whenever I talk to a high school or college age group of kids after that happened, I would ask them, did any of you check no? And not a single——

Mr. CHOPRA. Because you can't check no.

Mr. ARMSTRONG. Not a single hand goes up. So how people define privacy in the next generation is also something that is changing dramatically.

Mr. CICILLINE. I thank the gentleman. I recognize myself for 5 minutes.

I just want to build upon that point that Commissioner Chopra made about this notion of consent would be—you know, trying to find out what you're consenting to would be a full-time job. And I think, as it turns out, even if you devoted your time to it as a full-time job, you still would run into the situation in which you have these sort of take-it-or-leave-it contracts where basically if you don't agree to a certain amount of collection, you just don't get the service. So, you know, the consumer or the user in this context doesn't really have the power even if you devoted full-time to navigating and trying to—and you wonder why we don't create the kind of consent we require in most other contexts, if it's medical consent, if it's consent to withdraw a not guilty plea and enter a plea in court. It's the knowing consent. It's actually the person knowing what they're consenting and affirmatively consenting and why we have allowed a kind of complete turning on its head where everyone is presumed to consent to the total collection of everything about them unless they can find some way to object to it. It's kind of curious, so I think this is a really important area for us to look at.

Dr. Valletti, I want to just turn to you for a moment. Google has 2 billion users on Android, and Facebook has over 2 and a half billion users. And what we hear very often is that, you know, these services are very popular, and people really have no problem with the kind of corporate surveillance and these loose privacy controls. And isn't the fact that these numbers are so great evidence that there's not really a problem, that the popularity of these services proves that we really don't need to worry about this. What do you say to that argument?

Mr. VALLETTI. The services are very popular. It's evident they are very good services but that nobody cares. One of the points I make in my written piece is also that consumers are not put in a

position to understand what the cost might be because they cannot make comparisons. They don't see where the data is going. They don't know when something is coming back against them because they just don't know, and they cannot make comparisons because there is a lack of competition.

Going back to your original remark, you're probably aware that, earlier this year, Germany had a case against Facebook, and this is on appeal in the court now. But it exactly said that the consent—that the customers who want to be on Facebook had to give also to cross link data with WhatsApp and Instagram, which belong to the same company. They said you didn't tell them what you were going to do. You cannot do it unless you inform them in some appropriate way, and if you do not—if they don't consent, you cannot deny access to the service to Facebook because you don't need that consent to supply the primary service.

Mr. CICILLINE. Thank you. In July, as part of this investigation, Google testified before this subcommittee that it faces, and I quote, "formidable competition around the world," end quote. Google stated that users can choose from a menu of search providers, including Bing, DuckDuckGo, and Yahoo.

Dr. Valletti, in light of your work with the European Commission, do you agree that there is intense competition in online search, whether it be in Europe or in the United States?

Mr. VALLETTI. It's a very general statement. So I will be more precise when it comes to, say, general search, this competition is not there in Europe; 93 percent of European searches are done by one search engine. And this possibility that consumers have to do something else, to change the defaults, to change the pre-installment of these behavior biases we already mentioned several times, they are clear in the data; I do see people actually sticking all the time and never changing the default.

Mr. CICILLINE. Dr. Furman? I have a couple questions for you. You can respond to that quickly, though.

Mr. FURMAN. Just one quick point to add. You wouldn't—Google wouldn't pay so much money to be the default search engine on things like iOS if it was really easy for consumers to switch.

Mr. CICILLINE. Right. And so, Dr. Furman, what role do you think information asymmetries play in how we should understand digital markets? Corporations routinely have more information than regulators and the public, but digital platforms seem to enjoy an astronomical advantage. How should this affect antitrust enforcement and competition policy, if at all?

Mr. FURMAN. First of all, I think the enforcers need more resources. The CMA and the U.K. have actually created a digital unit with excellent staff in terms of data analytics and the like. And we also need to design policies around data openness that reduce some of that asymmetry between some of the big platforms, their competitors, and the public and regulators.

Mr. CICILLINE. I think many of you have made this point. Competition and privacy can be complements such that more competition can incentivize firms to provide users with more privacy, but they can also be at odds, such as that encouraging interoperability and data portability could expose user data to a broader set of cor-

porations. So how should enforcers and policymakers in the Congress strike this balance?

Mr. FURMAN. I think the answer to that is going to be on a case-by-case basis. First of all, as you said, a lot of cases, they really are complements. A lot of cases, only one of them is implicated; the other one barely is. But you need to have both objectives. You can't just think about privacy and completely ignore competition, and you can't just think about competition and completely ignore privacy. That's part of why you would want to establish a unit, a body of regulators, something that would have both of those objectives.

Mr. CICILLINE. Ms. Layton, I want to know if you wanted to respond to any of what I've asked. No. Okay.

Mr. CHOPRA. Mr. Chairman, I would just add that when there's so few dominant players, that opens up more abuses of privacy. And I'm worried that our economy in this sphere is just drifting toward the Chinese model where there's just a massive amount of information on people collected without their consent and can be used to manipulate. And I just reject this argument that if we want to compete with China, we need to have our companies look like them. The beauty of our country is when new entrants come in and challenge the dominant ones. I just don't want that system.

Mr. CICILLINE. I agree.

At this time, I'd ask unanimous consent that the following statements be introduced in the record: a written statement from the Australian Competition and Consumer Commission Chair Rod Sims discussing his investigation into the digital platforms.

Without objection.

[The information follows:]

MR. CICILLINE FOR THE RECORD

United States House Judiciary Committee

Subcommittee on Antitrust, Commercial and Administrative Law

Prepared Testimony of Rod Sims, Chair,

Australian Competition and Consumer Commission

Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the Subcommittee, thank you for the invitation to appear today. It is an honour to be here and talk about the Digital Platforms Inquiry conducted by the Australian Competition and Consumer Commission (**the ACCC**). I hope the findings and recommendations from our Inquiry are useful as you seek to deal with these market power and related antitrust issues in the United States.

If there is one key message I want to convey today it is that antitrust issues have a central role to play in understanding and addressing concerns with digital platforms. This is why your hearings are so important. To be fully effective, however, antitrust needs to work as an integral part of a wider response. While there are real issues in relation to actual and potential exclusion, foreclosure and self-preferencing, there are also a wider array of market failures that must be addressed for the protection, and benefit of, society as a whole.

If I am allowed another key message, it is the importance of data and how it is used. Google and Facebook have access to unparalleled amounts of data which reinforces their market power, and which is collected from consumers without them being adequately informed, and without sufficient consumer control. The implications for consumers, businesses, the economy and our society cannot be overstated.

Australia conducted a unique inquiry

The Australian Digital Platforms Inquiry had the distinct benefit of being wide ranging, addressing competition (antitrust), consumer, privacy, advertising and media issues. We considered the market power wielded by the digital platforms and the role of data and particular behaviour in entrenching that market power, the competitive impact of the platforms on media and advertising markets, consumers' understanding of how their data is collected and used, the privacy implications of the use of that data and the impact of digital platforms on news and journalism.

The antitrust, consumer, privacy, advertising and media issues we identified are closely connected. For example, privacy issues are linked to consumer issues; are consumers being misled about what data is being accessed and how it is used? And these questions are closely connected to competition issues; the data consumers provide can be seen as the 'price' for using Google or Facebook, but if consumers are unaware about what data is being collected and how it is being used, how can rivals

compete by offering "a lower data price", i.e. offering a similar but more privacy-friendly service? It is difficult to deal fully with competition issues without dealing with privacy and consumer issues, and vice versa.

The ACCC was well placed to carry out this inquiry, as we are not just the antitrust enforcer, but also the Australian Government agency responsible for consumer protection, telecommunications and infrastructure regulation. Our Government recognised the value of this and set a broad terms of reference when directing us to conduct our inquiry into certain digital platforms in December 2017.

In considering these issues we recognised the substantial social and economic benefits that digital platforms, such as Google and Facebook, have provided for many businesses and consumers, in Australia and globally. However, while the benefits to consumers across the world are significant, this does not mean the associated problems should be left unaddressed.

Our approach to addressing these problems was threefold. First, for each problem identified we determined a solution. Second, we sought the most appropriate solution, whether it involved strict antitrust or involved broader policy and law. Third, we realised the problems would evolve further so the solutions had to as well. In particular, governments and the key institutions need a continuing flow of information to stay ahead of these issues.

Market power, and so antitrust, is at the core of concerns with the digital platforms, and something I know this Committee is giving serious consideration to. As I said at the ABA Antitrust Spring Meeting in DC earlier this year, however, while antitrust is a key part of the solution, more tools and interventions are needed. Antitrust experts should work closely with counterparts working in consumer law, privacy law, and with media law and policy to address the issues we have identified.

Australia's final report was published in July this year, after 18 months. During this time we issued around 60 statutory notices compelling the provision of information and documents, analysed over 200 submissions, held numerous public forums and countless stakeholder meetings.

Today I am keen to share some of our key findings and recommendations. Many of the concerns identified in our report are similar to those arising in the United States. While the solutions we propose can be implemented by one country acting alone, they will clearly benefit significantly from international cooperation.

Before going further I should explain why the focus of our inquiry was largely on Facebook and Google. Each month approximately 19.2 million Australians use Google Search, which is 93 per cent

of Australians aged 13 and over,[1] and 17.3 million access Facebook, which is 84 per cent of Australians aged 13 and over.[2] Amazon is a new entrant to Australia with currently little market share, however I know there are concerns in other jurisdictions about Amazon's market power. We believe that the recommendations we have made can deal with the problems associated with other platforms as they arise.

Google and Facebook and the value of data

The collection of user data is central to the business models of digital platforms like Google and Facebook, as it allows them to offer highly targeted advertising opportunities. Some 84% of Google's revenue comes from the sale of advertising opportunities[3] and 98% of Facebook's revenue comes from advertising opportunities.[4]

The data collected by these platforms extends far beyond information provided or behaviour observed during users' direct interactions with their apps and services. Using their market power it also incorporates data collected from users' interactions with vast numbers of other websites and apps.

It is estimated that over 70 per cent of the top million websites have a Google tracker, and more than 20 per cent have a Facebook tracker.[5] An estimated 88 per cent of apps in the Google Play Store send user data to Google, and 43 per cent to Facebook.[6]

There is much commentary about the unprecedented amount of data collected by Google and Facebook. The multiple touch points Google and Facebook have with users, and the depth and quality of the data held, provides each of them with a strong competitive advantage in advertising markets. It creates barriers to rivals entering their markets and also allows them to expand into adjacent markets by leveraging their market power in, respectively, search and social media.

The business models of Google and Facebook have grown considerably through acquisitions. As you know, Google is reported to have spent at least US$23 billion buying 145 companies between 2004 and 2014,[7] and Facebook is reported to have spent at least $23 billion buying 72 companies since 2004.[8]

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[1] Based on Australian Bureau of Statistics, Australian Demographic Statistics for December 2018, released 20 June 2019.
[2] Based on Australian Bureau of Statistics, Australian Demographic Statistics for December 2018, released 20 June 2019.
[3] Alphabet Inc, Form 10Q for the Quarterly Period Ending 30 June 2019, p. 10.
[4] Facebook, Facebook Records Second Quarter 2019 Results, p. 1.
[5] S Englehardt and A Narayanan, Online Tracking: A 1-million-site Measurement and Analysis, Princeton Web Census, p. 8.
[6] Oxford University, Third Party Tracking in the Mobile Ecosystem, 2018 p. 5.
[7] J Lipton, Google's best and worst acquisitions, CNBC, 19 August 2014.
[8] S Toth, 72 Facebook Acquisitions – The Complete List (2019)! [INFOGRAPHIC], TechWyse, 17 June 2019.

Financial markets expect continuing growth and higher profits from Google and Facebook in the future, via growth or expansion into adjacent markets. Our broad calculations estimated that, at the time of publishing our final report, 46-64% of Google's current share price and 50-67% of Facebook's current share price could be attributed to expectations for future growth.[9] Without such growth their share price would more than halve.

The relationship between antitrust, consumer and privacy concerns

As outlined earlier, the operation of digital platforms in data-driven markets raises new issues at the intersection of antitrust, privacy and consumer protection considerations. Access to data is a key source of market power but, despite the importance of data collection, consumers are not fully informed of, and cannot effectively control, how their data is collected, used and shared. This is because digital platform privacy policies are usually long, vague, complex, and extremely hard to navigate.

Our Inquiry found, for example, these privacy policies would take an average reader 10 to 20 minutes to read, and use language complex enough to require a college-level understanding of English to comprehend.[10] That's if anyone was actually reading them.

While this is obviously worrying from a privacy point of view, the fact digital platform users are not informed about the collection and use of their data impacts competition and consumer welfare. The information asymmetry reduces consumers' ability to make informed choices based on how their data will be handled, in turn preventing competition on this important element of digital platforms' service offerings.

The extensive data collection practices of the digital platforms reflects an imbalance of bargaining power between platforms and their users. The ubiquity of Google and Facebook mean many consumers feel they have to join or use these platforms, and agree to their non-negotiable terms of use, in order to receive communications and remain involved in community life. It is critical that consumers are provided with adequate information, and greater control over the collection and use of their data.

For these reasons, consumer and privacy laws can be as important as antitrust law in addressing harms that digital platforms may cause to markets and consumers.

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[9] Australian Competition and Consumer Commission, Digital Platforms Inquiry Final Report, p. 7.
[10] Australian Competition and Consumer Commission, Digital Platforms Inquiry Final Report, p. 598.

Accordingly, the ACCC has made recommendations to combat these potential harms through:

- strengthening consumer and privacy protections
- the establishment of a special unit within the ACCC to continually monitor and report publicly on the behaviour of the digital platforms, and
- taking strong enforcement action against competition and consumer law breaches.

Together these mechanisms give the ACCC a strong foundation and range of options to address the consumer harm and market inefficiencies caused by the digital platforms.

The impact on news and journalism

Digital platforms have clearly disrupted traditional media markets and, in particular, have threatened the sustainability of print (now print/online) news businesses. The growth of digital platforms marked a continuation of the fall in advertising revenue for print/online news businesses that began with the loss of classifieds in the early days of the internet. Between 2008 and 2018, the Australian print sector's advertising revenue fell from $8.3 billion to $1.9 billion, adjusted for inflation; a decline of 77 per cent.[11]

Our final report paints a stark picture of the resulting reduction in particular types of journalism produced in Australia over recent years. This includes local government and local court reporting, which we consider important to the healthy functioning of the democratic process. Strikingly, we found that 106 Australian local and regional newspapers closed between 2008 and 2018, leaving 21 local government areas without coverage from a local newspaper in either print or online formats.[12] These findings mirror recent research showing that 1 in 5 local newspapers in the United States have closed in the last 15 years, leaving 200 counties with no local newspaper.[13]

As our Inquiry recommends, governments will need to find ways to support the production of high-quality news without compromising the crucial independence of journalism.

Platforms like Google and Facebook are not just rivals for the supply of advertising opportunities. Our inquiry estimated that around 50 per cent of traffic to online news websites comes from Google or Facebook. If this figure is adjusted to take into account access to news directly through publishers' apps, 38 per cent of traffic comes from Google and Facebook. Either way, these platforms are unavoidable partners for many news businesses.

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[11] Australian Competition and Consumer Commission, Digital Platforms Inquiry Final Report, Fig. 3, p. 18.
[12] Australian Competition and Consumer Commission, Digital Platforms Inquiry Final Report, p. 562.
[13] P Abernathy, The Expanding News Desert, University of North Carolina at Chapel Hill, 2018, p. 8.

While the digital platforms clearly value the news media content they are able to display to their users, Google and Facebook are each more important to news media businesses than any one news media business is to Google or Facebook. This creates an imbalance of bargaining power between digital platforms and news media businesses, meaning that agreements they reach are likely much different to those that would be reached in a competitive market.

Our inquiry heard complaints about a lack of transparency in ranking of news content; algorithms that devalue original news stories and content behind a paywall; restrictions on the types of advertising available in certain formats; and the potential impacts of so-called 'Google snippets' on traffic to media websites. The ACCC has proposed practical solutions to address the consequences of this imbalance in bargaining power.

Australian consumers are increasingly accessing news via algorithm-driven digital platforms. This 'atomises' journalism, displacing individual stories from their publishers and other original sources, weakening brand associations and placing consumers at risk of being exposed to deliberately misleading and harmful news (disinformation).

While the leading platforms have taken some steps to address this risk, we consider it is important that there is a consistent, transparent oversight and independent monitoring, and that digital platforms implement consistent and robust complaints-handling processes for serious instances of disinformation.

Ultimately these are issues of responsibility. The business systems of the digital platforms mean they take little or no responsibility for the content on their sites or curated on their platforms. There is a clear role for government to address this.

The impact on the advertising market

The large digital platforms have also reshaped the advertising industry. We found that Google and Facebook are the channels by which most online advertising is purchased and sold in Australia. These two companies also receive the majority of online advertising spend in our country, and have captured more than 80 per cent of all growth in Australian online advertising in the past three years.

Australian advertisers are highly dependent on Google and Facebook to reach consumers online. However, there is a lack of transparency in the operation of the online advertising markets that these platforms dominate. In particular, it is unclear how Google and Facebook rank and display advertisements, and the extent to which each platform may be self-preferencing its own services or associated businesses at the expense of rival advertisers and consumers.

These problems are compounded by the complexity and opacity of the 'ad tech supply chain'; the process by which technology offered by Google and others matches advertisers with websites and apps selling ad space, using automated bidding to instantaneously deliver targeted ads to users. The prices charged by ad tech suppliers, and the share of advertising expenditure they retain, are largely unknown to both the purchasers of the advertisements and the websites or apps hosting the advertisements. For these reasons, it is very difficult for advertisers to know where their advertising dollar goes, and for website or app owners to know the true value of their advertising inventory.

Market participants are quite reasonably questioning the efficiency of this programmatic advertising process. The lack of transparency means we don't yet fully understand what inefficiencies or antitrust issues have arisen here and in other areas of the online advertising market.

Our Inquiry recommends a detailed investigation into the supply of ad tech services in order to increase the transparency of this market and determine whether any competition or efficiency concerns exist.

The importance of international cooperation

The magnitude and complexity of the problems identified by our Inquiry highlight the need for decisive action. The size of the multinational major digital platforms should not deter us.

As I've been reminding people at home, Australia can act alone. Facebook and Google are clearly subject to our laws. They either comply with the rules or do not do business in our country.

However, it would be preferable, and more effective, if we worked together with other nations, such as the United States, to not only develop solutions to the problems we all share but also to work together to enforce them. Society as a whole can only benefit from such cooperation.

Our proposed solutions

Our main proposed policy solutions to the problems we identified in our report are set out in the following table.

I hope that the holistic approach to the interrelated competition, consumer protection, privacy, media and advertising issues taken in the Australian Digital Platforms Inquiry will make a positive contribution to the **Subcommittee on Antitrust, Commercial and Administrative Law's** consideration of these critical issues.

Relevant Recommendations of the Digital Platforms Inquiry Final Report	
Concern	**Key recommended solutions**
The large digital platforms like Google and Facebook have the ability and incentive to foreclose rivals in now and future markets.	**Recommendation 1: Changes to merger law** Updating Australia's merger law to incorporate the likelihood that an acquisition would remove a potential competitor from the market; and the nature and significance of assets, including data and technology, acquired through a merger.
	Recommendation 4: Proactive investigation, monitoring and enforcement Establishing a specialist branch within the ACCC to proactively monitor, investigate and enforce antitrust *and* consumer protection laws involving digital platforms to ensure effective operation of the markets in which they operate.
The lack of transparency in online advertising makes it difficult for both market participants and enforcement agencies to know whether inefficiencies or antitrust issues have arisen in this market.	This branch would also produce regular reports and make recommendations to Government to address consumer harm and impediments to the efficient operation of the relevant markets on a continuing basis.
	Recommendation 5: Inquiry into ad tech services and advertising agencies Conducting an inquiry into the competition for the supply of ad tech services and online advertising services by advertising and media agencies in order to improve transparency in this market and assess antitrust issues.
The large digital platforms exploit their position of market power by requiring businesses to yield data and consumers to make uninformed decisions in agreeing to extensive data collection, preventing competition on the basis of data handling and privacy.	**Recommendation 16: Strengthen protections in the Privacy Act** Modernising Australia's privacy legislation to address issues arising from data collection practices including strengthening notification and consent requirements and allowing erasure of personal information.
	Recommendation 18: Privacy code for digital platforms Introducing an enforceable industry code of practice to enable proactive and targeted regulation of digital platforms' data practices.
	Recommendation 20: Prohibition against unfair contract terms Amending Australian consumer law to make unfair contract terms prohibited (not just voidable) and subject to pecuniary penalties.
	Recommendation 21: Prohibition on certain unfair trading practices Amending Australian consumer law to prohibit certain unfair trading practices.
The large digital platforms exercise market power in their dealings with media businesses, making it very difficult to monetise journalism on their platforms.	**Recommendation 6: Implement a harmonised media regulatory framework** Implementing a new framework for effective, consistent and platform-neutral regulation of media businesses, publishers, broadcasters and digital platforms.
	Recommendation 7: Code of conduct to govern relationships between digital platforms and media businesses Requiring designated large digital platforms to each implement a code of conduct to govern their relationships with news media businesses, including minimum commitments around

	data sharing, notification of changes to ranking and display of news content and fair negotiation of revenue sharing arrangements. The code is to be enforceable, and a mandatory standard can be imposed if an appropriate code is not submitted.
	Recommendation 8: Copyright take-down code for digital platforms Implementing a mandatory industry code to ensure effective and timely removal of copyright-protected content from digital platforms operating in Australia.
Disruption of the media industry by the large digital platforms has threatened consumers' access to journalism relevant to the healthy functioning of democracy by contributing to the spread of low-quality news content and disinformation.	**Recommendation 14: Monitoring credibility signalling on digital platforms** Directing an independent Government agency to monitor the voluntary initiatives of digital platforms to help users identify the reliability of news content.
	Recommendation 15: Code to counter disinformation Introducing an industry code to govern large digital platforms' handling of complaints about instances of disinformation that may cause serious public harm.
	Recommendation 23: Ombudsman scheme for digital platforms Establishing an independent ombudsman that will resolve complaints and disputes between consumers and digital platforms, including in relation to scams and the removal of scam content.

Mr. CICILLINE. A written statement from Dina Srinivasan discussing the intersection of competition and privacy.

Without objection.

[The information follows:]

The Honorable David Cicilline, Chair
The Honorable F. James Sensenbrenner, Ranking Member
House Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law
2138 Rayburn House Office Building
Washington, DC 20515

Statement for the Hearing on Online Platforms and Market Power
Part 3: The Role of Data and Privacy in Competition

Friday, October 18, 2019

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

Thank you for hosting this hearing and for inviting my thoughts on this topic. This statement reflects my position as a legal scholar examining the intersection of competition and technology, as well as my experience as an entrepreneur and executive in the digital advertising industry since 2007.

In my twelve years working in and researching digital advertising, I have closely watched the rise of modern high-tech industries that now drive our economy. I have observed the markets for online search, social networking, instant messaging and advertising software transition from being fiercely contested by many upstart firms to intensely consolidated by a handful of tech giants, and I have written about how this consolidation has affected consumers and the dynamism of the American economy.

What I have learned is that, when it comes to our data, the degree of consumer privacy is closely linked with the degree of competition in the marketplace. Many of the high-tech services that Americans use every day may technically be "free", but market consolidation allows companies like Alphabet (the parent company of Google) and Facebook to harm consumers not by escalating prices, but rather, by diminishing quality by eroding privacy terms. This is why I have argued that regulators need to rethink their approach by considering the issue of privacy as part of the question of quality—which, along with price, is the other crucial factor when considering antitrust enforcement.[1]

[1] Dina Srinivasan, *The Antitrust Case Against Facebook: A Monopolist's Journey Towards Pervasive Surveillance in Spite of Consumers' Preference for Privacy*, 16 Berkeley Bus. L.J. 39 (2019).

The online advertising market has an insatiable demand for consumer data. As Google and Facebook increasingly ignore user privacy, they collect an ever-growing amount of data from their users' emails, search queries, browsers, social network likes, and online video consumption, to target consumers and dominate online advertising. The two firms are now a duopoly that control approximately 60% of the total U.S. internet advertising market, as well as the vast majority of year-over-year growth within it.[2] Google and Facebook do not simply sell advertisements to marketers that appear on their own properties. They also control the advertising software and real-time exchanges that online publishers go through to sell their own advertising inventory.

While there is not space in this statement to holistically address all the problems related to data, privacy, and competition, in my remarks below, I focus on the following overlooked issues:

1. The erosion of privacy for users of Facebook and Google over time
2. Restrictions around data portability help firms maintain and grow their market power
3. The inability to opt-out of online tracking renders competitors' privacy-focused strategies obsolete
4. Overly complicated terms of service prevent consumers from making informed decisions
5. Increased collection of user data allows firms to exploit consumers
6. A more competitive landscape may compel firms to pay users for their data

1. The erosion of privacy for users of Facebook and Google over time

Facebook's evolution provides a telling example of how, when competition is eliminated, quality erodes. When Facebook launched in 2005 it faced fierce competition from rival social networks like MySpace, Orkut, Bebo, and Friendster. To differentiate itself, Facebook adopted the position of the social network that cared about user privacy. "We do not and will not use cookies to collect private information from any user," declared its privacy policy at the time.[3] However, as the number of competitors decreased, Facebook began tracking users on an additional 8 million-plus other sites and mobile apps—anything that embeds Facebook's Like button or plugs into

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[2] Sheila Dang, *Google, Facebook Have Tight Grip on Growing U.S. Online Ad Market: Report*, Reuters (June 5, 2019), https://www.reuters.com/article/us-alphabet-facebook-advertising/google-facebook-have-tight-grip-on-growing-u-s-online-ad-market-report-idUSKCN1T61IV.

[3] *Facebook Privacy Policy*, FACEBOOK.COM (Dec. 30, 2004), http://www.thefacebook.com/policy.php [https://web.archive.org/web/20050107221705/http://www.thefacebook.com/policy.php].

Facebook's software—to sell ads. It gets away with this because users who might want to leave the social network no longer have any other choice.

The story of Google's rise to dominance tells a parallel story. When Google acquired the advertising software company DoubleClick in 2007, privacy advocates were concerned that the new Google would leverage its dominance to decrease consumers' privacy. Specifically, they were concerned Google would combine its ability to identify consumers online (through Gmail, for example), with DoubleClick's ability to extensively track users anonymously, in order to know exactly what specific, real people do online. In spite of this concern, the Federal Trade Commission approved the merger, dismissing the likelihood that less competition would trigger consumer privacy problems. Yet in 2016, after Google had further entrenched its dominance in the search market, the ad server software market, and the advertising exchange software market, Google deprecated consumer privacy in precisely the way some experts forecasted but the FTC dismissed.[4]

2. **Restrictions around data portability help firms maintain and grow their market power**

There is another important way that companies can use data to interfere with competition and hurt consumers in the process—and that is, by interfering with data portability. Google search data can be easily accessed in Google's analytics software alone. Data in Google's analytics software can be easily ported into Google advertising software, but not the advertising software of competing firms. This type of behavior allows a company to leverage a dominant position in one market into a dominant one in another. Free markets work when firms purchase a product because of its merits, not simply because it is tied to another product they have no choice but to buy.

3. **The inability to opt-out of online tracking renders competitors' privacy-focused strategies obsolete**

Companies' policies around online tracking can make it difficult for other firms to compete by offering services with higher levels of privacy. When Snapchat (Facebook's largest social network competitor) entered the market, it promised users it would not track them across the web as a way to differentiate itself. In an ideal marketplace, that means consumers who do not like Facebook's practice of tracking them online could opt out of Facebook and choose to use Snapchat instead. But there is just one problem: Facebook continues to track users even after they deactivate or delete their accounts. Since users cannot escape Facebook's privacy intrusions by choosing a different service, there is less incentive to switch to a new service, which makes it

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[4] Julia Angwin, *Google Has Quietly Dropped Ban on Personally Identifiable Web Tracking*, ProPublica (Oct. 21, 2016), https://www.propublica.org/article/google-has-quietly-dropped-ban-on-personally-identifiable-web-tracking.

difficult for competitors to compete on privacy.

4. Overly complicated terms of service prevent consumers from making informed decisions

Competition is undermined when companies bury their privacy and data policies in long terms and conditions agreements that consumers cannot read or simply do not understand—Google's Terms of Service agreement that deals with privacy is 27 pages long.[5] When a user signs up for Google's email service, Google clearly states that Gmail is "free." However, in reality, the service comes at the cost of consumers' personal data being collected and used for multiple purposes, including personalized ads. Google buries this information in a long Terms of Service agreement, just as credit card companies once buried interest rates in long incomprehensible financial contracts. Today, nuances in privacy terms are relegated to investigative journalists to discover and explain. When the media does report on them—as they did around Google's practice of letting employees and contractors read Gmail users' emails[6]—consumers often switch to a competitor that offers a better product or service.

5. Increased collection of user data allows firms to exploit consumers

When companies hold large troves of consumer data, they control more data that can be stolen or used in predatory ways, such as using data to target and manipulate vulnerable individuals for political, social or commercial means. For example, earlier this year, we observed a company using what it knows about people to suppress housing ads to people based on their race, religion, or national origin.[7]

6. A more competitive landscape may compel firms to pay users for their data

In online advertising markets, if competition worked as it should, companies might pay users for the right to gather information about them and show them targeted ads. The advertising companies that extract data from consumers make billions of dollars selling behaviorally targeted advertising. Online ads are traded in real-time advertising exchanges, similar to stock exchanges, and consumers' data is part of this process. According to a recent study released by Google, the value of the ads that Google sells drops by 52% on average, when Google cannot use consumers'

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[5] Gmail Terms of Use: Terms and Privacy, https://www.google.com/mail/help/terms_of_use.html (last visited Sept. 9, 2019); Google, Google Privacy Policy (Jan. 22, 2019), https://www.gstatic.com/policies/privacy/pdf/20190122/f3294e95/google_privacy_policy_en.pdf.

[6] Douglas MacMillan, *Tech's 'Dirty Secret': The App Developers Sifting Through Your Gmail*, Wall St. J. (July 2, 2018), https://www.wsj.com/articles/techs-dirty-secret-the-app-developers-sifting-through-your-gmail-1530544442.

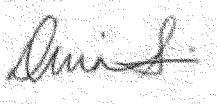
[7] Katie Benner, Glenn Thrush & Mike Isaac, *Facebook Engages in Housing Discrimination with Its Ad Practices, U.S. Says*, N.Y. Times (Mar. 28, 2019), https://www.nytimes.com/2019/03/28/us/politics/facebook-housing-discrimination.html.

data to target them.[8] It is technically feasible to compensate consumers for the ability to collect information about them in order to show them more targeted ads—as evidenced by at least one browser company doing so today.

Historically, it has been the role of the federal government to actively intervene in emerging product markets—including foods, drugs, cars, and financial products—to ensure that free markets work for consumers. This is especially true when products are dangerous, have hidden or deferred risk, or depend on consumers assenting to long terms they cannot read or understand. Our government should pass legislation that protects consumers from companies' exploitative data practices and also grants them the ability to opt-out of behaviorally targeted advertising. Our antitrust laws can also help solve problems related to data and privacy. Here, for example, enforcers can recognize the consumer harm in the erosion of quality and privacy, and how friction around data portability helps firms maintain and leverage their market power. The issues around technology, data, and privacy are complicated, but solving them is less tricky that many companies would have Congress believe.

Thank you and I would be happy to answer any questions that the committee may have.

Respectfully,



Dina Srinivasan

[8] Deepak Ravichandran & Nitish Korula, Effect of Disabling Third-Party Cookies on Publisher Revenue, Google (Aug. 27, 2019), https://services.google.com/fh/files/misc/disabling_third-party_cookies_publisher_revenue.pdf.

Mr. CICILLINE. A letter from the Consumer Reports detailing their priorities in examining data and privacy in competition.

Without objection.

[The information follows:]



October 17, 2019

The Honorable David N. Cicilline
Chairman
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

The Honorable F. James Sensenbrenner
Ranking Member
Subcommittee on Antitrust,
Commercial and Administrative Law
Committee on the Judiciary
U.S. House of Representatives
Washington, DC 20515

RE: Online Platforms and Market Power, Part 3: The Role of Data and Privacy in Competition

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

Consumer Reports welcomes the Subcommittee's hearing to examine the role of data and privacy in competition. With the ever-growing power of giant online platforms over commerce and communications, it is critically important to comprehend the threats posed to competition, consumers, the marketplace, and our society, so that these threats can be effectively addressed.

In terms of data and privacy as they relate to competition, there are at least three distinct but related threats:

(1) A dominant platform can use the data it amasses regarding private commercial interactions that pass through its platform to target discriminatory favoritism among sellers or advertisers who use the platform for reaching consumers, or to tailor new product and service offerings of its own to preempt promising business opportunities identified in the data, even to target a seller's customers.

(2) The data amassed by a dominant platform can solidify its dominance, by creating formidable barriers to entry by would-be competitors who do not have access to similar data.

(3) Freed from having to worry about competition that gives consumers the choice to go elsewhere, a dominant platform can disregard the interests of consumers in protecting their privacy, and design their platform to maximize its ability to monitor, monetize, and manipulate our personal interactions as consumers and as citizens.

Properly applied, our current antitrust laws can and should play a key role in addressing these threats. It is not clear, however, that the courts and the antitrust enforcement agencies are able and willing to apply them to achieve this result.

We are encouraged that, spurred on by this Subcommittee's inquiry, and by increasing interest in other quarters, the Justice Department and the Federal Trade Commission have indicated they intend to undertake investigations in this area. A growing number of state attorneys general have also indicated they are undertaking investigations of their own.

We hope these announced efforts will be carried forward, and that they will prove effective. Ultimately, these investigations can also shed light on whether we need to strengthen the antitrust statutes or develop new laws to address the special competition challenges presented by this technology.

Antitrust will never be a complete solution; we also need strong privacy laws and other consumer protections. But strong antitrust laws and their vigorous enforcement – backed by sufficient resources – will be key to any solution.

The internet has revolutionized commerce and communication, in extraordinarily beneficial ways. But these benefits are undercut when a handful of tech giants amass overwhelming market power that threatens to restrict and diminish our choices, and the pathways for all who seek to reach us – including manufacturers, service providers, content creators, and other voices.

We appreciate your Subcommittee's examination of these matters and your continuing efforts to ensure that the online marketplace works for consumers, and for all who depend on it.

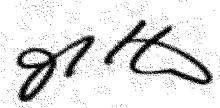
Sincerely,



George Slover
Senior Policy Counsel
Consumer Reports



Justin Brookman
Director, Privacy and
Technology Policy
Consumer Reports



Jonathan Schwantes
Senior Policy Counsel
Consumer Reports

cc: Members, Subcommittee on Antitrust, Commercial and Administrative Law

Mr. CICILLINE. A written statement from Maurice Stucke and Ariel Ezrachi on the digital platform economy's effects on antitrust and privacy policy.

Without objection.

[The information follows:]

Written Statement for the Record

by

Maurice E. Stucke[*] and Ariel Ezrachi[†]

for a hearing before

The U.S. House Judiciary Subcommittee on Antitrust, Commercial and Administrative Law

titled

Online Platforms and Market Power, Part III: The Role of Data and Privacy in Competition

Rep. David Cicilline, Chair
Rep. James Sensenbrenner, Ranking Member

October 18, 2019

Thank you for soliciting our views on the implications of the digital platform economy on antitrust and privacy policy.

We live in a transformative era, driven by the digital platform economy, which affects many aspects of our livelihood. The digital platform economy, fueled by the rise of big data and big analytics, has created new value chains and profit centers, with the emergence of new gatekeepers, networks, and multi-sided markets.

But what makes the digital platform economy unique? After all, data, technology, and platforms have long been part of markets. As we illustrate below, the key characteristics of the digital platform economy, which can promote efficiencies and our welfare, can also affect the nature of competition, and give rise to sustained market power and abuse.

As we transition to a data-driven platform economy, we are witnessing the emergence of ***data-opolies***—companies that control a key digital platform and significant data inputs. The positioning of these companies as central hubs, like a coral reef, attracts users, sellers, advertisers, software developers, apps, and accessory makers to their ecosystem. Apple and

[*] Professor of Law, University of Tennessee.
[†] The Slaughter and May Professor of Competition Law at the University of Oxford, Fellow of Pembroke College, and the Director of the Oxford Centre for Competition Law and Policy.

Google, for example, each control a popular mobile phone operating system (and key apps on that platform); Amazon controls the largest online merchant platform; and Facebook controls the largest social network platform. Through their leading platforms, a significant volume and variety of personal data flows. The velocity in acquiring and exploiting this personal data helps these companies obtain significant market power.

While these online platforms differ from each other in their nature, appeal, and business models, some commonalities exist, including:

- their operation in multi-sided markets,
- the interdependence between the various sides of the market, the role of cross-platform network externalities (we elaborate on this below), and the way price and volume are set,
- their ability to reach a critical mass of users and providers on all sides of the platform that increases user and supplier value and ignites a positive feedback loop,
- the importance of personal data, which the platforms collect directly or through third parties, in providing a significant competitive advantage, and
- the vertical integration that characterizes many modern digital platforms.

To fully understand the durability and source of the data-opolies' power, it is important to acknowledge (i) the centrality of personal data in the digital platform economy, (ii) the multiple network effects in this economy, (iii) how, as a result, the winner can take all or most once the market tips, and (iv) the data-opolies' incentives and ability to use anticompetitive measures to tip the market and maintain and extend their dominance.

After outlining some of the key drivers, which, together, stimulated the change in market dynamics and support the rise of data-opolies, we highlight some of the economic, social, and political risks they pose and the need for a measured response.

We show how these changing market dynamics justify refining and developing policy tools to protect competition, our privacy, and our welfare through a measured and complementary use of competition policy, privacy, and data protection laws.

I. The Centrality of Personal Data in the Digital Economy

The role of personal data in the digital platform economy cannot be overstated, as it drives much of that commerce. Eighty-five percent of Google's 2018 revenues and 98.5 percent of Facebook's 2018 revenues came from advertising,[1] which is fueled by the personal data they collect. Data may be structured or unstructured, gathered voluntarily, through observations, or by inferring new information using existing data.[2]

When considering the role data plays in the digital platform economy, it is helpful to take note of the "four Vs of Big Data" – *Volume* (the quantity of data one can extract), *Variety* (the scope of data one can attain), *Velocity* (the rate the data are generated, accessed, processed, analyzed, and utilized), and *Value* (the overall benefit one can obtain from the data).[3] With a sufficient volume and variety of data, and the velocity in processing and learning from the data, companies can improve their algorithms, production, services, business organization, strategies, and competitive advantage. The more personal data a company collects, the greater the variety of the data, and the faster the company can collect, process, and utilize the data, the greater the data's potential value for the data holder and other service providers in the digital platform economy.

While data is often "non-rivalous" in the sense that it may be duplicated and used by multiple parties, without depleting its value (and as such differs from oil or traditional assets),[4] its control, especially where the four Vs are present, offers a distinct competitive advantage in the digital economy. Indeed, it is often the large platforms that can derive significant value from the volume and variety of personal data they quickly collect either directly, or through third parties,[5] and gain a clear data (and competitive) advantage over smaller competitors. Limited access to relevant and timely data may inhibit entry,

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[1] Alphabet 2018 10-K at 27, https://abc.xyz/investor/; Facebook 2018 Annual Report at 44, https://investor.fb.com/financials/sec-filings-details/default.aspx?FilingId=13183451.

[2] *Competition Law and Data*, 10th May, 2016, available at https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Berichte/Big%20Data%20Papier.pdf?__blob=publicationFile&v=2.

[3] For more details on each V, see MAURICE E. STUCKE & ALLEN P. GRUNES, BIG DATA AND COMPETITION POLICY 310 ¶¶ 2.04–2.29 (Oxford University Press, 2016); OECD, *Big Data: Bringing Competition Policy to the Digital Era*, DAF/COMP(2016)14, at 5, https://www.oecd.org/competition/big-data-bringing-competition-policy-to-the-digital-era.htm.

[4] EU Commission Case No COMP/M.6314 – *Telefonica UK/Vodafone UK/Everything Everywhere* (joint venture) - "Customers generally tend to give their personal data to many market players, which gather and market it. Therefore, this type of data is generally understood to be a commodity" (para 543).

[5] Ariel Ezrachi & Viktoria H.S.E. Robertson, *Competition, Market Power and Third-Party Tracking*, 42 WORLD COMPETITION 5–19 (2019).

expansion, and innovation.[6] As the OECD noted, a positive feedback loop helps the strong become stronger, as the weak get weaker.[7] Other concerns evolve around data mining, data trade, privacy violations, and manipulation of behavior.[8]

Big data and big analytics can reinforce each other. Data can help train the algorithm. For example, access to a large volume and variety of photographs and related personal data can helped train a platform's facial recognition software.[9] Big analytics, in turn, offer the power to optimize the use of data and subject it to rigorous analysis. Advanced analytics – which rely on algorithms and artificial intelligence – are used to identify patterns in data, sift through vast volume of data points, identify and classify user behavior, and monitor market dynamics. As such, big analytics provide a crucial component in the digital platform economy, and alongside the clear benefits, big analytics can be used in ways that undermine competition and individuals' welfare. We discuss elsewhere how algorithms can facilitate collusion (in ways that enforcers cannot readily detect or prosecute) and behavioral discrimination, which means getting people to buy things they otherwise wouldn't at the highest price they are willing to pay.[10]

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[6] The key themes below are discussed in greater detail in ARIEL EZRACHI & MAURICE E. STUCKE, VIRTUAL COMPETITION - THE PROMISE AND PERILS OF THE ALGORITHM DRIVEN ECONOMY (Harvard University Press, 2016); Ariel Ezrachi & Maurice E. Stucke, *Digitalisation and Its Impact on Innovation - Report Prepared for the European Commission*, DG Research & Innovation (2018).

[7] OECD, *Data-Driven Innovation for Growth and Well-Being: Interim Synthesis Report* 29 (October 2014), http://www.oecd.org/sti/inno/data-driven-innovation-interim-synthesis.pdf; reference within quotation is to CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY (Harvard Business Press, 1999).

[8] SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER (Public Affairs, 2019); ROGER MCNAMEE, ZUCKED: WAKING UP TO THE FACEBOOK CATASTROPHE (Penguin Press, 2019).

[9] April Glaser, *Facebook's Face-ID Database Could Be the Biggest in the World. Yes, It Should Worry Us*, SLATE, July 09, 2019, https://slate.com/technology/2019/07/facebook-facial-recognition-ice-bad.html.

[10] VIRTUAL COMPETITION, *supra*, at 89–100 (2016); *Sustainable and Unchallenged Algorithmic Tacit Collusion*, NORTHWESTERN JOURNAL OF TECHNOLOGY & INTELLECTUAL PROPERTY (forthcoming 2020), available at https://ssrn.com/abstract=3282235 or http://dx.doi.org/10.2139/ssrn.3282235; *Antitrust Enforcement and Market Power in the Digital Age: Is Your Digital Assistant Devious?*, *in* RECONCILING EFFICIENCY AND EQUITY: A GLOBAL CHALLENGE FOR COMPETITION POLICY (Damien Gerard & Ioannis Lianos eds., Cambridge University Press, 2019); *Antitrust, Algorithmic Pricing and Tacit Collusion*, *in* RESEARCH HANDBOOK ON THE LAW OF ARTIFICIAL INTELLIGENCE (Woodrow Barfield & Ugo Pagallo eds., Edward Elgar Publishing, 2018); *Algorithmic Collusion: Problems and Counter-Measures* (23 June 2017) (Report commissioned by the Organisation for Economic Co-operation and Development for its Competition Committee's Roundtable on Algorithms and Collusion (21-23 June 2017)); *How Digital Assistants Can Harm Our Economy, Privacy, and Democracy*, 32 BERKELEY TECHNOLOGY LAW JOURNAL 1239 (2017); *The Rise of Behavioural Discrimination*, 37 EUROPEAN COMPETITION LAW REVIEW 484 (2016).

II. The Multiple Network Effects in the Digital Platform Economy

Network effects occur when a good or service becomes more valuable as others use it. The digital platform economy has several types of network effects. All can create a feedback loop that attracts users, sellers, service providers and developers, and advertisers to a network. These network effects include:

- *Direct network effects* -- As more people have a telephone, for example, the more people one can call, the more use one gets from one's telephone. An example in today's digital platform economy are social networks, like Facebook.

- *Indirect network effects* concern an increase in benefit for other goods and services as a result of the relationship between users and other providers – such as developers, sellers, or advertisers. A classic example is Microsoft's operating system for personal computers.[11] As more people use Microsoft Windows, the operating system becomes more attractive to developers and service providers, who benefit from scale and can more easily cover the high fixed costs.

  One can see similar indirect network effects for the operating systems for mobile phones (Google's Android and Apple's iOS), as well as, digital personal assistants (like Google Home and Amazon Alexa). Users are attracted to platforms that offer the popular applications and skills, and can connect with more smart appliances. App developers, publishers, and smart appliance manufacturers prefer platforms with the larger audiences. So, as one or two platforms attract users, they, in turn, will attract more developers, which, in turn, will attract more users to those platforms, thus enhancing the feedback loop. Once many users switch to the leading platforms, it is harder for the smaller platforms to continue to attract users and popular sellers and developers. As several business professors observed, "in a platform market, it is the best platform, and not the best product, that usually wins."[12]

- *Spill–Over Effects* – A traditional spill-over network effects emerges, where more users attract more sellers, advertisers, or suppliers on the other side, which, in turn, can attract more users. When a platform is in position of amassing relevant personal

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[11] United States v. Microsoft Corp., 84 F. Supp. 2d 9, 20 (D.D.C. 1999).
[12] MICHAEL A. CUSUMANO, ANNABELLE GAWER, & DAVID B. YOFFIE, THE BUSINESS OF PLATFORMS: STRATEGY IN THE AGE OF DIGITAL COMPETITION, INNOVATION, AND POWER 133 (HarperCollins, 2019).

data, then the network effects are amplified by the four Vs, in terms of the platform's ability in attracting additional users, sellers, service providers and developers, and advertisers. The more personal data the platform collects, the better the platform can target users with personalized sponsored search results and ads.[13] Platforms compete for advertisers based on the return on investment that the platform can deliver.[14] As more users are drawn to the services offered by the platform, the data-opoly amasses a greater variety of data to effectively target consumers with relevant ads, products, and services. The more time users spend on the platform's services (such as search engines, email, maps, videos, etc.), the more opportunities the platform can target users in the moments that matter for a purchasing decision, and the more ad revenues it attracts relative to other online sites.

- *Learning–by–Doing*, powered by big data and big analytics. This network effect concerns the development of advanced and refined analytics through usage. Search engines demonstrate this data–driven network effect clearly.[15] Each person's utility from using the search engine increases when others use it as well.[16] As more people use the search engine, the more opportunities to learn are available to the algorithm, the greater feedback allows refinement as the search engine can learn consumers' preferences, the more relevant the search results will likely be, which, in turn, will likely attract others to use the search engine; and the positive feedback continues. Learning–by–doing network effect is not limited to online searches, but will be present in any environment in which algorithms evolve and adapt based on

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[13] Julia Angwin, Surya Mattu & Terry Parris Jr., *Facebook Doesn't Tell Users Everything It Really Knows About Them*, PROPUBLICA (Dec. 27, 2016, 9:00 AM), https://www.propublica.org/article/facebook-doesnt-tell-users-everything-it-really-knows-about-them; Julia Angwin, Madeleine Varner & Ariana Tobin, *Facebook Enabled Advertisers to Reach 'Jew Haters'*, PROPUBLICA (Sept. 14, 2017, 4:00 PM), https://www.propublica.org/article/facebook-enabled-advertisers-to-reach-jew-haters; Alex Kantrowitz, *Google Allowed Advertisers to Target People Searching Racist Phrases*, BUZZFEED NEWS (Sept. 15, 2017, 11:15 AM), www.buzzfeed.com/alexkantrowitz/google-allowed-advertisers-to-target-jewish-parasite-black.

[14] *See, e.g.*, AUSTRALIAN COMPETITION & CONSUMER COMMISSION, DIGITAL PLATFORMS INQUIRY FINAL REPORT 3.2 (June 2019); United States v. Bazaarvoice, Inc., No. 13-CV-00133-WHO, 2014 WL 203966, at *21 (N.D. Cal. Jan. 8, 2014) ("A critical asset in building a successful social commerce network is to have the largest audience possible because that is how advertisers and marketers and brands think about the value they get.") (internal quotations omitted).

[15] STUCKE & GRUNES, BIG DATA AND COMPETITION POLICY, *supra*, at 172–81; Press Release, European Comm'n, Antitrust: Commission Fines Google €2.42 Billion for Abusing Dominance as Search Engine by Giving Illegal Advantage to Own Comparison Shopping Service (June 27, 2017), http://europa.eu/rapid/press-release_MEMO-17-1785_en.htm (discussing high barriers to entry in these markets, in part because of network effects: "the data a search engine gathers about consumers can in turn be used to improve results").

[16] STUCKE & GRUNES, *supra*, at 170–81.

experience, such, for example, the development of voice recognition or other instances based on machine learning.[17]

- *Scope of Data*. This data-driven network effect concerns the scope of personal data collected, which can be used to personalize tasks and individualize users' needs. The data-opolies already expend significant effort to better track individuals, collect their personal data, and profile them.[18] For example, the more one uses a digital assistant, like Alexa, and the more personal data it collects, the more opportunities Alexa can anticipate one's particular needs.

III. Winner Takes All or Most

With these network effects, a digital platform market is subject to tipping. Once a significant number of users switch to the leading platforms, app developers will soon follow, increasing the risk that the market will tip to the leading platform's favor. In these instances, competition is said to be *for the market*. For example, the mobile operating system market went from multiple competitors in 2010 (with Google and Apple collectively accounting for 39 percent of unit sales), to a duopoly eight years later.[19] Table 1 reflects this increasing concentration.

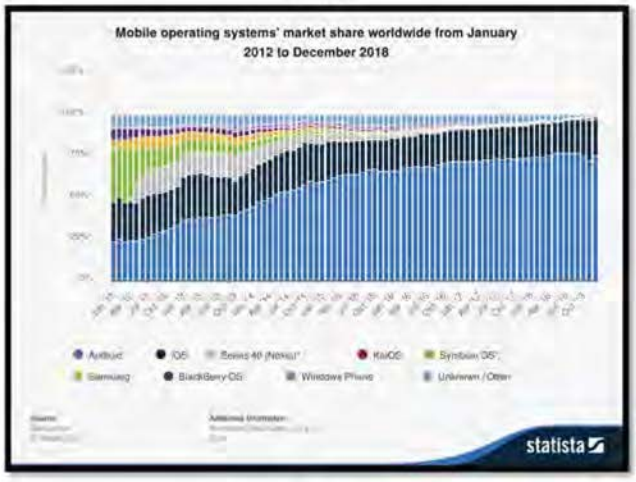
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[17] *See, e.g.*, *id.*; Christian Chessman, *A "Source" of Error: Computer Code, Criminal Defendants, and the Constitution*, 105 CALIF. L. REV. 179, 181 n.9 (2017) (explaining that machine learning involves combining "rules of analysis" and "repeated exposure to data patterns" in order to iteratively modify software "output or behaviors" over time); M. I. Jordan & T. M. Mitchell, *Machine Learning: Trends, Perspectives, and Prospects*, 349 SCIENCE 255, 255 (2015) ("Machine learning addresses the question of how to build computers that improve automatically through experience.").

[18] EZRACHI & STUCKE, ***supra*Error! Bookmark not defined.**, at chs. 15, 16.

[19] Felix Richter, *Smartphone OS: The Smartphone Duopoly*, Statista, May 20, 2019, https://www-statista-com.proxy.lib.utk.edu/chart/3268/smartphone-os-market-share/.

Table 1



Source: StatCounter[20]

The reality is that it would be very difficult for a new mobile phone operating system to enter the market today and ignite meaningful network effects, even if it offered better features.[21]

When network effects lead to a tipping of a market in favor of the leading platform, competitors may find it impossible to attract advertisers, producers/sellers, app developers, and consumers. Once the market has tipped, users might find it difficult to unilaterally switch as a result of such data-driven network effects. Users become reliant on the dominant platform even though they may prefer a different platform model. In short, users remain with the dominant platform, which may or may not offer the best terms or services.

For example, in early 2018 in the aftermath of the Cambridge Analytica scandal, a #DeleteFacebook campaign made the news. Despite the public outrage, Facebook, in its first quarter of 2018, saw a 13 percent increase in daily and monthly active users and a 49

[20] Mobile operating systems' market share worldwide from January 2012 to December 2018 Statista. https://www-statista-com.proxy.lib.utk.edu/statistics/272698/global-market-share-held-by-mobile-operating-systems-since-2009/ (last visited August 01, 2019).

[21] Unlocking Digital Competition: Report of the Digital Competition Expert Panel (London: March 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf, at 29 ("The UK Digital Competition Expert Panel Report" (also known as the "Furman Report")).

percent increase in revenue, year-over-year. Facebook's results in its second, third, and fourth quarters of 2018 were even better, with more monthly active users worldwide (and in North America) and higher revenues.[22] This is not because Facebook users are agnostic about privacy. Seventy-four percent of surveyed users in 2018 were very or somewhat concerned about Facebook's invasion of their privacy (a nine percentage point increase from 2011).[23] Even if many Facebook users are displeased with the company's privacy violations, they cannot readily switch to alternative social networks unless their network of friends also switch to the same alternative network.

IV. Anticompetitive Actions to Attain, Maintain, and Extend Their Dominance

To encourage the tipping of these digital markets, and maintain and extend its dominance, a data-opoly may engage in a variety of anticompetitive strategies, including:

1. Foreclosing its rivals from timely accessing critical data,[24]
2. Exclusionary practices to prevent rivals from achieving scale,
3. Degrading the functionality of the independent apps and online platforms—like LinkedIn, Twitter, Yelp, or Coupons.com—that operate on their platform (such as mobile operating system) by reducing their inter-operability or performance (such as making them run slower),
4. Leveraging its data-advantage in a regulated market to another market,
5. Increasing customers' switching costs and thereby reduce multi-homing,
6. Limiting a competing app's revenue stream by excluding the app from its online payment systems, such as Apple Pay or Google Wallet,
7. Reducing or eliminating the independent app's ability to distribute its products,
8. Using its "nowcasting radar" to identify and either squelch or acquire nascent competitive threats. Some platforms have a relative advantage in accessing and analyzing data to discern consumer trends well before others. Data-opolies can use their relative advantage to see what products or services are becoming more popular. With their now-casting radar, data-opolies can acquire or squelch these nascent competitive threats. Thus, concerns of kill zones, as *The Economist* notes, abound as the data-opolies use their data-advantage to acquire or squelch nascent

[22] Facebook, Earning Slides: Q4 2018 Results, https://investor.fb.com/financials/?section=secfilings.
[23] Jeffrey M. Jones, *Facebook Users' Privacy Concerns Up Since 2011*, Gallup, April 11, 2018, https://news.gallup.com/poll/232319/facebook-users-privacy-concerns-2011.aspx.
[24] One example is when Facebook cut off data to a nascent competitive threat, Twitter's now defunct video app, Vine. Isobel Asher Hamilton, *Emails show Mark Zuckerberg personally approved Facebook's decision to cut off Vine's access to data*, BUSINESS INSIDER, Dec. 5, 2018, https://www.businessinsider.com/facebook-documents-mark-zuckerberg-restricted-vine-data-access-2018-12.

> competitive threats, which present unique challenges for enforcers and policy makers.[25]

For example, once the market has tipped to its favor, the platform may vertically integrate (a legitimate strategic move), and start competing with one side of its platform, namely the app developers and sellers. Amazon, for example, sells its own products under its own brand labels. Google and Apple promote their own mobile phone apps. Rather than compete on the merits, the platform can seek to give its products and services an unfair advantage. When such competition is not on the merits, and involves self-favoring and exclusion, competition downstream is distorted. Indeed, once a powerful platform vertically integrates, then its incentives can change. It can begin preferring its own products and services, and make it harder for consumers to find or use competing products on its platform. Thus, it can be potentially a friend and enemy to the independent apps and sellers.

One example of anticompetitive self-preferencing is the Google Shopping Case, where the European Commission found Google to have abused its market dominance as a search engine by giving an illegal advantage to another Google product, its comparison shopping service.[26] Another reported example is Apple favoring its own apps in its app store, over more relevant, or higher rated, competing apps.[27] A third example, which the European Commission is currently investigating, is whether Amazon is using data from the merchants it hosts on its platform to secure an advantage in selling its own products against those same retailers.[28]

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[25] *Into the danger zone: American tech giants are making life tough for startups*, THE ECONOMIST, June 2, 2018, https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups.

[26] European Commission - Press release, Antitrust: Commission fines Google €2.42 billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service, 27 June 2017, https://europa.eu/rapid/press-release_IP-17-1784_en.htm. Google is appealing the EC's decision.

[27] Tripp Mickle, *Apple Dominates App Store Search Results, Thwarting Competitors: Searches for 'music,' 'audiobooks' and other categories rank company apps first, a process some developers find unfair; Apple says algorithm doesn't give own products an advantage*, WALL STREET JOURNAL, July 23, 2019, https://www.wsj.com/articles/apple-dominates-app-store-search-results-thwarting-competitors-11563897221?shareToken=st44e68b42ee5f45f5bd573dae5f8f0f5e.

[28] Sara Salinas, *Amazon hit by EU antitrust probe*, CNBC, Sept. 19, 2018, https://www.cnbc.com/2018/09/19/eu-probing-amazons-use-of-data-on-third-party-merchants.html; see also ILSR, *2019 Independent Business Survey* (July 2019), https://ilsr.org/2019-independent-business-survey/ (highlighting concerns of surveyed independent sellers on Amazon's Marketplace).

V. The Rise of Sustained Market Power

The above dynamics support sustained market power, which is not easily challenged. A look at the global ranking of companies by market value reveals the power of the platform business model. Seven of the eight largest companies in the world (based on market value) in 2019 were digital platforms:

Table 2

The 100 largest companies in the world by market value in 2019 (in billion U.S. dollars)	
	Market value in billion U.S. dollars
Apple	$961.3
Microsoft	$946.5
Amazon.com	$916.1
Alphabet	$863.2
Berkshire Hathaway	$516.4
Facebook	$512
Alibaba	$480.8
Tencent Holdings	$472.1

Source: Forbes[29]

To put this in perspective, if one totaled the market value of the 100 largest companies in the world, these seven firms would account for 24 percent of that total.

Overall, since the mid-2000s, the leading digital platforms – Google, Apple, Facebook, Amazon, and Microsoft – have become key players in the digital economy. Amazon, Apple, Microsoft and Google had the largest absolute increase in market capitalization between 2009 and 2019, with Facebook trailing not far behind.[30]

[29] Forbes, The 100 largest companies in the world by market value in 2019 (in billion U.S. dollars) Statista, https://www-statista-com.proxy.lib.utk.edu/statistics/263264/top-companies-in-the-world-by-market-value/ (last visited August 01, 2019).

[30] Pwc, Global Top 100 companies by market capitalization (July 2019), https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-2019.pdf.

VI. Data-Opolies Can Be Far More Durable Than Past Monopolies

We often hear how dynamic the digital markets are, and how gales of creative destruction can readily displace the leading firms. Thus, Google displaced Yahoo! as the leading search engine, Facebook displaced Myspace, and Amazon displaced many brick-and-mortar retailers.

In order to assess the durability of monopolies in the digital economy, it is helpful to first establish the baseline mortality of companies. As one study found, most companies live very short lives: The average half-life of U.S. publicly traded companies is close to 10.5 years, "meaning that half of all companies that began trading in any given year have disappeared in 10.5 years."[31] For companies that were created and died between 1950 and 2009, most died after their initial public offering and fewer than five percent remained alive after thirty years.[32]

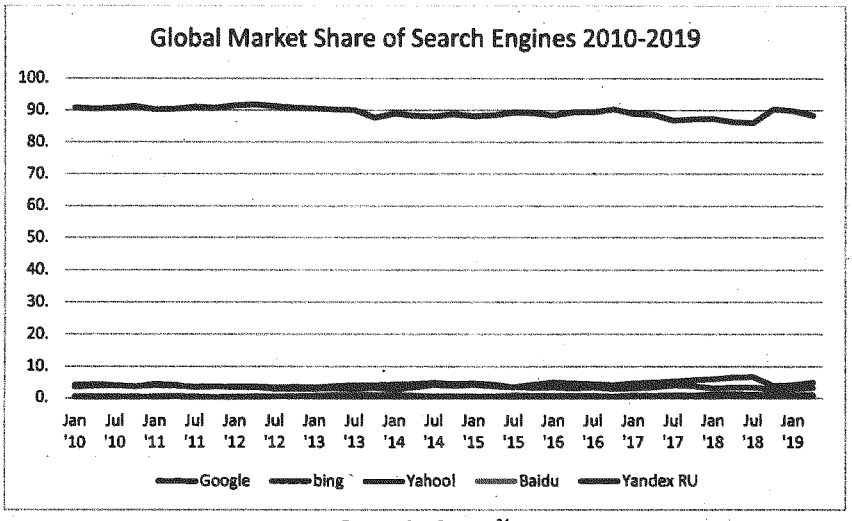
Similarly, platforms whether in the digital or brick-and-mortar economy are not ensured durable monopoly power. One study calculated 209 failures of platforms over the past twenty years. Most of them (85 percent) were transaction platforms, which also had shorter lives (on average 4.6 years) than the innovation platforms (5 years) or hybrid platforms (7.4 years) in the survey.[33]

But while the digital platform economy has eroded the power of some of the older platforms and witnesses its share of failures, the new platform economy does not disperse power evenly. Instead, data-opolies have had durable power. For example, Google occupies a position of dominance in the market for search not only in the U.S. and European Union but around the world.

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[31] GEOFFREY WEST, SCALE: THE UNIVERSAL LAWS OF GROWTH, INNOVATION, SUSTAINABILITY, AND THE PACE OF LIFE IN ORGANISMS, CITIES, ECONOMIES, AND COMPANIES 402 (Penguin Press 2018).
[32] *Id.* at 397.
[33] CUSUMANO ET AL., BUSINESS OF PLATFORMS, *supra*, at 108.

Table 3



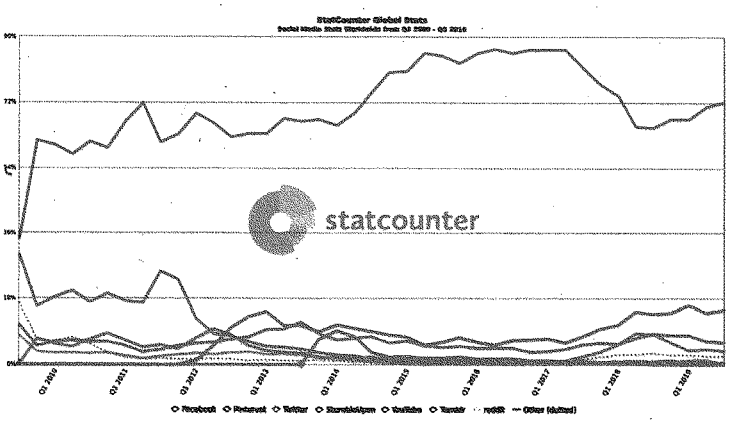
Source: StatCounter[34]

Similarly, the Bundeskartellamt found Facebook to dominate the market for social networks in Germany.[35] But it too, as Table 4 reflects, dominates many other geographic markets around the world.

[34] Worldwide desktop market share of leading search engines from January 2010 to April 2019 Statista, https://www-statista-com.proxy.lib.utk.edu/statistics/216573/worldwide-market-share-of-search-engines/ (last visited September 07, 2019).

[35] Bundeskartellamt, "Bundeskartellamt Prohibits Facebook from Combining User Data from Different Sources," news release, February 7, 2019, https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/07_02_2019_Facebook.html; Bundeskartellamt, "Preliminary Assessment in Facebook Proceeding: Facebook's Collection and Use of Data from Third-Party Sources Is Abusive," news release, December 19, 2017, https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19_12_2017_Facebook.html. Facebook prevailed on appeal, and the German competition agency is now appealing the appellate court's decision.

Table 4



Source: StatCounter[36]

As we explore in our forthcoming book, *Competition Overdose* (HarperCollins, March 2020), Google and Facebook also dominate the underlying digital advertising ecosystem.[37] By 2018, Google and Facebook extracted 58 percent of the $111 billion in revenues from the digital ad market – more than all of their online competitors combined.[38] The closest competitor is Amazon, which is still expanding its advertising network. According to *Bloomberg*, "In the first half of 2018, Google and Facebook accounted for 75 percent of all digital ad growth; Amazon was responsible for much of the rest."[39]

Moreover, it will be far harder for an entrant today to displace Google, Apple, Facebook, and Amazon, as readily as they had displaced their rivals. As the UK 2019 Report of the Digital Competition Expert Panel on *Unlocking Digital Competition* noted,

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[36] https://gs.statcounter.com/social-media-stats#quarterly-200903-201903.

[37] See also UK Digital Competition Expert Panel Report, *supra*; ACCC Final Report, *supra*; Autorité de la Concurrence, Opinion no. 18-A-03 of 6 March 2018 on Data Processing in the Online Advertising Sector, http://www.autoritedelaconcurrence.fr/doc/avis18a03_en_.pdf.

[38] Autorité Report, 6; Spencer Soper, *Amazon Increases Ad Market Share at Expense of Google, Facebook*, BLOOMBERG NEWS, September 19, 2018, https://www.bloomberg.com/news/articles/2018-09-19/amazon-increases-ad-market-share-at-expense-of-google-facebook.

[39] Leonid Bershidsky, *The Digital Ad Market Is Overdue for Antitrust Review*, BLOOMBERG NEWS, December 5, 2018, https://www.bloomberg.com/opinion/articles/2018-12-05/amazon-google-facebook-are-ripe-for-a-european-antitrust-review; see also ACCC Preliminary Report, 66 ("Google and Facebook receive the majority of digital advertising revenue in Australia; and have captured more than 80 per cent of growth in digital advertising in the past three years.").

> The level of dominance achieved by the early leaders in markets such as social networks and online search is not comparable to the scale and reach that has been achieved by Facebook and Google. For example, the number of monthly unique global visitors to Myspace peaked at around 100 million, and it was valued at $580 million when it was purchased by News Corporation in 2005. In comparison, Facebook reportedly has over two billion monthly active users, with over 40 million in the UK alone, and was valued at more than $470 billion in February 2019. It is possible that companies such as Myspace never achieved the critical mass necessary to secure the market.[40]

It added, "Due to their duopoly in the mobile operating system market, Apple and Google each occupy gateway positions between app developers and consumers. In this context, it is clear there is little incentive for app developers to go to the trouble and expense of ensuring their apps work on any smaller rival operating systems, as the potential target market will be so small."[41] Likewise, in its *Digital Platforms Inquiry - Final Report*, the Australian competition authority concluded that "Google is insulated from dynamic competition to a considerable degree, by barriers to entry and expansion, advantages of scope as well as its acquisition strategies."[42] And that "like Google, to a large extent, Facebook is insulated from dynamic competition …"[43]

So, while many companies typically die within ten years of their birth, these data-opolies have dominated multiple markets for years and seem poised to continue their domination over the next decade. Indeed, the current market valuations of the key digital platforms suggest that investors do not anticipate disruption that would radically change their dominance. As *The Economist* reported "Alphabet [Google], Facebook and Amazon are not being valued by investors as if they are high risk, but as if their market shares are sustainable and their network effects and accumulation of data will eventually allow them to reap monopoly-style profits."[44]

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[40] UK Digital Competition Expert Panel Report, *supra*, Point 1.102, page 39.
[41] *Id.*, Point 1.55, page 29.
[42] ACCC Final Report, Point 2.36, page 76.
[43] *Id.*, Point 2.41, page 78.
[44] *Business in America: Too much of a good thing; Profits are too high. America needs a giant dose of competition*, THE ECONOMIST (March 26, 2016), http://www.economist.com/node/21695385/print; see also *The Data Economy*, THE ECONOMIST (May 6-12, 2017).

VII. Additional Risks from the Data-opolies

Ordinarily corporate market power generates profits for companies that are above the competitive rate of return, while imposing higher prices on consumers. As Robert Bork argued, there "is no coherent case for monopolization because a search engine, like Google, is free to consumers and they can switch to an alternative search engine with a click."[45]

But the risks of powerful platforms (or data-opolies) are not necessarily higher consumer prices (at least directly). Data-opolies can harm consumers, sellers, and the rest of society in other, more significant, ways.

Above, in section IV, we already noted the possibility for ***exclusion of rivals*** (through foreclosing strategies, self-favoring, functionality degradation, and leveraging of data advantage and market power) that can dampen competition (including privacy competition), user choice, and innovation.

In addition, data-opolies can pose other potential harms, including:[46]

Lower-quality products with less privacy. Companies, antitrust authorities increasingly recognize, can compete on privacy and protecting data. But without effective competition, data-opolies face less pressure. They can depress privacy protection below competitive levels and collect personal data above competitive levels. The collection of too much personal data can be the equivalent of charging an excessive price. Data-opolies can also fail to disclose what data they collect and how they will use the data. The current notice-and-consent regime is meaningless when there are no viable competitive alternatives and the bargaining power is so unequal.

Surveillance and security risks. In a monopolized market, personal data is concentrated in a few firms. Consumers have limited outside options that offer better privacy protection. This raises additional risks, including:

- Government capture. The fewer the number of firms controlling the personal data, the greater the potential risk that a government will "capture" the firm. Companies need things from government; governments often want access to data. When there are only a few firms, this can increase the likelihood of companies secretly

[45] Robert Bork, *Antitrust and Google*, CHI. TRIB. (Apr. 6, 2012).
[46] For elaboration on each of these risks, see Maurice E. Stucke, *Should We Be Concerned About Data-opolies?*, 2 GEORGETOWN LAW TECHNOLOGY REVIEW 275 (2018).

cooperating with the government to provide access to data. China, for example, relies on its data-opolies to better monitor its population.

- Covert surveillance. Even if the government cannot capture a data-opoly, its rich data-trove increases a government's incentive to circumvent the data-opoly's privacy protections to tap into the personal data. Even if the government can't strike a deal to access the data directly, it may be able to do so covertly.
- Implications of a data policy violation/security breach. Data-opolies have greater incentives to prevent a breach than do typical firms. But with more personal data concentrated in fewer companies, hackers, marketers, political consultants, among others, have even greater incentives to find ways to circumvent or breach the dominant firm's security measures. The concentration of data means that if one of them is breached, the harm done could be orders of magnitude greater than with a normal company. While consumers may be outraged, a dominant firm has less reason to worry of consumers' switching to rivals.

Wealth transfer to data-opolies. Even when their products and services are ostensibly "free," data-opolies can extract significant wealth in several ways that they otherwise couldn't in a competitive market.

- First, data-opolies can extract wealth by getting personal data without having to pay for the data's fair market value. The personal data collected may be worth far more than the cost of providing the "free" service. The fact that the service is "free" does not mean we are fairly compensated for our data. Thus, data-opolies have a strong economic incentive to maintain the status quo, in which users, as the *MIT Technology Review* put it, "have little idea how much personal data they have provided, how it is used, and what it is worth."[47] If the public knew, and if they had viable alternatives, they might hold out for compensation.
- Second, something similar can happen but with the content users create. Data-opolies can extract wealth by getting creative content from users for free. In a competitive market, users could conceivably demand compensation not only for their data but also their contributions to Facebook. With no viable alternatives, they cannot.
- Third, data-opolies can extract wealth from sellers upstream. One example is when data-opolies scrape valuable content from photographers, authors, musicians, and

[47] Tom Simonite, *If Facebook Can Profit from Your Data, Why Can't You?*, MIT TECH. REV. (July 30, 2013), https://www.technologyreview.com/s/517356/if-facebook-canprofit-from-your-data-why-cant-you/.

other websites and post it on their own platform. In this case, the wealth of the data-opolies comes at the expense of other businesses in their value chain.

- Fourth, data-opolies can extract our wealth indirectly, when their higher advertising fees are passed along in the prices for the advertised goods and services.[48] If the data-opolies faced more competitors for their advertising services, ads could cost even less — and therefore so might the products being advertised.
- Finally, data-opolies can extract wealth from both sellers upstream and consumers downstream by facilitating or engaging in "behavioral discrimination," a form of price discrimination based on past behavior — like, say, your internet browsing.

Loss of trust. Market economies rely on trust. For online markets to deliver their benefits, people must trust firms and their use of the personal data. But as technology evolves and more personal data is collected, we are increasingly aware that a few powerful firms are using our personal information for their own benefit, not ours. When data-opolies degrade privacy protections below competitive levels, some consumers will choose not "to share their data, to limit their data sharing with companies, or even to lie when providing information," as the UK's Competition and Markets Authority put it.[49] Consumers may forgo the data-opolies' services, which they otherwise would have used if privacy competition were robust. This loss would represent what economists call a deadweight welfare loss. In other words, as distrust increases, society overall becomes worse off.

Social and moral concerns. Historically, antitrust has also been concerned with how monopolies can hinder individual autonomy. Data-opolies can also hurt individual autonomy. To start with, they can direct (and limit) opportunities for startups that subsist on their super-platform. This includes third-party sellers that rely on Amazon's platform to reach consumers, newspapers and journalists that depend on Facebook and Google to reach younger readers, and, as the European Commission's Google Shopping Case explores, companies that depend on traffic from Google's search engine.

But the autonomy concerns go beyond the constellation of app developers, sellers, journalists, musicians, writers, photographers, and artists dependent on the data-opoly to reach users. Every individual's autonomy is at stake. In January 2018, the hedge fund Jana Partners joined the California State Teachers' Retirement pension fund to demand that

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[48] UK Digital Competition Expert Panel Report, *supra*, at 45 (noting how a report commissioned by DCMS found that as "a consequence of their high market share, ownership of key technologies and strong user data assets, Google and Facebook are, to some extent, able to set their own terms to advertisers and publishers").
[49] UK Competition and Markets Authority, *The Commercial Use of Consumer Data: Report on the CMA's Call For Information* 146 (2015).

Apple do more to address the effects of its devices on children. As *The Economist* noted, "You know you are in trouble if a Wall Street firm is lecturing you about morality."[50] The concern is that the data-opolies' products are purposefully addictive, and thereby eroding individuals' ability to make free choices.

There is an interesting counterargument that's worth noting, based on the interplay between monopoly power and competition. On the one hand, in monopolized markets, consumers have fewer competitive options. So, arguably, there is less need to addict them. On the other hand, data-opolies, like Facebook and Google, even without significant rivals, can increase profits by increasing our engagement with their products. So, data-opolies can have an incentive to exploit behavioral biases and imperfect willpower to addict users — whether watching YouTube videos or posting on Instagram.

Political concerns. Economic power often translates into political power. Unlike earlier monopolies, data-opolies, given how they interact with individuals, possess a more powerful tool: namely, the ability to affect the public debate and our perception of right and wrong.

Many people now receive their news from social media platforms. But the news isn't just passively transmitted. Data-opolies can affect how we feel and think. Facebook, for example, in an "emotional contagion" study, manipulated 689,003 users' emotions by altering their news feed.[51] Other risks of this sort include:

- Bias. In filtering the information we receive based on our preferences, data-opolies can reduce the viewpoints we receive, thereby leading to "echo chambers" and "filter bubbles."
- Censorship. Data-opolies, through their platform, can control or block content that users receive, and enforce governmental or private censorship of political or religious information.
- Manipulation. Data-opolies can promote stories that further their particular business or political interests, instead of their relevance or quality.

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[50] Evan Smith, *The Techlash Against Amazon, Facebook, and Google—and What They Can Do*, THE ECONOMIST (Jan. 20, 2018).

[51] Adam D. I. Kramer, Jamie E. Guillory & Jeffrey T. Hancock, *Experimental Evidence of Massive-Scale Emotional Contagion Through Social Networks*, 111 PROC. NAT'L ACAD. SCI. 8788 (2014).

VIII. Change in Enforcement Approach Is Needed

From the above, it becomes evident that the aggregated effect of these powerful platforms challenges several common assumptions, that policy makers are quickly shedding. Just a few years ago, as our earlier writings observed, many antitrust enforcers, among others, espoused the following 10 myths:

- Myth 1: privacy laws serve different goals from competition law
- Myth 2: the tools that competition officials currently use fully address all the big data issues.
- Myth 3: market forces currently solve privacy issues.
- Myth 4: data-driven online industries are not subject to network effects.
- Myth 5: data-driven online markets invariably have low entry barriers.
- Myth 6: data has little, if any, competitive significance, since data is ubiquitous, low cost, and widely available.
- Myth 7: data has little, if any, competitive significance, as dominant firms cannot exclude smaller companies' access to key data or use data to gain a competitive advantage.
- Myth 8: competition officials should not concern themselves with data-driven industries because competition always comes from surprising sources.
- Myth 9: competition officials should not concern themselves with data-driven industries because consumers generally benefit from free goods and services.
- Myth 10: consumers who use these free goods and services do not have any reasonable expectation of privacy, namely, that markets can easily self-correct, and that that the competitive dynamic and disruptive innovation will necessarily benefit society.

We have seen over the past few years the increasing awareness among policy makers around the globe of the complexity and risks of digital platform markets, and the need to recalibrate current antitrust, privacy, and consumer protection tools and fashion new ones to mitigate these risks.

Among the key reports and studies recently released are the *OECD Roundtable on Big Data, OECD Roundtable on Algorithms and Collusion,*[52] *EU Commission Special Advisors Report on Competition Policy for the Digital Era,*[53] *UK Expert Panel Report - Unlocking*

[52] OECD, Algorithms and Collusion, https://www.oecd.org/competition/algorithms-and-collusion.htm.
[53] Available at http://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf.

Digital Competition,[54] *the ACCC Digital Platforms Inquiry, Canada's House of Commons Standing Committee on Access to Information, Privacy and Ethics,*[55] *UN World Economic and Social Survey 2018-Frontier Technologies for Sustainable Development,*[56] and *University of Chicago Committee for the Study of Digital Platforms 2019 Report.*[57]

No doubt, the innovations from digital platforms can offer many benefits and can help countries address other pressing issues. But, the new market dynamics come with risks and distortions that require close scrutiny and measured guardrails. In setting and adjusting their policy measures, countries can ensure a vibrant digital economy in which our welfare is maximized. They can unleash the technological innovations from the digital economy that are so desperately needed to overcome the constraints of poverty, food and water security, climate change, violence and crime, and access to health and education.

As illustrated above, and as is noted in many of the reports mentioned above, in the new market reality, one cannot expect that market forces, if left unchecked, will deliver.

Congress needs to act.

Part of the problem is the ongoing erosion of the scope and relevance of US antitrust law. A series of Supreme Court decisions have emasculated antitrust under a consumer welfare standard that neither concerns citizens nor promotes their welfare. We are at a risk of using a tool ill-equipped and limited in its ability to address the challenges of the digital economy and deliver on its intended promise. On point here are comments made by EU Commissioner Margrethe Vestager who noted at the 2019 OECD/G7 conference: "You can't have competition policy that is ready for the future, unless it can tackle the threats to competition that come from digitalisation."[58]

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[54] UK Digital Competition Expert Panel Report, *supra*.

[55] Canada. 2018. "Democracy under Threat: Risks and Solutions in the Era of Disinformation and Data Monopoly." House of Commons Standing Committee on Access to Information, Privacy and Ethics. December, http://www.ourcommons.ca/DocumentViewer/en/42-1/ETHI/report-17/page-141#37.

[56] https://www.un.org/development/desa/dpad/publication/world-economic-and-social-survey-2018-frontier-technologies-for-sustainable-development/.

[57] George J. Stigler Center for the Study of the Economy and the State, The University of Chicago Booth School of Business, Committee for the Study of Digital Platforms - Market Structure and Antitrust Subcommittee, Report, 01 July 2019. https://research.chicagobooth.edu/-/media/research/stigler/pdfs/market-structure-report.pdf?la=en&hash=E08C7C9AA7367F2D612DE24F814074BA43CAED8C.

[58] OECD/G7 Conference, 3 June 2019. Speech available online: https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/competition-and-digital-economy_en.

Also contributing to the problem is that antitrust's price-centric tools do not necessarily work well in the digital platform economy, where products and services are often "free" or subsidized by the other side of the platform.

Furthermore, some of the base assumptions as to the way markets operate, the likelihood of them self-correcting, and the power and likelihood of disruption, need careful examination. The ten myths outlined above flourished in an environment of antitrust atrophy in the U.S. Since 1999, the US Department of Justice has brought only *one* major monopolization case under Section 2 of the Sherman Act.[59] In contrast the DOJ under the Nixon administration brought between 1970 and 1973, 39 civil and 3 criminal cases against monopolies and oligopolies.[60] The DOJ brought its last predation case in 1999, and in its amicus briefs and advocacy, had sought to weaken, rather than clarify and enforce, a monopolist's duty to deal.

Another factor concerns the effectiveness of enforcement actions. One complaint in both the EU and US is that monopolization cases drag on for years, and once a remedy is imposed, it is often too late and ineffectual. Fines in recent cases have made the headlines due to their magnitude. The FTC's $5 billion fine against Facebook for privacy violations might seem impressive. But that equals, as the *Wall Street Journal* calculated, "about 16%" of the dominant platform's 2018 operating expenses, "the day-to-day cost of running the business" or to state differently, what the company spends on 59 days of ordinary expenses.[61] Plus, Facebook had a large stockpile of cash -- $13.9 billion in cash and equivalents, plus $34.7 billion in marketable securities.

Likewise, Google, in 2018, paid more in fines than it did taxes.[62] But, as the *Wall Street Journal* calculated, France's $56.8 million fine in 2019 equaled about 4.5 hours of the data-opoly's operating expenses. The European Commission's $1.7 billion fine in 2019 for Google's limiting its rival ads amounts to about 5.6 days of its operating expenses. The Commission's $5 billion fine in 2018 for the multiple Android violations equals 16.5 days. And the $2.7 billion fine in the shopping case amounts to 11.6 days. Like Facebook,

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[59] U.S. Dep't of Justice, Antitrust Division Workload Statistics, FY 2007-2016, https://www.justice.gov/atr/file/788426/download; U.S. Dep't of Justice, Antitrust Division Workload Statistics, FY 2000-2009, https://www.justice.gov/sites/default/files/atr/legacy/2012/04/04/281484.pdf.

[60] U.S. Dep't of Justice, Antitrust Division Workload Statistics, FY 1970-1979, https://www.justice.gov/atr/antitrust-divisionworkload-statistics-fy-1970-1979.

[61] Theo Francis, *For Facebook and Alphabet, Big-Ticket Fines Cause Limited Pain*, WALL STREET JOURNAL, July 30, 2019, https://www.wsj.com/articles/for-facebook-and-alphabet-big-ticket-fines-cause-limited-pain-11564498156.

[62] *Google Paid More in EU Fines Than in Taxes in 2018*, STATISTA, Feb. 11, 2019, https://www.msn.com/en-us/money/news/google-paid-more-in-eu-fines-than-in-taxes-in-2018/ar-BBTs3vE.

Google, at the end of June 2019, had a large stockpile of cash -- about $16.6 billion in cash and equivalents, and $104.5 billion in marketable securities.

Once one considers the likelihood of the agency detecting the violation and the court upholding the finding of infringement, the overall deterrent effect of fines is further limited.[63] This is even more so when the company benefits from deep pockets and can regard the fine as another "cost of doing business." Private litigation and damage claims may help increase deterrence in these cases.[64] But the belief is that fines do not sufficiently deter antitrust violations. For if they did, the United States would not be sending price-fixers to jail.[65]

In addition to the above, sound competition policy requires a re-evaluation of the ex-ante approach to mergers and acquisitions and the development of advanced theories of harm. In particular, there is increased realization of the competitive risks resulting from data-opolies' acquisitions of nascent competitive threats or non-competitors, which fall outside the current theories of anticompetitive harm. In the new platform economy, such acquisitions may lead to the "strengthening of the platform's (or ecosystem's) dominance, because the acquisition can: (i) intensify the loyalty of those users … (ii) help retain other users for which the new services might be partial substitutes to the ones already available…"[66]

Finally, the risks of data-opolies extend beyond state and national borders. US policymakers and enforcers need to coordinate with other jurisdictions. While enforcement against monopolies shriveled in the US, the rest of the world has marched on, with enforcers investigating the abuses of data-opolies and digital platforms generally. The European competition authorities have begun to recognize this and have brought actions against four data-opolies: Google, Apple, Facebook, and Amazon (or GAFA for short). (*The Economist* created its own acronym, BAADD, "too big, anti-competitive, addictive

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[63] M. C. Levenstein & V. Y. Suslow, *What Determines Cartel Success?*, 44 JOURNAL OF ECONOMIC LITERATURE 43 (2006); J. E. Harrington Jr, *Optimal Cartel Pricing in the Presence of an Antitrust Authority*, 46 INTERNATIONAL ECONOMIC REVIEW 145-169 (2005).

[64] Reiter v. Sonotone Corp., 442 U.S. 330, 344 (1979); see also Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc., 473 U.S. 614, 635 (1985) ("The treble-damages provision wielded by the private litigant is a chief tool in the antitrust enforcement scheme, posing a crucial deterrent to potential violators."); Agency Holding Corp. v. Malley-Duff & Assocs., Inc., 483 U.S. 143, 151 (1987) (Clayton Act "bring[s] to bear the pressure of 'private attorneys general' on a serious national problem for which public prosecutorial resources are deemed inadequate"); Robert H. Lande & Josh Paul Davis, *Benefits from Private Antitrust Enforcement: An Analysis of Forty Cases*, 42 UNIVERSITY OF SAN FRANCISCO LAW REVIEW 879 (2008).

[65] Maurice E. Stucke, *Morality and Antitrust*, 2006 COLUMBIA BUSINESS LAW REVIEW 443 (2006), https://ssrn.com/abstract=949199.

[66] Page 11, EU Commission Special Advisors Report on Competition Policy for the Digital Era.

and destructive to democracy."[67]) While some of the challenges presented by the data-opolies are novel, and while the law has not caught up to deter some of their excesses, the jurisdictions, in building upon each other's research and enforcement actions, have made significant headway in reassessing the risks and benefits of the digital platform economy.

An increasing consensus has emerged that there is a need for a joint approach: (i) competition law as a reactive tool, addressing violations and abuse of power, (ii) regulation as an instrument used to ensure the openness and competitiveness of markets, design the boundaries of acceptable behavior, and provide ex-ante certainty as to consumer rights and adequate behavior, and (iii) statutory protections of fundamental rights essential to safeguarding privacy, individual autonomy, and well-being.

What can Congress do?

First, ensure the relevance of the competition provisions and their effectiveness in digital markets. Congress can correct some of the Supreme Court's errant dicta and holdings, which undermined the effectiveness of antitrust. Thus, Congress should reorient antitrust to ensure its effectiveness and relevance in modern digital markets, with a standard rooted in antitrust's historical concerns and legal presumptions that are simple enough for lawyers to explain to their clients, for companies to incorporate, and for courts to apply.[68]

Second, promote effective and measured regulatory regimes. Tackling the risks of data-opolies requires not only a careful evolution of antitrust enforcement and policy, but also a fortification of some relevant regulatory regimes. A look across the Atlantic reveals an increase emphasis of regulatory tools to address wider aspects of the digital economy. Examples from the EU include regulations on data protection (GDPR),[69] Platform-to-Business regulation,[70] and proposed ePrivacy regulation.[71] On point are comments made

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[67] Evan Smith, *The Techlash Against Amazon, Facebook, and Google—and What They Can Do*, ECONOMIST (Jan. 20, 2018), https://www.economist.com/briefing/2018/01/20/the-techlash-against-amazon-facebookand-google-and-what-they-can-do.

[68] For legislative proposals see Marshall Steinbaum & Maurice E. Stucke, *The Effective Competition Standard: A New Standard for Antitrust*, Roosevelt Institute Paper (Sept. 2018), https://rooseveltinstitute.org/effective-competition-standard/.

[69] Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services PE/56/2019/REV/1 OJ L 186, 11.7.2019.

[70] Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services PE/56/2019/REV/1 OJ L 186, 11.7.2019.

[71] Regulation of the European Parliament and of the Council concerning the respect for private life and the protection of personal data in electronic communications and repealing Directive 2002/58/EC.

in the UK Digital Competition Expert Panel Report: "Instead of just relying on traditional competition tools, the UK should take a forward-looking approach that creates and enforces a clear set of rules to limit anti-competitive actions by the most significant digital platforms while also reducing structural barriers that currently hinder effective competition."[72] Indeed, "Competition for the market cannot be counted on, by itself, to solve the problems associated with market tipping and winner-takes-most."[73]

Third, promote privacy and data protection. The law has not kept up with the data-driven technologies that impact our privacy. This was not the first time. The same year Congress enacted the Sherman Antitrust Act, Samuel Warren and Louis Brandeis called in their seminal law review article for greater privacy protection: "Recent inventions and business methods call attention to the next step which must be taken for the protection of the person, and for securing to the individual what Judge Cooley calls the right 'to be let alone.'"[74]

Congress must protect the fundamental rights and freedoms, and personal data, of US citizens, and clarify our rights in our data and ability to prevent its appropriation without our meaningful consent. In particular one would hope for greater protection with respect for private life, confidentiality of communications, and the protection of personal data in the digital economy.

Certainly there is not perfect harmony among all the policy makers on the antitrust and privacy implications of the digital platform economy, and divergence certainly exists on how best to deter the risks. But, in the end, the ultimate aim remains the same: an inclusive, sustainable economy that promotes the citizens' autonomy and well-being.

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[72] UK Digital Competition Expert Panel Report, *supra*, at 2.
[73] *Id.* at 4.
[74] Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARVARD LAW REVIEW 193, 195 (1890).

Mr. CICILLINE. And a statement from the European Union Commissioner for Competition, Margrethe Vestager, with her expertise on the digital economy.

Without objection.

[The information follows:]

MR. CICILLINE FOR THE RECORD

COMMITTEE ON THE JUDICIARY

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

UNITED STATES HOUSE OF REPRESENTATIVES

STATEMENT BY MARGRETHE VESTAGER

EUROPEAN COMMISSIONER FOR COMPETITION

SEPTEMBER 6, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, members of the subcommittee, thank you for accepting this written statement for submission with regard to the subcommittee's investigation into competition in the digital economy and the role of digital platforms.

I have been the European Union's Commissioner for Competition since 2014. During this period, we all have become increasingly aware of the various consequences of the accelerated digital revolution happening around us. Digital services increasingly connect people and businesses and can open the path for new products, new business models and new opportunities for consumers. We recognise these benefits, but cannot turn a blind eye to the fact that they also raise new risks and new forms of market power. Competition enforcers and other regulators, not just in Europe but around the world and including the United States, are investing significant resources to come to grips with the unique features of this digital economy and its main players, and the threats to effective competition and to innovation thereby created. As European Commissioner for Competition, I have launched a reflection process involving an open public consultation, a one-day conference in Brussels in January 2019, and the commissioning of a report written by three appointed Special Advisers from academia and published on 4 April 2019, titled "Competition policy for the digital era."

The Special Advisers' report is only one example of a widespread climate of reflection on competition in the digital economy around the world, as evidenced by many reports and hearings. The FTC has held hearings in recent months, but we have also taken note of, among others, the Common Understanding of G7 Competition Authorities on Competition and the Digital Economy, the Furman Report in the United Kingdom, the report on digital platforms by the Australian Competition and Consumer Commission, a report on data by the Japanese Federal Trade Commission and a number of initiatives among individual Member States of the EU. It is encouraging that so many competition authorities are reflecting on how to meet the challenges arising from digitization and there seems to be a trend towards convergence, at least when it comes to identifying the biggest challenges (such as the market power and the 'gate-keeper' function of certain platforms, the role of data and the need to carefully scrutinise acquisitions of innovative start-ups by digital incumbents).

Ever since the 2004 decision finding that Microsoft abused its dominant position in the market for PC operating systems by denying rivals the ability to interoperate with Windows and by tying Windows Media Player with its operating system, the European Commission has been at the forefront of enforcement in digital and tech markets. We have sought to protect incentives for firms to innovate to the benefit of consumers by developing and marketing new or improved products or services that increase the quality and choice available to them, as well as to prevent dominant companies from foreclosing actual or potential competitors by anti-competitive means. We have applied our rules to all companies doing business in the EU in a non-discriminatory fashion and irrespective of their national origin.

Some observers have called on us and on others to refrain from intervening in digital markets, arguing that "competition is always just a click away." However, our careful analysis of the new developments and assessment of the evidence in particular cases pointed clearly to situations in which a stifling of the competition process, and thereby consumer harm, had appeared and needed to be addressed. We have pursued these cases on the basis of a rigorous, evidence-based approach and strived to take account of all relevant specificities of digital markets, including their fast-moving nature; network effects, that is the fact that, in particular in digital markets, the value of a product or a service increases according to the number of people using it; the "winner-takes-all" tendency to tip in favour of dominant players; the implications of 'zero-price' services (such as when the use of a search engine or social network is offered to consumers free of charge while the provider makes a profit by selling ad space on the service); and the importance of data.

Some of our cases involved the analysis of issues that come squarely within the announced scope of the subcommittee's investigation. These cases, and others, have established precedents that we hope can provide clarity and guidance into further enforcement in this sector, where appropriate and applicable.

Antitrust enforcement

In 2017 and 2018, we adopted two major prohibition decisions addressed to Google in relation to conduct that we characterised as abuses of Google's dominant position in search in contravention of Article 102 of the EU Treaty (the equivalent of Section 2 of the Sherman Act). In *Google Shopping*, we found that Google had abused its dominant position as a search engine by treating its own comparison shopping service more favourably in its general search results than rival comparison shopping services in terms of placement and presentation. By doing so, Google leveraged its dominant position in general search to stifle competition on the merits in comparison shopping markets. The decision ordered Google to comply with the simple principle of giving equal treatment to rival services as it gives its own services in the positioning and display of search results for comparison shopping.

Then last year in *Android*, we found that Google had abused its dominant position by the use of certain contractual obligations and financial incentives aimed at protecting and strengthening Google's dominance in general internet search. The aim of this decision was to create the conditions for competing search and browser providers to compete head to head with Google for pre-installation on Android devices, and for the development and marketing of competing operating systems based on the Android open source code. Google has proposed to put in place a choice screen that will let consumers choose which search and browser provider they want on their Android phone. In the past, choice screens have been an effective way for a dominant company to restore competition. In this case, it would have the potential to give users a real choice of how they search on Android devices and to allow Google's rivals the chance to be chosen upfront by users.

In both of these cases, we are now accordingly looking carefully at remedies proposed by Google to resolve the competition concerns. Implementation and monitoring of effective remedies is essential to correct the harm caused by the infringements.

In the most recent *Google AdSense* decision (2019), which deals with the provision of search ads on third-party websites, the Commission looked at hundreds of contracts and the impact that their terms had on the market. Through an exclusivity provision, the most commercially important customers were contractually prevented from sourcing any search ads from Google's rivals on their websites. Over time, Google replaced this with another clause that did not completely stop customers from

sourcing ads from Google's rivals, but required them to take a minimum number of search ads from Google and put them on the most visible - and therefore most profitable - part of the page. Finally, customers also had to get written approval from Google before changing the way they displayed the search ads of Google's rivals - right down to the size, colour and even font of those ads.

The evidence showed that customers did have an interest in sourcing from rivals, but that Google's practices either prevented or strongly deterred them from doing so. We saw that search advertising is a market with strong network effects. This means that to compete effectively, one needs to build scale. The conduct thus prevented Google's rivals from competing on the merits in what was a strategic entry point.

A common element among many of these digital cases is the existence of smaller, specialized companies or start-ups in an adjacent market that the dominant company is trying to monopolize. Our enforcement actions have not been aimed at protecting specific competitors, but at the process of competition that can enable such companies to innovate and grow in ways that benefit consumers through new or improved services or increased consumer choice. For example, in 2017 we accepted commitments from Amazon not to introduce or enforce what are sometimes called "most-favoured-nation" clauses in the e-books market. These clauses required publishers to offer Amazon similar (or better) terms and conditions as those offered to its competitors and/or inform Amazon about more favourable or alternative terms given to Amazon's competitors. The clauses covered not only price but also other aspects that a competitor could use to differentiate itself from Amazon, such as an alternative business (distribution) model, an innovative e-book or a promotion. The Commission's investigation concluded that such clauses could make it more difficult for other e-book platforms to compete with Amazon on price as well as these other parameters. Amazon proposed a set of commitments to remove these concerns, and the Commission made these commitments binding by decision just under two years from the opening of the formal investigation.

It is also well known that the Commission is now conducting an investigation into Amazon in relation to its Marketplace. Amazon is an example of a dual-role platform, which, on the same website, offers both marketplace services to third party sellers and sells products as an online retailer, in direct competition with those third party sellers. The Commission is examining whether Amazon might thereby gain access to competitively sensitive information about competitors' products that it could use to boost its own activities at the expense of third party sellers. This investigation is still ongoing and it is too early to conclude that it will end with a finding of an infringement, but it shows that issues surrounding access to and the use of data are likely to occupy us in the years to come.

The Commission also conducted a sector inquiry into e-commerce, in which we found that manufacturers widely use price monitoring software programs to monitor prices of their online retailers, and that these can be used to more easily limit the ability of online retailers to set their own resale prices, thereby restricting competition between them. Moreover, online retailers also often use pricing algorithms to automatically adjust the retail price to those of its competitors. Price restrictions imposed by the manufacturer on only a few (low pricing) online retailers could therefore have a broader impact on the overall online prices for the respective products. These and other suspicions were investigated and sanctioned in a series of prohibition decisions adopted during the last year against several EU and Asian companies, including Asus, Philips and Pioneer.

Merger control

Similar to the Hart-Scott-Rodino Act, the EU Merger Regulation empowers the Commission to examine mergers and acquisitions among firms meeting certain turnover-based jurisdictional

thresholds. The Commission can prohibit an acquisition if it finds that it will result in a "significant impediment of effective competition", or approve it with conditions if the firms are able to propose remedies that remove the identified competition concerns. In a nutshell, the goal of merger control in the EU, as well as in the US and elsewhere in the world, is to ensure that markets remain open and competitive. Digital and data issues have and will continue to occupy competition enforcers in the field of merger control, just as they have in the sphere of antitrust.

Since 2007, when we opened an in-depth investigation into Google's acquisition of DoubleClick, the Commission has notably dealt with a number of cases in which an important part of our analysis was whether the merged entity would be able to accumulate large amounts of data inaccessible to competitors, and thereby gain an insurmountable competitive advantage in a market where that data is an input. In this line of cases including, among others, *Google/DoubleClick*, *Microsoft / Yahoo! Search Business*, *Facebook/WhatsApp*, *Microsoft/LinkedIn*, *Verizon/Yahoo!*, *Bite/Tele2/Telia Lietuva/IV* and *Apple/Shazam*, we investigated these concerns in detail, taking into account the specific features of the markets at stake.

Through our investigations, we have learned that data is not a uniform and homogenous product and that our assessment of data-related issues has to take into account its multifaceted characteristics. For this purpose, the Commission has begun to develop methods to compare datasets using four relevant metrics: the variety of data composing the dataset; the speed at which the data are collected; the size of the data set; and the economic relevance of the data.

The Commission has applied this methodology, for example, in *Apple/Shazam*, where it analysed the potential impact on the market music streaming services in Europe resulting from the music data concentration brought about by the transaction. The Commission ultimately did not find competition concerns in this regard, insofar as Shazam's data was not deemed unique and Apple's competitors would still have the opportunity to access and use similar database after the transaction.

In *Apple/Shazam*, the Commission also analysed whether, through the acquisition of Shazam, Apple could gain access to competitively sensitive information about competitors' customers and use that data to target customers of competing music streaming services in order to make them switch to Apple Music. The concern was dismissed due to the negligible impact that such conduct would have had in the market, which was growing very rapidly.

Further, the Commission has also integrated, where appropriate, data protection as a quality parameter for the assessment of merger cases. In *Microsoft*/LinkedIn, the Commission investigated the extent to which consumers see data protection as a significant relevant factor, whether data protection constitutes a driver of competition between the merging parties and other companies and whether the merger could lead to a deterioration of data protection practices by the merging companies.

The Commission found that data protection was an important (non-price) parameter of competition between professional social networks in Europe, which could have been negatively affected by the transaction. In particular, the Commission found that, by pre-installing LinkedIn on its operating systems for PCs or integrating LinkedIn's functionality in its productivity software, post-transaction Microsoft could have marginalized existing professional social networks, which offer a greater degree of data protection to users than LinkedIn (or could have made the entry of any such competitor more difficult). As result, the transaction would have also restricted consumer choice in that regard. The transaction was cleared subject to commitments aimed at addressing such marginalization risks and preserve consumer choice, in particular in relation to different levels of data protection. These

commitments, in sum, ensured that those customers who value more privacy would not be harmed by the merger.

In parallel to its enforcement practice, the Commission launched a reflection process about whether its rules and processes allow it to sufficiently capture all potentially harmful effects coming from mergers in the digital sector. This notably concerns cases of acquisitions of small, innovative companies, often with limited turnover as yet, notably by large digital players, which may escape the turnover-based jurisdictional thresholds of the EU Merger Regulation. We are closely monitoring this issue.

Conclusions

I have already mentioned above the report written by the Special Advisers in the context of the broader reflection process, setting forth their views on where we should go from here. In concluding, I would like to share with you one of their clearest and, in my view, most important conclusions: that competition policy will continue to play a crucial role in promoting pro-consumer innovation in the digital age. At the same time, however, we must recognize the complementarity that exists between competition law and other legal regimes, such as consumer protection and privacy; and also between case-specific enforcement and possible ex-ante regulatory initiatives, which may be, appropriate to address clearly identified and systemic problems we might find.

The European Commission has also carried out specific research on how practices used by online platforms influence consumers[1], coordinated enforcement action of consumer protection authorities regarding social media (Facebook, Twitter, Google+) and platforms (Airbnb) and has taken important relevant regulatory initiatives such as the General Data Protection Regulation (GDPR[2]), a Regulation on platform-to-business trading practices (the P2B Regulation[3]) and new transparency requirements for online platforms vis-à-vis consumers (New Deal for Consumers). I will not further elaborate on these in this statement, except to say that these instruments already set high standards of protection for the respective consumer and business-sides of online platforms' multi-sided markets, while providing those 10 500 online platforms operating in the EU with a harmonised legal framework that is conducive to innovation.

The Special Advisers' report, like many of the other reports recently published in this field, highlight the unique features of the digital economy and propose some possible adaptations our existing regulatory and enforcement frameworks may need to make in order to meet these challenges. As just one example, the special advisers have pointed out that a platform can seriously affect competition, just by acting as the referee – by laying down the rules that govern the market. The way a search algorithm is designed can affect which businesses are noticed, and which are not. An online marketplace can decide which sellers to allow on the platform, and the terms of their contracts with buyers. When the platform chooses to act as both a player and a referee, it can grant itself an unfair advantage. And so their report suggests that those platforms could have a responsibility under competition law to make sure the rules that they set are transparent and do not harm competition.

Regardless of whatever mix of policies and measures we eventually choose to protect competition in digital markets, it is now clear that we must move forward on the basis that, due to the characteristics

[1] Behavioural study on advertising and marketing practices in social media, European Commission, 2018 and Behavioural study on the transparency in online platforms, European Commission, 2018

[2] Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, OJ L 119/1 (2016).

[3] Regulation (EU) 2019/1150 on promoting fairness and transparency for business users of online intermediation services, OJ L 186/57 (2019).

of these markets, including notably their network effects that favour incumbents, the risk of under-enforcement is just as harmful to innovation and competition as is that of over-enforcement. Authorities must act based on solid evidence and sound legal and economic principles, but they must be able to take action before anti-competitive practices achieve their goal and harm becomes irreparable.

Thank you for the opportunity to share these thoughts with the subcommittee. Digital markets are international, so we will be all the more effective in our efforts where we can find common ground and common approaches across jurisdictions. Indeed, the Commission and the US competition enforcement agencies already have a long history of fruitful, open exchange and cooperation on the most important matters affecting both our jurisdictions. My current mandate as Commissioner for Competition is drawing to a close, but the Commission will continue to stand ready to exchange views and experience with this subcommittee, as well as with any other body interested in engaging with the issues I have discussed in this statement, as needed and as appropriate.

Mr. CICILLINE. And, with that, I will conclude the hearing with gratitude for our extraordinary witnesses, and thank you for being here today and for contributing significantly to our ongoing investigation.

And, with that, the committee is adjourned.

[Whereupon, at 12:05 p.m., the subcommittee was adjourned.]

APPENDIX

COMMITTEE ON THE JUDICIARY

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

UNITED STATES HOUSE OF REPRESENTATIVES

STATEMENT BY SHOSHANA ZUBOFF

Charles Edward Wilson Professor Emerita, Harvard Business School

Author, *The Age of Surveillance Capitalism:*
The Fight for a Human Future at the New Frontier of Power

OCTOBER 18, 2019

Shoshana Zuboff
Testimony Submitted to the House Subcommittee on Antitrust, Commercial and Administrative Law
October 18, 2019

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Chairman Cicilline, Ranking Member Sensenbrenner, members of the subcommittee, thank you for accepting this written statement for submission with regard to the subcommittee's investigation into competition in the digital economy and the role of digital platforms. My scholarly work on the rise of digital technologies and their complex relationships to the economy, work, organization, capitalism, individuals, and society began in 1978 and has remained the dominant intellectual pursuit of a long career. More recently, my research focus on surveillance capitalism was first undertaken in 2006, and my summative book on this subject was published in January 2019. I note that the statements and conclusions conveyed in this written testimony are amply supported by the information and analysis available in my book.

I. INTRODUCTION

The internet is now owned and operated by private surveillance capital. Once embraced as a source of empowerment and anticipated as a mighty force for the democratization of knowledge, the internet instead took a dark turn, hijacked by a novel economic logic: surveillance capitalism. This silent coup set a new course for the digital future, one that is marked by extreme asymmetries of knowledge and the power that accrues to such knowledge. This new inequality is exemplified in the growing chasm between what we know and what can be known about us. Surveillance capitalism undermines the economic ideals of robust, competitive, and innovative markets aligned with the changing needs of their societies. It also undermines democracy by ignoring the elemental rights of citizens, threatening individual autonomy, introducing extreme new forms of social inequality, and valuing the exponential growth of its data supply chains over the societal and political degradation associated with the weaponization of fraudulent information content. Taken together, these consequences threaten the very possibility of a thriving market democracy.

Surveillance capitalism rooted and flourished during the last two decades by aggressively moving into blank spaces where it could grow unimpeded by law, regulation, or any form of democratic governance. Its leaders celebrated the internet as "the last ungoverned space," and its rapid growth was enabled by the unprecedented character of its practices and their inherent indecipherability, combined with both technical systems

and public rhetoric designed to camouflage, misdirect, confuse, bamboozle, and generally produce ignorance among populations and their lawmakers.

Citizens and lawmakers around the world are now awakening to these developments, alarmed by surveillance capitalism's unprecedented power and its implications for economy, society, democracy, and ultimately for capitalism itself. In the throes of this awakening, the past offers good counsel to lawmakers. In his Pulitzer prize-winning history, *Prophets of Regulation*, Thomas McGraw recounts the phases and distinct purposes of regulatory regimes in the US: the 1870s and the initial period of industrialization; the early twentieth century, especially 1900-1916; the 1930s and the New Deal; and the onset of deindustrialization during the 1970s and 1980s. The challenges of each era brought distinct forms of law and regulatory leadership. At the dawn of the twentieth century it was the muckrakers and progressives who defined the regulatory paradigm. Later, the lawyers dominated. Only the past few decades saw the economists as the framers of the regulatory vision.

McGraw warns that this "economists' hour" will certainly end, and he wonders what will come next. In considering the arc of this history McGraw finds clues, observing that concerns for justice and fairness have generally overshadowed the more narrow aims of economic growth. "Regulation," he writes, "is best understood as a political settlement." With these observations McGraw delivers a warning that is significant for us now. **He emphasizes that across the centuries regulators failed when they were unable "to frame strategies appropriate to the particular industries they were regulating."**

The lesson is that today's new legislative and regulatory challenges will not be met effectively without a clear grasp of surveillance capitalism as a novel economic logic defined by distinct economic imperatives and the specific practices and consequences that they compel. Twenty-first century solutions to our twenty-first century challenges may build on existing paradigms of privacy and antitrust, but will also have to move beyond and even transform those paradigms, as we learn how to interrupt and outlaw surveillance capitalism's key mechanisms, methods, and markets. As the European Commissioner for Competition recently put it, "One of the things I have learned from

surveillance capitalism... is [that] it's not you searching Google, it is Google searching you. And that gives a very good idea about not only what you want to buy but also what you think. So we have indeed a lot to do."

II. WHAT SURVEILLANCE CAPITALISM IS NOT

Before defining surveillance capitalism, let me first say what it is not:

First, leading surveillance capitalists have sought to persuade us that its practices are an inevitable consequence of digital technologies. This is false. While it is impossible to imagine surveillance capitalism without the digital, it is easy to imagine the digital without surveillance capitalism. The point cannot be emphasized enough: surveillance capitalism is not technology. Digital technologies can take many forms and have many effects, depending upon the social and economic logics that bring them to life. Surveillance capitalism relies on a ubiquitous internet-enabled networked digital architecture, machine intelligence, and platforms, but it is not the same as any of those.

Second, surveillance capitalism is not a single corporation or even a group of corporations. It was invented at Google in 2000-2001 as a solution to financial emergency during the dot-com bust and first elaborated there. It was later ported to Facebook with Google executive Sheryl Sandberg. These surveillance capitalist operations were honed in the context of online-targeted ads and rationalized as a quid pro quo for free services, but surveillance capitalism is no more limited to that context than mass production was limited to the fabrication of the Model T, where it was first comprehensively established. Surveillance capitalism quickly became the default model for Silicon Valley and most of the tech sector. By now it has spread across a wide range of products, services, and economic sectors.

Third, surveillance capitalism is not a person or a group of people. The founders of the pioneer surveillance capitalist corporations — Mark Zuckerberg at Facebook, Larry Page and Sergey Brin at Google — exploited specific historical circumstances in combination with a range of offensive strategies and tactics in order to protect themselves from external constraint either in the form of law and regulation or sound corporate governance. These circumstances produced some stark facts, as I write in my book: "Two men at Google who enjoy neither the legitimacy of the vote, democratic oversight,

nor the demands of shareholder governance exercise control over the organization and presentation of the world's information. One man at Facebook who enjoys neither the legitimacy of the vote, democratic oversight, nor the demands of shareholder governance exercises control over an increasingly universal means of social connection along with the information concealed in its networks." The unimpeded freedom of these individuals has been bad for people and for democracy. There are good reasons to curb their power. As important as this may be, however, it will not alter the fundamental issues that this subcommittee seeks to address. The entrenched economic logic of surveillance capitalism will not vanish, even with a new cast of characters.

III. WHAT IS SURVEILLANCE CAPITALISM?

Now that we know what it is not, we may ask, *what is surveillance capitalism?* It was invented and elaborated at Google between 2000 and 2001 as a response to the financial emergency of the dot-com bust. In 2001, as Google's leaders began to understand the economic power of their new invention, Larry Page ruminated, "If we did have a category, it would be personal information." He noted that as a result of cheap cameras, sensors, and storage, "people will generate enormous amounts of data... everything you've ever heard or seen or experienced will become searchable. Your whole life will be searchable."

Page's vision perfectly reflects the history of capitalism. It has long been understood that capitalism evolves by claiming things that exist outside of the market dynamic and turning them into market commodities for sale and purchase. Industrial capitalism famously claimed nature for the market, to be reborn as "land" or "real estate" for sale and purchase.

Surveillance capitalism repeats this process but with a startling twist: it declares *private human experience* as free raw material for translation into production and sales. Once private human experience is claimed for the market, it is rendered as behavioral data for computation and analysis. While some of these data may be applied to product or service improvements, the rest are declared as a proprietary *behavioral surplus*. This surplus is defined by its rich predictive value.

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Behavioral surplus extraction began with online browsing, search, and social media behavior but now encompasses every movement, conversation, facial expression, sound, text, and image that is, or can be, or will be, accessible to the always-on ubiquitous internet-enabled digital extraction architecture that I call *Big Other*. In this digital surround, every device, interface, and touch point is redefined as a node in a vast supply network dedicated to relentlessly tracking, hunting, inducing, and taking more behavioral surplus. From the beginning these operations were intentionally designed to bypass "user" awareness. Google's data scientists celebrated their ability to take without users' knowledge, and to learn more about people than they intended to disclose. This relationship of surveillance was baked into the cake from the start and is essential to its approach to value creation.

These supply chains ultimately feed the new-age computational factories known as "machine intelligence" where behavioral surplus is fabricated into *prediction products:* calculations that anticipate what we will do now, soon, and later. The first globally successful prediction products were clickthrough rates – predictions of how users would react to specific ads.

In a final stage of the new economic logic, prediction products are rapidly swept up into the life of the market, traded in newly constituted marketplaces for behavioral predictions in which surveillance capitalists compete to sell certainty to their business customers. These markets are best understood as trading in "human futures," just as other markets trade in commodity futures such as pork bellies or wheat. Surveillance capitalists have grown immensely wealthy from these trading operations based on the promise of certainty in the form of guaranteed outcomes. Many companies are eager to lay bets on such guarantees of our future behavior. Online-targeted advertising was simply the first of these markets in human futures, where "clickthrough rates" were sold as predictions of human behavior.

Recently the world caught a rare glimpse into these operations. A leaked Facebook document in 2018 cites Facebook's unparalleled "machine learning expertise" aimed at meeting its customers' "core business challenges." Inside the factory, we find Facebook's "prediction engine" built on a machine intelligence platform called "FB

Learner Flow," which the company describes as its "AI backbone" and the key to "personalized experiences" that deliver "the most relevant content." The machine learning system "ingests trillions of data points every day, trains thousands of models... and then deploys them to the server fleet for live predictions." The company explains that "since its inception, more than a million models have been trained, and our prediction service has grown to make more than 6 million predictions per second."[1]

What is the purpose of this world-historic assembly of brain power, data, machines and infrastructure? No, it is no trained on solutions to climate crisis or revolutionary cures for cancers. It is not inventing ways to rid the oceans and artic snows of plastic particles. Instead, the Facebook document describes the company's ability to use its unrivaled data stores "to predict future behavior," targeting individuals on the basis of how they will behave, purchase, and think with methods that link behavioral prediction, intervention, and modification. It highlights a Facebook service called "loyalty prediction," which analyzes behavioral surplus in order to predict individuals who are "at risk" of shifting their brand allegiance. The idea is that these predictions alert advertisers to intervene promptly, targeting aggressive messages to stabilize loyalty and thus achieve guaranteed outcomes by altering the course of the future.

This illustration clarifies a critical point, one that confuses both the public and its lawmakers. Surveillance capitalists harbor two distinct data sets that I call "the two texts." The first is the public-facing text that contains information that users provide. The second is what I call "the shadow text." These data are the result of the unilateral hunting and gathering of behavioral surplus without "users'" knowledge. This shadow text in combination with the proprietary material, human, and scientific infrastructures to compute its meanings constitutes the heart and soul of surveillance capitalists' economic and social power. Discussions of data transparency, ownership, access, and portability will always fall short, because they refer only to the public-facing first text, not the larger proprietary shadow text.

[1] Sam Biddle, "Facebook Uses Artificial Intelligence to Predict Your Future Actions or Advertisers, Says Confidential Document," *Intercept* (blog), April 13, 2018, https://theintercept.com/2018/04/13/facebook-advertising-data-artificial-intelligence-ai/.

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Today, every product or service that begins with the word "smart" or "personalized," every internet-enabled device, every "digital assistant," is a supply-chain interface for the unobstructed flow of behavioral data on its way to the shadow text and the computations that predict human futures for others' financial gain.

IV. THE COMPETITIVE DISTORTION

What Would Henry Do?

The invention and deployment of surveillance capitalism at Google began in 2000-2001, as its investors threatened to withdraw their capital. By 2004 when Google went public, documents revealed that the young firm's revenues had increased by 3,590% during that period. These results represent what I call "the surveillance dividend," which distorted the incentives for investors and redefined the financial bar for companies. Since that time, the pursuit of the surveillance dividend drove the new economics of surveillance capitalism across the tech sector and eventually into every economic sector including insurance, retail, finance, education, health care, real estate, and more, birthing whole new ecosystems of behavioral surplus suppliers, producers, market-makers, and market players. Thanks to the distortions of the surveillance dividend, capitalism is literally shifting under our gaze: Profits once derived from products, then services, then financial speculation, and now surveillance, as companies turn to behavioral surplus in search of the surveillance dividend.

Perhaps the most poignant illustration of these new facts is found in the birthplace of mass production, the Ford Motor Company. One hundred years ago pioneer capitalists like Ford bent to the revolutionary task of making things at a price that people could afford and shaping a new century of mass consumption. Henry Ford was proud to author the definition of 'mass production' for the *Encyclopedia Britannica,* the Google of his day, describing it as "a productive organization that delivers in quantities a useful commodity of standard material, workmanship, and design, at *minimum* cost." Ford understood that the mass production revolution was the result, not the cause of a new era of demand in US society—farmers and shopkeepers who wanted automobiles too, but at a price they could afford. "The necessary, precedent condition of mass production is a capacity, latent or developed, of *mass consumption,*" he wrote. "The two go together and in the latter may be

traced the reasons for the former."[2] In Ford's cosmos, demand and supply were twinborn, with customers and workers were forever linked in a cycle of production and sales that combined low cost goods with consumption-worthy wages immortalized by the five-dollar day.

Had Ford been listening to the Freakonomics Radio podcast in November 2018, he would have learned that the powerful breakthroughs associated with the close alignment of supply and demand had been relegated to the dustbin of history by his own distant successor. In response to the sustained slump in global auto sales, the company is already cutting thousands of jobs and eliminating models in pursuit of a price-earnings ratio befitting a high tech data company. Henry Ford might have surveyed the situation and determined to double down on supply and demand by putting the company's capital and genius behind the creation of a low-cost zero-carbon vehicle. Instead, Hackett wants Ford to become more like Facebook and Google. In his vision, the work of making and selling cars gives way to proprietary monetizable data flows — a "transportation operating system." [3] Hackett wants Henry's company to collect data from the "100 million people... that are sitting in Ford blue-oval vehicles...We have as much data in the future coming from vehicles, or from users in those vehicles, or from cities talking to those vehicles, as the other competitors that you and I would be talking about [like Facebook and Google] that have monetizable attraction."

Once customers are reinvented as raw material for datafication, it's easy for Hackett to imagine the next step in which the data that stream from vehicles in real-time are combined with Ford's financing data, where, he says, "we already know ... what people make...we know where they work; we know if they're married. We know how long they've lived in their house." Hackett concludes, "And that's the leverage we've got here with the data... I think our higher purpose is that the smart vehicle and the smart world

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[2] Henry Ford, 'Mass Production', in *Encyclopedia Brittannica* (New York, NY:Encyclopedia Britannica, Inc., 1926), http://memory.loc.gov/cgi-bin/query/h?ammem/coolbib:@field(NUMBER+@band(amrlg+lg48)).
[3] William Boston, 'Ford to Slash Jobs, Shut Plants in Major European Revamp', *Wall Street Journal*, 10 January 2019, sec. Business, https://www.wsj.com/articles/ford-announces-major-european-restructuring-11547117814. Greg Rosalsky, 'Can an Industrial Giant Become a Tech Darling? (Ep. 357)', *Freakonomics* (blog), accessed 20 January 2019, http://freakonomics.com/podcast/ford/.

have an interaction in the future that's much bigger than it was in the past."[4] As one industry analyst observed, Ford "could make a fortune monetizing data. They won't need engineers, factories, or dealers to do it. It's almost pure profit."[5]

This is where we live now — a world in which nearly every product or service that begins with the word "smart" or "personalized," every internet-enabled device or vehicle, every "digital assistant"... each is simply a supply-chain interface for the unobstructed flow of behavioral data that is analyzed, sold, and purchased as companies desperately seek a new road to profit margins by predicting and betting on our futures. What began as a solution to financial emergency in 2000 is now a burgeoning surveillance-based economic order: *a surveillance economy.*

Surveillance Capitalism is a Market Failure

Surveillance capitalism derives its revenues and profits from business customers who trade in human futures markets. People are the raw materials for these products, but not their beneficiaries. In other words, the organic reciprocities that once bound companies to their populations as sources of customers and employees are diminished. These reciprocities are the societal underpinning of the close alignment between supply and demand and across the centuries they helped to tether capitalism, however imperfectly, to society's interests. Both are closely linked to the rise of stable democratic societies.

First, surveillance capitalists no longer rely on people as consumers. Instead, supply and demand orients the surveillance capitalist firm to businesses intent on anticipating the behavior of populations, groups, and individuals. Second, by historical standards the large surveillance capitalists employ relatively few people compared to their unprecedented computational resources. A small highly educated workforce leverages the power of a massive capital-intensive infrastructure. It is interesting to note that GM employed more people during the height of the Great Depression than either Google or Facebook employs at their heights of market capitalization. The absence of these reciprocities has significant implications because each contributed significantly to the

[4] Greg Rosalsky, 'Can an Industrial Giant Become a Tech Darling? (Ep. 357)', *Freakonomics* (blog), accessed 20 January 2019, http://freakonomics.com/podcast/ford/.
[5] 'Data Could Be What Ford Sells next as It Looks for New Revenue', Detroit Free Press, accessed 19 November 2018, https://www.freep.com/story/money/cars/2018/11/13/ford-motor-credit-data-new-revenue/1967077002/.

spread of democracy. Consumer reciprocities were critical to the popular mobilization that became the American Revolution. Employee reciprocities helped drive the expansion of the democratic franchise in late nineteenth century Britain.

The disjuncture between supply and demand is evident in a range of research conducted over the last fifteen years, and I shall point to only a few of these here. In 46 of the most prominent 48 opinion surveys on the subject of privacy administered in the US and Europe between 2008 and 2016, substantial majorities support measures for enhanced privacy and user control over personal data. (Only two early surveys were somewhat less conclusive, because so many participants said they did not understand how or what personal information was being gathered.)

By 2008 it was well established that the more information people have about "internet privacy practices," the more they are "very concerned" about privacy.[6] An important 2009 survey found that when people were informed of the ways that companies gather data for targeted online ads, more than 73 per cent rejected such advertising. A substantial 2015 survey found 91 percent of respondents disagreed that the collection of personal information "without my knowing" was a fair trade-off for a price discount. Fifty-five percent disagreed that it was even a fair exchange for improved services.

The surveillance capitalist firms typically dismiss these results, pointing instead to users' actual behavior and the spectacular revenues it produces as justification for the status quo. Recall former Google CEO Eric Schmidt's infamous 2009 brushoff, "If you have something that you don't want anyone to know, maybe you shouldn't be doing it in the first place."[7] Academics call the gap between attitudes and behavior "the privacy paradox," but there is no paradox here, only the predictable consequence of the pitched

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[6] Chris Jay Hoofnagle and Jennifer King, "Research Report: What Californians Understand About Privacy Offline" (SSRN Scholarly Paper, Rochester, NY: Social Science Research Network, May 15, 2008), http://papers.ssrn.com/abstract=1133075.

[7] Richard Esguerra, 'Google CEO Eric Schmidt Dismisses the Importance of Privacy', Electronic Frontier Foundation, 10 December 2009, https://www.eff.org/deeplinks/2009/12/google-ceo-eric-schmidt-dismisses-privacy.

battle between supply and demand expressed in the difference between what surveillance capitalism imposes upon people and what they really want.[8]

In other words, *surveillance capitalism is a market failure that would not survive a truly competitive commercial environment.* The privacy research studies suggest that few people who get a glimpse at the hidden operations of surveillance capitalism actually want to be their target. Most people want an alternative path to the digital future, one that will fulfill their needs without compromising privacy and usurping decision rights. This is one of those disjunctures in economic history, when nearly everyone wants something that they cannot have, just as those early 20th century farmers and shopkeepers wanted automobiles too, but at a price they could afford. Back then Henry Ford stood alone in fashioning an answer to their call symbolized by the Model T, which paved the way for a new era of mass consumption. Eventually it would be Alfred Sloan at General Motors who took up the mantle, scrupulously inventing the logic and methods of the modern mass production corporation. Both Ford and Sloan conceptualized and publicized their inventions, and encouraged others to do the same, enabling mass production and mass consumption to become a global revolution.

By now the frustration produced by this market failure is palpable. *The Age of Surveillance Capitalism* is a big book, but it has become an improbable international bestseller with translations in seventeen languages so far. The reason appears to be a widely shared sense of a future careening off the rails. An economic logic is not something that you see, but it is something that you feel. People in the US, Europe, and around the world are now feeling the effects of surveillance capitalism in their daily lives, and they don't like how it feels.

Over the last ten months of continuous travel in Europe and North America, I have asked every audience the same question: "What concerns bring you here today?" In every case the same short list of words rises from the room: *"anxiety, manipulation, freedom, malaise, autonomy, democracy, control, fear, resistance, rebellion, agency, power, law, rights... "* This suggests to me that the anonymous term "users" no longer

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[8] "The Privacy Paradox, "Investigating Discrepancies between Expressed Privacy Concerns and Actual Online Behavior: A Systematic Literature Review," https://doi.org/10.1016/j.tele.2017.04.013.

holds meaning. Instead a democratic citizenry is awakening to its shared social, political, psychological, and economic interests. This blooming public awareness will find expression in new forms of collective action. It will insist on political leadership in the form of new law and regulatory regimes.

According to legal historian Lawrence Friedman this kind of phase change in the public demand for democratic remedies has many causes – cultural change, increased intensity of communications, a cyclical readiness to expand the scope of government. Above all it reflects the changing nature of the economy and the sharp disjuncture between supply and demand. The appetite for new law and regulation in the 1930s came from decades of anger, frustration, outrage, and helplessness at the growing scale and complexity of the industrial behemoths. Only law was up to the task of tethering such the giant industrial corporations to the needs of a democratic society.

Today we face similar circumstances. The top five US companies by market capitalization are all tech companies.[9] Of the five, two are the pioneers of surveillance capitalism: Google and Facebook. Two began as more traditional sales-oriented firms that later diversified into surveillance capitalism: Microsoft and Amazon. The fifth, Apple, has been reluctant to embrace surveillance capitalism. Apple's current move into digital services will reveal a great deal about its resolve on this front. Even more important than the world-historic wealth amassed by these companies is the public's growing sense of repugnance toward the secrecy, vast complexity, asymmetries of knowledge, the unconstrained power of their operations, and the sheer arrogance of their continuous evasion of law, all of which have so far shielded them from democratic governance. *Nevertheless, only democracy can meet this challenge.*

Surveillance Capitalism's Rhetorical Defenses Against Democratic Governance

The Innovation Defense

The surveillance capitalist leaders have employed a variety of rhetorical strategies aimed at confusing the public and keeping lawmakers off balance. Among the most bogus of these strategies I include: 1) Democracy will repress innovation, and 2)

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[9] http://dogsofthedow.com/largest-companies-by-market-cap.htm

Democratic governance is a threat to national security. This second strategy first relied on the tech companies' utilities in the "war on terror," but has now moved on to China as the external threat that justifies a hands-off stance from lawmakers. Both strategies were evident in Nick Clegg's defense of Facebook, upon taking up his new role as Corporate Vice-President. When confronted in a BBC interview quickly reverted to Silicon Valley's DEFCON ONE defense against the rule of law: the false opposition of innovation and regulation. He warned that law resulting from "tech-lash" risked making it "almost impossible for tech to innovate properly," and he moved on the strategy #2, summoning the new boogeyman of Chinese ascendance. "I can predict that...we will have tech domination from a country with wholly different sets of values..." The U.S. and other Western nations will need to protect themselves from and compete with China, but not by becoming less democratic or emulating the Chinese.

Both Facebook and Google have long relied on these misleading formulas to shield them from law. In 2010 Mark Zuckerberg announced that privacy was no longer a "social norm," celebrating Facebook's explosive new "privacy policies" that publicly displayed personal information by default as evidence of his determination to innovate rather than "be trapped" by conventions or law. "We decided that these would be the social norms now and we just went for it." In 2011 former Google CEO Eric Schmidt warned that government overreach would foolishly constrain innovation, "We'll move much faster than any government." That year Google founder Larry Page complained that "old institutions like the law" impede the firm's freedom to "build really great things." This rhetoric is a hand-me-down from another era when Gilded Age barons, whom we now call "robbers," insisted that there was no need for law when one had the "law of evolution," the "laws of capital," and the "laws of industrial society." As historian David Nasaw put it, the millionaires preached that "democracy had its limits, beyond which voters and their elected representatives dared not trespass lest economic calamity befall the nation."[10]

[10] David Nasaw, "Gilded Age Gospels," in *Ruling America: A History of Wealth and Power in a Democracy*, ed. Steve Fraser and Gary Gerstle (Cambridge, Mass: Harvard University Press, 2005), 124-125,148.

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Orwell observed that the rhetorical silences and blatant contradictions of power are designed so that "to see what is in front of one's nose needs a constant struggle."[11] The tech companies' innovation rhetoric effectively blinded users and their lawmakers for many years. Facebook and Google were regarded as innovative companies that sometimes make dreadful mistakes at the expense of privacy. Since then the picture has sharpened and we are getting better at seeing what's in front of our collective nose: what we thought of as mistakes actually *are* the innovations — Google Glass, email scanning, Street View's theft of private WiFi data, Facebook's Beacon program, its sale of private information to developers, and more.

The Freedom Defense

Lawmakers also have been held back in their work by confusion about the relationship between knowledge and freedom. Surveillance capitalists are no different from other capitalists in demanding freedom from any sort of constraint. They insist upon the "freedom to" launch every novel practice while aggressively asserting the necessity of their "freedom from" law and regulation. This classic pattern reflects two bedrock assumptions about capitalism made by its own theorists: The first is that markets are intrinsically unknowable. The second is that the ignorance produced by this lack of knowledge requires wide-ranging freedom of action for market actors.

The notion that ignorance and freedom are essential twinborn characteristics of capitalism is rooted in the conditions of life before the advent of modern systems of communication and transportation, let alone global digital networks, the internet, or the ubiquitous computational, sensate, actuating architectures of Big Other. Until the last few moments of the human story, life was necessarily local, and the "whole" was necessarily invisible to the "part."

Adam Smith's famous metaphor of the "invisible hand" drew on these enduring realities of human life. Each individual, Smith reasoned, employs his capital locally in pursuit of immediate comforts and necessities. Each one attends to "his own security… his own gain… led by an invisible hand to promote an end which was no part of his

[11] Sonia Orwell and Ian Angus, *In Front of Your Nose 1945-1940: The Collected Essays, Journalism, and Letters of George Orwell*, vol. 4 (New York, N.Y: Harcourt, Brace & World, Inc., 1968), 125.

intention." That end is the efficient employ of capital in the broader market: the wealth of nations. The individual actions that produce efficient markets add up to a staggeringly complex pattern, a mystery that no one person or entity could hope to know or understand, let alone to direct: "The statesman, who should attempt to direct private people in what manner they ought to employ their capitals, would… assume an authority which could safely be trusted, not only to no single person, but to no council or senate whatever."[12]

The neoliberal economist Friedrich Hayek, whose work laid the foundation for the market-privileging economic policies of the past half century, drew the most basic tenets of his arguments from Smith's assumptions about the whole and the part. "Adam Smith," Hayek wrote, "was the first to perceive that we have stumbled upon methods of ordering human economic cooperation that exceed the limits of our knowledge and perception. His 'invisible hand' had perhaps better have been described as an invisible or unsurveyable pattern."[13]

In Hayek's framing, the mystery of the market is that a great many people can behave effectively while remaining ignorant of the whole. Individuals not only can choose freely, but they must freely choose their own pursuits because there is no alternative, no source of total knowledge or conscious control to guide them. "Human design" is impossible, Hayek says, because the relevant information flows are "beyond the span of the control of any one mind." The market dynamic makes it possible for people to operate in ignorance without "anyone having to tell them what to do."[14]

When it comes to surveillance capitalist operations, the classic quid pro quo of freedom for ignorance is shattered. The "market" is no longer invisible, certainly not in the way that Smith or Hayek imagined. The competitive struggle among surveillance capitalists produces the compulsion toward totality. Total information tends toward certainty and the promise of guaranteed outcomes. These operations mean that the supply and demand of human futures markets are rendered in infinite detail. Surveillance

[12] Adam Smith, The Wealth of Nations, ed. Edwin Cannan (New York: Modern Library, 1994), 485.
[13] Friedrich August von Hayek, The Collected Works of Friedrich August Hayek, ed. William Warren Bartley (Chicago: University of Chicago Press, 1988), 1:14.

[14] Friedrich Hayek, "The Use of Knowledge in Society," in Individualism and Economic Order (Chicago: University of Chicago Press, 1980). See the discussion on 85–89.

capitalism thus replaces mystery with certainty as it substitutes datafication, behavioral modification, and prediction for the old "unsurveyable pattern."

The result is a fundamental reversal of the classic ideal of the "market" as intrinsically unknowable. Now the market is visible. As the head of Facebook's data science team once reflected, "This is the first time the world has seen this scale and quality of data about human communication. For the first time, we have a microscope that… lets us examine social behavior at a very fine level that we've never been able to see before." A top Facebook engineer put it succinctly: "We are trying to map out the graph of everything in the world and how it relates to each other." The same objectives are echoed in the other leading surveillance capitalist firms. As Google's Eric Schmidt observed in 2010, "You give us more information about you, about your friends, and we can improve the quality of our searches. We don't need you to type at all. We know where you are. We know where you've been. We can more or less know what you're thinking about." Satya Nadella of Microsoft understands all physical and institutional spaces, people, and social relationships as indexable and searchable: all of it subject to machine reasoning, pattern recognition, prediction, preemption, interruption, and modification.

Although there is nothing unusual about the prospect of capitalist enterprises seeking every kind of knowledge advantage in a competitive marketplace, the surveillance capitalist capabilities that translate ignorance into knowledge are unprecedented because they rely on the one resource that distinguishes the surveillance capitalists from traditional utopianists: the financial and intellectual capital that permits the actual transformation of the world, materialized in the continuously expanding architectures of Big Other. More astonishing still is that surveillance capital derives from the dispossession of human experience, operationalized in its unilateral and pervasive programs of rendering experience as computational data: our lives are scraped and sold to fund their freedom and our subjugation, their knowledge and our ignorance about what they know.

This new condition unravels the economic justification for the triumph of raw capitalism: its free markets, free-market actors, and self-regulating enterprises. It suggests

that surveillance capitalists mastered the rhetoric and political genius of the neoliberal ideological defense while pursuing a novel logic of accumulation that belies the most fundamental postulates of the capitalist worldview. It's not just that the cards have been reshuffled; the rules of the game have been transformed into something that is both unprecedented and unimaginable outside the digital milieu and the vast resources of wealth and scientific prowess that the new applied utopianists bring to the table.

Surveillance capitalism's command and control of the division of learning in society is the signature feature that breaks with the old justifications of the invisible hand and its entitlements. The combination of knowledge and freedom works to accelerate the asymmetry of power between surveillance capitalists and the societies in which they operate. This cycle will be broken only when we acknowledge as citizens, as lawmakers, as societies, and indeed as a civilization that *surveillance capitalists know too much to qualify for freedom.* Instead, the time has come for law that can interrupt surveillance capitalism's key economic imperatives.

V. SURVELLIANCE CAPITALISM'S ECONOMIC IMPERATIVES

Economies of Scale and Scope

In markets that trade in human futures, the best predictions win. The competition to sell certainty produces specific imperatives that drive business practices. Trade in predictions of human futures compels the extraction of ever more predictive sources of behavioral surplus entailing specific consequences that produce both economic and non-economic harms.

Machine learning requires a lot of data, and not surprisingly the first competitive phase emphasized the need for a critical volume of data and thus *economies of scale*. This turned the online medium into a ruthless hunting ground for behavioral surplus. The second phase emphasized varieties of data — *economies of scope*. In this phase users were sent from their desktops to their mobile phones, out into the world where real behavior could be captured and rendered as data: your home, car, face, run, shopping excursion, search for a parking space, voice, posture, gait, and always... location, location, location.

The imperatives of extraction at scale and scope produce an unusual perspective on data that I call *radical indifference*. It requires that content is judged by its volume,

range, and depth of surplus. These metrics treat all data as equivalently valuable, despite the obvious fact that data originate in distinct human situations, convey profoundly dissimilar human meanings, and therefore are fundamentally unequal. Radical indifference is an asocial framework for evaluating data. As such, it is the economic driver of what has come to be called "fake news." Just as early-twentieth-century managers were once taught the "administrative point of view" as the mode of knowledge required for the hierarchical complexities of the twentieth century's large-scale corporations, today's high priests practice the applied arts of radical indifference.

Radical indifference is a response to economic imperatives, and only occasionally do we catch an unobstructed view of its strict application as a managerial discipline. One such occasion was 2018 when *BuzzFeed* acquired a 2016 Facebook memo. The memo was written by Andrew Bosworth, one of the company's long-standing and most influential executives. It provided a window into radical indifference as an applied discipline. "We talk about the good and the bad of our work often. I want to talk about the ugly," Bosworth began. He went on to explain how equivalence wins out over equality in the march toward totality, certainty, and the growth of surveillance revenues:

> *We connect people. That can be good if they make it positive. Maybe someone finds love. Maybe it even saves the life of someone on the brink of suicide. So we connect more people. That can be bad if they make it negative. Maybe it costs a life by exposing someone to bullies. Maybe someone dies in a terrorist attack coordinated on our tools. And still we connect people. The ugly truth is that... anything that allows us to connect more people more often is de facto good. It is perhaps the only area where the metrics do tell the true story as far as we are concerned... That's why all the work we do in growth is justified. All the questionable contact importing practices. All the subtle language that helps people stay searchable by friends. All of the work we do to bring more communication in.... The best products don't win. The ones everyone uses win... make no mistake, growth tactics are how we got here.*

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As Bosworth makes clear, from the viewpoint of radical indifference the positives and negatives must be viewed as equivalent, despite their unequal moral meanings and human consequences. From this perspective the only rational objective is the pursuit of products that snare "everyone," not "the best products."

A significant result of the systematic application of radical indifference is that the public-facing "first text" is vulnerable to corruption with content that would normally be perceived as repugnant: lies, disinformation, fraud, violence, hate speech, and so on. As long as content contributes to "growth tactics," Facebook "wins." This vulnerability can be an explosive problem on the demand side, the user side, but it breaks through the fortifications of radical indifference only when it threatens to interrupt the flow of surplus into the second "shadow" text: the one that is for them but not for us.

The norm is that information corruption is not catalogued as problematic unless it poses an existential threat to supply operations—Bosworth's imperative of connection—either because it might trigger user disengagement or because it might attract regulatory scrutiny. This means that any internal efforts toward "content moderation" are best understood as defensive measures, not as acts of public responsibility. In other words, and this is key, *surveillance capitalism's networks are intentionally constructed to launch viruses in full knowledge that there are no vaccines, no fail safe systems, no breaks that can be applied to global infection.* Vaccines would put behavioral surplus supply chains at risk, and this constitutes an existential threat as a primary violation of economic imperatives.

The greatest challenge to radical indifference has come from Facebook and Google's overreaching ambitions to supplant professional journalism on the internet. Both corporations inserted themselves between publishers and their populations, subjecting journalistic "content" to the same categories of equivalence that dominate surveillance capitalism's other landscapes. In a formal sense, professional journalism is the precise opposite of radical indifference. The journalist's job is to produce news and analysis that separate truth from falsehood. This rejection of equivalence defines journalism's raison d'être as well as its organic reciprocities with its readers. Under surveillance capitalism, though, these reciprocities are erased.

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A consequential example was Facebook's decision to standardize the presentation of its News Feed content so that "all news stories looked roughly the same as each other… whether they were investigations in The Washington Post, gossip in the New York Post, or flat-out lies in the Denver Guardian, an entirely bogus newspaper." This expression of equivalence without equality made Facebook's first text exceptionally vulnerable to corruption from what would come to be called "fake news."

This is the context in which Facebook and Google became the focus of international attention following the discovery of organized political disinformation campaigns and profit-driven "fake news" stories during the 2016 US presidential election and the UK Brexit vote earlier that year. Economists Hunt Allcott and Matthew Gentzkow, who have studied these phenomena in detail, define "fake news" as "distorted signals uncorrelated with the truth" that impose "private and social costs by making it more difficult… to infer the true state of the world… " They found that in the lead-up to the 2016 US election there were 760 million instances of a user reading these intentionally orchestrated lies online, or about three such stories for each adult American.

As radical indifference would predict, however, "fake news" and other forms of information corruption have been perennial features of Google and Facebook's online environments. There are countless examples of disinformation that survived and even thrived because it fulfilled economic imperatives, and I point out just a few. In 2007 a prominent financial analyst worried that the subprime mortgage bust would harm Google's lucrative ad business. It seems a strange observation until you learn that in the years prior to the Great Recession, Google eagerly welcomed shady subprime lenders into its behavioral futures markets, anxious to net the lion's share of the $200 million in monthly revenue that mortgage lenders were spending on online advertising. A 2011 Consumer Watchdog report on Google's advertising practices leading up to and during the Great Recession concluded that "Google has been a prominent beneficiary of the national home loan and foreclosure crisis… by accepting deceptive advertising from fraudulent operators who falsely promise unwary consumers that they can solve their mortgage and credit problems." Despite these increasingly public facts, Google continued to serve its fraudulent business customers until 2011, when the US Treasury Department

finally required the company to suspend advertising relationships with "more than 500 internet advertisers associated with the 85 alleged online mortgage fraud schemes and related deceptive advertising."

Only a few months earlier, the Department of Justice had fined Google $500 million, "one of the largest financial forfeiture penalties in history," for accepting ads from online Canadian pharmacies that encouraged Google's US users to illegally import controlled drugs, despite repeated warnings. As the US Deputy Attorney General told the press, "The Department of Justice will continue to hold accountable companies who in their bid for profits violate federal law and put at risk the health and safety of American consumers."

It is by now obvious that the rogue forces of disinformation grasp the facts of radical indifference more crisply than do lawmakers or surveillance capitalism's genuine users and customers. These rogue forces learned to exploit the blind eye of radical indifference in an open society in order to escalate the perversion of the public text, for the purpose of political manipulation. This kind of information corruption has also been a continuous feature of the Facebook environment. The turmoil associated with the 2016 US and UK political disinformation campaigns on Facebook was a well-known problem that had disfigured elections and social discourse in Indonesia, the Philippines, Columbia, Germany, Spain, Italy, Chad, Uganda, Finland, Sweden, Holland, Estonia, and the Ukraine. Scholars and political analysts had called attention to the harmful consequences of this online disinformation for years. One political analyst in the Philippines worried in 2017 that it might be too late to fix the problem: "We already saw the warning signs of this years ago... Voices that were lurking in the shadows are now at the center of the public discourse."

Economies of Action

Eventually, surveillance capitalists discovered that the most-predictive behavioral data come from intervening in real life behavior in order to nudge, coax, tune, herd, and modify human activity at scale, always pushing behavior toward profitable outcomes, or what I call *economies of action*. Data scientists refer to this as a shift from "monitoring" to "actuation." As one data scientist explained to me, "We can engineer the context

around a particular behavior and force change that way...*We are learning how to write the music, and then we let the music make them dance.*

At this new level of competitive intensity, it is no longer enough to automate information flows *about us;* the goal now is to *automate us.* In this phase, the 'means of production' are subordinated to an increasingly complex "means of behavioral modification" in which the digital medium is called into action as a seamless environment of reinforcement to shape the behaviors of individuals, groups, and populations. These processes continue to be meticulously designed to produce ignorance by circumventing individual awareness and thus eliminate any possibility of self-determination and combat. As long as surveillance capitalism and its behavioral futures markets are allowed to thrive, ownership of the new means of behavioral modification eclipses ownership of the means of production as the fountainhead of capitalist wealth and power in the twenty-first century.

In this way, surveillance capitalism produces a new kind of power – I call it *instrumentarian power* — which aims to shape human behavior toward others' ends. Instead of armaments and armies, murder and terror, it works its will through the automated medium of the increasingly ubiquitous, internet-enabled, computational architecture of "smart" networked devices, things, and spaces of *Big Other*.

These new capabilities are being honed in an ever-widening experimental zone. Facebook's 2012 and 2013 "massive-scale contagion experiments" confirmed that the corporation could manipulate subliminal cues on its pages to successfully change real-world behavior and feelings. It further demonstrated that it could do this while bypassing its users' awareness. Thanks to another leaked document in 2017 we learned that the same methods were touted to business customers in Australia and New Zealand, aimed at effecting the behavior of six million teenagers and young adults in those countries based on detailed knowledge of when young people feel 'stressed,' 'defeated,' 'overwhelmed,' 'anxious,' 'nervous,' 'stupid,' 'silly,' 'useless,' and a 'failure.'"[15] The report reveals Facebook's interest in leveraging this surplus for economies of action.

[15] Darren Davidson, "Facebook Targets 'Insecure' To Sell Ads," Australian, May 1, 2017.

The report depicted the corporation's systems for gathering "psychological insights" on 6.4 million high school and tertiary students as well as young Australians and New Zealanders already in the workforce. The Facebook document detailed the many ways in which the corporation uses these stores of behavioral surplus to pinpoint the exact moment at which a young person needs a "confidence boost" and is therefore most vulnerable to a specific configuration of advertising cues and triggers. It boasts information on "mood shifts" among young people based on "internal Facebook data," and it claims that Facebook's prediction products can not only "detect sentiment" but also predict how emotions are communicated at different points during the week, matching each emotional phase with appropriate ad messaging for the maximum probability of guaranteed outcomes. "Anticipatory emotions are more likely to be expressed early in the week," the analysis counsels, "while reflective emotions increase on the weekend. Monday-Thursday is about building confidence; the weekend is for broadcasting achievements." [16]

These are the very same practices adopted by Cambridge Analytica, as described by whistleblower Chris Wylie. CA used behavioral surplus to exploit and trigger users' "inner demons," as Wylie put it, orchestrating subliminal cues online in order to effect real world behavior and emotions. Indeed, Cambridge Analytica is best understood as a parasite on the host body – not simply of Facebook but of the larger framework and tools of surveillance capitalism. In other words, surveillance capitalism's routine methods were simply pivoted a few degrees toward political rather than commercial outcomes. As addendum it is worth noting that CA's chief revenue officer quietly announced his less glamorous but more lucrative post-election strategy for the firm: "After this election, it'll be full-tilt into the commercial business." Writing in a magazine for car dealers just after the US election, he notes that CA's new analytic methods reveal "how a customer wants to be sold to, what their personality type is, and which methods of persuasion are most effective... What it does is change people's behavior through carefully crafted messaging that resonates with them... It only takes small improvements in conversion rates for a dealership to see a dramatic shift in revenue."

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[16] Darren Davidson.

Economies of action were further invented at Google, where Street View chief John Hanke's internal skunk works, Niantic Labs, developed the augmented reality game Pokémon Go. The real game, it turns out, was designed to herd innocent players to eat, drink, and purchase in the restaurants, bars, fast food joints, and shops that paid to play in the game's futures markets. Niantic Labs sold guarantees of footfall rates to business customers for a fee, the precise real-world analogy to clickthrough rates in the online milieu. The company learned to use the rewards and punishments of gamification and social comparison dynamics to modify behavior at scale.

These population-level capabilities of behavior modification and control ultimately aim for bigger game. The target now is the "smart city," or what Google once preferred to call the "Google city." The idea is to replace democratic governance with computation aimed at fulfilling guaranteed outcomes for business customers. The city is now the terrain upon which surveillance capitalists intend to remake society in their image and according to their interests. The fair city of Toronto is now the frontier of this most critical contest. Alphabet/Google-owned Sidewalk Labs is spinning its euphemisms of "governance innovation," Orwellian code for the deconstruction of local democracy in favor of Sidewalk's computational rule. If Sidewalk can take Toronto, Canadians will have gifted surveillance capitalism a platform for a wider assault on the rule of law and the democratic social order, all of it to advance surveillance capitalism's long range plans, profits, and vision of society as a collective to be ordered and tuned by computation in the service of others' commercial outcomes.

In *The Age of Surveillance Capitalism*, I explore sixteen reasons that explain how surveillance capitalists "got away with it." These include the clever exploitation of historical, political, economic, and psychological conditions. Two deserve mention here. First, surveillance capitalism came of age at a time when government regulation was despised as an encroachment on freedom. Second, surveillance capitalism was invented in 2001, the same year that the West became engulfed in a "war on terror." In the US, and to a certain extent other nations too, the fledgling capabilities of the new tech companies were protected and nurtured outside the scope of Constitutional constraints in the hopes that they would contribute to the larger cause of "total information awareness."

There were other reasons on the demand side. Chief among these was the *unprecedented* nature of the new practices, which made them difficult to perceive and understand. Another is the historic concentration of technology and specialist expertise aimed at engineering user *ignorance* of surveillance capitalists' backstage operations. Finally as alternatives to surveillance capitalism are foreclosed, we are left in a state of "no exit," trapped in an involuntary merger of personal necessity and economic extraction. The same channels that we rely upon for daily logistics, social interaction, work, education, healthcare, access to products and services, and much more, now double as supply chain operations for surveillance capitalism's surplus flows. The result is that effective social participation leads through "the means of behavioral modification," eroding the choice mechanisms that we have traditionally associated with the private realm — exit, voice, and loyalty. There can be no exit from processes that are intentionally designed to bypass individual awareness and produce ignorance, especially when these are the very same processes upon which we must depend for effective daily life.

"User" dependency is thus a classic Faustian pact in which our felt needs for effective life vie against the inclination to resist surveillance capitalism's bold incursions. This conflict produces a psychic numbing that inures us to the realities of being tracked, parsed, mined, and modified. It disposes us to rationalize the situation in resigned cynicism, to shelter behind defense mechanisms like the infamous formulation, "I have nothing to hide", or to find other ways to stick our heads in the sand out of frustration and helplessness. In this way, surveillance capitalism imposes a fundamentally illegitimate choice that twenty-first century individuals should not have to make, and its normalization leaves us dancing in our chains—where it is all to easy to forget that *anyone who has nothing to hide is nothing.*

VI. DEMOCRACY AT RISK

Humanity has survived the millennia by passing stories that teach us how to live from one generation to the next. These stories have been the North Star to our collective

moral compass; they protect us from a future of forgetting. It is in this spirit that I recount a twentieth-century story with urgent implications for our twenty-first century future.

In 1971 the United States Senate Subcommittee on Constitutional Rights, led by North Carolina Senator Sam Ervin and including luminaries from across the political spectrum such as Edward Kennedy, Birch Bayh, Robert Byrd, and Strom Thurmond, undertook what would become a multiyear investigation into "a variety of programs designed to predict, control, and modify human behavior," triggered by a growing sense of public alarm at the spread of psychological techniques for behavior control. A migration of behavior-modification practices from military to civilian applications targeted captive populations in prisons, psychiatric wards, classrooms, institutions for the mentally challenged, schools for the autistic, and factories.

The Subcommittee subjected the principles and applications of behavior modification to intense constitutional scrutiny, questioning and ultimately rejecting the use of behavioral modification as an extension of state power. One outcome was the denial of federal funding to any program or institution that used such techniques.

From the first lines of the preface of the subcommittee's 1974 report, authored by Senator Ervin, it should be evident to any twenty-first-century captive of surveillance capitalism that US society has undergone a social discontinuity more profound than the mere passage of decades suggests. Where we succumb to psychic numbing and yield to the absolutism of market "freedom," Ervin located the subcommittee's work at the heart of the Enlightenment project, pledging to defend the liberal ideals of freedom and dignity:

> *When the founding fathers established our constitutional system of government, they based it on their fundamental belief in the sanctity of the individual... They understood that self-determination is the source of individuality, and individuality is the mainstay of freedom... Recently, however, technology has begun to develop new methods of behavior control capable of altering not just an individual's actions but his very personality and manner of thinking... the behavioral technology being developed in the United States today touches upon the most basic sources of individuality and the very core of personal freedom... the*

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> *most serious threat… is the power this technology gives one man to impose his views and values on another…*
>
> *Concepts of freedom, privacy and self-determination inherently conflict with programs designed to control not just physical freedom, but the source of free thought as well… The question becomes even more acute when these programs are conducted, as they are today, in the absence of strict controls. As disturbing as behavior modification may be on a theoretical level, the unchecked growth of the practical technology of behavior control is cause for even greater concern.*

In contrast to the 1970s, twenty-first century citizens have fallen captive to a far more powerful and comprehensive digital architecture of behavior control whose tentacles spread and root every day. Yesterday it was Facebook's integration of it communication platforms, today it is the disappearance of Nest into the maw of Google's device-led assault on everyday life. Tomorrow it is the Ford Motor Company's strategy to stream data from the 100,000 drivers of its vehicles. Our faces no longer belong to us. They are digital flows that feed the supply chains. Our voices are converted into "dialogue chunks" shuttled on digital conveyor belts to the new means of production. Our behavior is subjected to subliminal cues, engineered social comparison dynamics, and schedules of reinforcement designed to tune and herd us at scale. Each of these exploit intimate knowledge of our demons and our dreams that would be impossible to achieve without Big Other, funded by the vast capital reserves of the surveillance capitalists and the revenues that stream from trading our futures. Instead of consumers or employees, surveillance capitalism regards its populations as sources of raw material for the rendition of behavioral surplus. In this way, surveillance capitalism assaults democracy from below and from above.

First, surveillance capitalism undermines democracy from below as its own imperatives set it on a collision course with human agency, the very autonomy that the Ervin committee understood as the elemental condition of human freedom and without which the very idea of a democratic society is impossible to imagine. Engineered ignorance robs us of decision rights over the boundaries of our own experience.

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Economies of action challenge our elemental rights to the future tense, to promise one another and ourselves what we will do next, free of systematic, intentional, hidden interference. Prediction products require algorithmic certainty. Behavior must conform to parameters. Outliers are dangerous friction in a system oriented toward guaranteed outcomes.

Second, surveillance capitalism destroys democracy from above. It is an extraordinary fact that we embark upon the third decade of the twenty-first century with societies marked by more extreme asymmetries of knowledge and the power that accrues to such knowledge than have ever existed in human history. Trillions of data points and six million behavioral predictions per second are the surface of a shadow text over which democracy and its demos have no knowledge, no authority, and no control. Laws regarding data ownership, accessibility, or portability pertain to the public text and thus will not change this fact. Equally troubling is that only the surveillance capitalists have the financial, technological, and intellectual capital to know. At a time when we anticipated the democratization of knowledge, we find ourselves reverting to a pre-Gutenberg pattern of knowledge for the few not the many. They know more about us than we know about ourselves. They know much about us, but we know little about them. There knowledge is about us, but it is not for us. Their knowledge is accrued from our lives, but we are excluded from it.

These illegitimately acquired asymmetries of knowledge and power award surveillance capitalists with unauthorized social dominance. Industrial civilization enshrined the division of labor as the key principle of social order and oriented society toward the challenges of economic equality. Now an information civilization enshrines the *division of learning* as the new principle of social order and orients society toward epistemic equality. Three essential questions determine justice in this new world: *Who knows? Who decides who knows? Who decides who decides who knows?* These are the intersecting dilemmas of knowledge, authority, and power in our time. In the absence of a democratic resurgence, it is the surveillance capitalists who occupy the catbird seat in this new world. They know, they decide who knows, and they decide who decides.

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This anti-democratic and anti-egalitarian juggernaut is best described as a market-driven coup from above. It is not a coup d'état in the classic sense but rather a *coup de gens:* an overthrow of the people concealed as the technological Trojan horse of digital technology. On the strength of its illegitimate annexation of human experience, this coup achieves exclusive concentrations of knowledge and power that sustain privileged influence over the division of learning in society. Bluntly stated, this means the privatization of the central principle of social ordering in the twenty-first century, and it imposes the social relations of a pre-modern absolutist authority. It is a form of tyranny that feeds on people but is not of the people. In a surreal paradox, this coup is celebrated as "personalization," although it defiles, ignores, overrides, and displaces everything about you and me that is personal. While democracy slept, surveillance capitalism created and claimed unilateral power over the shadow text in ways that have, at least so far, deprived democratic populations of means of combat.

VII. WHAT IS TO BE DONE?

As stated at the outset, surveillance capitalism has thrived in the absence of law and regulation. Rather than mourning this state of affairs, I take it as a positive sign. We have not failed to reign in this rogue capitalism. On the contrary, we simply have not yet tried. And there is more good news: our societies have successfully confronted destructive forms of raw capitalism in the past, asserting new laws that tethered capitalism to the needs of people and the values of democracy. Democracy moderated some of the excesses of early industrialization. It ended the Gilded Age. It mitigated the destruction of the Great Depression. It built a strong post-War society. It protected earth, creatures, water, air, consumers, and workers... We have every reason to believe that we can be successful again, liberating the digital future to its earlier promise marked by its deep compatibility with and contribution to a resurgent democracy.

Recall that the historian Tom McGraw anticipated the end of the "economists' hour" and considered what new group might author the next regulatory vision. The challenges of surveillance capitalism provide the answer. This rogue economic logic is a human-made phenomenon and it is in the realm of politics that it must be confronted. The next great regulatory vision will be framed and implemented by warriors for democracy:

elected officials, citizens, and specialists allied in the knowledge that despite its failures and shortcomings, democracy is the one idea to emerge from the long human story that enshrines the peoples' right to govern themselves and asserts the ideal of the sovereign individual as the single most powerful bulwark against tyranny. We give up these ideals at our peril. Only democracy can impose the people's interests through law and regulation. The question is, what kind of law and regulation? Will it be comprehensive privacy legislation? Will it be an antitrust approach, as many counsel? As suggested at the beginning of this written testimony, we need new economic, legal, and collective action paradigms born of a close understanding of surveillance capitalism's economic imperatives and foundational mechanisms. Privacy and antitrust law are vital, but neither will be wholly adequate to this new challenge.

An example is privacy law's call for "data ownership" This is a misleading notion because it legitimates the original sin that is the unilateral taking of human experience for rendition into data. Why institutionalize illegitimate data capture? Negotiating data ownership is like negotiating how many hours a day a seven year old should be allowed to work in a factory, rather than contesting the fundamental legitimacy of child labor. Data ownership also fails to reckon with the realities of behavioral surplus. Even if "users" achieve "ownership" of the data that they provided in the first instance, they will not achieve "ownership" of behavioral surplus as it floods the shadow text, the predictions gleaned from it, or the fate of those predictions in markets that trade in human futures. Finally, data ownership is a recipe for a new underclass, in which economically disadvantaged individuals, families, groups sell their data in the same way that one might sell one's organs in a secretive marketplace. Officials in the city of Atlanta recently discovered that Google contractors were inducing homeless people to "sell" their faces for $5, images that would train the company's facial recognition algorithms.

The prospect of "breaking up" the largest surveillance capitalist firms also fails to reckon with the actual mechanisms of this economic logic. Surveillance capitalists achieve scale by cornering behavioral surplus supplies and driving up the value chain for more predictive forms of surplus. Breaking up the largest surveillance capitalists – Google, Facebook, Microsoft, and Amazon – can address important anti-competitive

problems, but without additional measures it will not prevent the emergence of smaller and more efficient surveillance capitalist firms, while opening the field for new surveillance capitalist competitors. We have to rethink the meaning of "size" and "monopoly" when a company with relatively few employees but huge capital reserves can corner data flows from large domains of human experience (e.g. "search" or "social networking") while cornering the professional labor markets for data science expertise.

There are three arenas in which legislative and regulatory strategies can be aligned effectively with the structure and consequences of surveillance capitalism. These include disrupting the surveillance dividend in order to rebuild a robust competitive landscape, creating space for new competitive solutions, and nurturing new forms of citizen-based collective and collaborative action.

Disrupting the Surveillance Dividend

The most effective form of regulation involves disrupting the raw materials and financial incentives that sustain the surveillance dividend. This means that lawmakers will need to devise strategies that interrupt and in some cases outlaw surveillance capitalism's mechanisms of supply and demand. At the front end, this involves interrupting supply chains by outlawing the secret theft of private human experience as a free source of raw material for translation into data. For example, why should private companies be allowed to take citizens' faces as they walk down the street? How do we reimagine the value of data as something that is acquired and utilized under the authority of the individual citizen and under the democratic rule of law? At the back end, the outlawing human futures markets would efficiently eliminate the financial incentives that sustain the surveillance dividend. This is not a radical prospect. We already outlaw markets whose dynamics are known to be pernicious and antidemocratic. For example out society outlaws markets that trade in human organs, babies, or slaves. In each case we recognize that such markets are both morally repugnant and predictably produce violent consequences that violate the values and aspirations of a democratic society. The same can be said for the anti-freedom and anti-democratic consequences of human futures markets.

Shoshana Zuboff
Testimony Submitted to the House Subcommittee on Antitrust, Commercial and Administrative Law
October 18, 2019

Creating Space For New Competitive Solutions

Consider the Aware Home, a collaboration between computer scientists and engineers in the year 2000, intended as a "living laboratory" for the study of "ubiquitous computing." [17] The project envisioned a "human-home symbiosis" in which animate and inanimate processes would be captured by an elaborate network of "context aware sensors" embedded in the house and by wearable computers worn by the home's occupants. The Aware Home information system was designed as a simple closed-loop controlled entirely by the home's occupants. Because the house would be "constantly monitoring the occupants' whereabouts and activities…even tracing its inhabitants' medical conditions," the engineers concluded, "there is a clear need to give the occupants knowledge and control of the distribution of this information." All the information was to be stored on the occupants' wearable computers "to insure the privacy of an individual's information."

Now fast forward to the year 2017 when two University of London scholars published a detailed analysis of a single "smart home" device, the Google-owned Nest thermostat. [18] They determined that were one to enter into the Nest ecosystem of connected devices and apps, each with their own burdensome and audacious terms of service for third-party data sharing, the purchase of a single Nest thermostat would entail the need to review nearly a thousand so-called "contracts." [19] Should the customer refuse to agree to Nest's stipulations, the Terms of Service indicate that the functionality and security of the thermostat may be deeply compromised, no longer supported by the

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[17] Cory D . Kidd et al., "The Aware Home: A Living Laboratory for Ubiquitous Computing Research," in *Proceedings of the Second International Workshop on Cooperative Buildings, Integrating Information, Organization, and Architecture*, CoBuild '99 (London, UK, UK: Springer-Verlag, 1999), 191–198, http://dl.acm.org/citation.cfm?id=645969.674887.

[18] Ron Amadeo, 'Nest Is Done as a Standalone Alphabet Company, Merges with Google', Ars Technica, 7 February 2018, https://arstechnica.com/gadgets/2018/02/nest-is-done-as-a-standalone-alphabet-company-merges-with-google/; Leo Kelion, 'Google-Nest Merger Raises Privacy Issues', *BBC News*, 8 February 2018, sec. Technology, http://www.bbc.com/news/technology-42989073.

[19] Guido Noto La Diega, 'Contracting for the "Internet of Things": Looking into the Nest', Research Paper (London, UK: Queen Mary University of London, School of Law, 2016); Robin Kar and Margaret Radin, 'Pseudo-Contract & Shared Meaning Analysis', Legal Studies Research Paper (University of Illinois College of Law, 16 November 2017), https://papers.ssrn.com/abstract=3083129.

necessary updates meant to ensure its reliability and safety. The consequences can range from frozen pipes to failed smoke alarms to an easily hacked internal home system. [20]

What happened in those 17 years? The only difference is the unimpeded rise of surveillance capitalism. The Aware Home is a vivid reminder that while it is impossible to imagine surveillance capitalism without the digital, it is easy to imagine the digital without surveillance capitalism. Today we might mourn the innocence of The Aware Home but, like a message in a bottle from a bygone age, it tells us something important. Once we were the subjects of our lives, now we are its objects. We once looked to the digital future as a human future — a place we could call home. Now that future has been hijacked by a rogue mutation of capitalism careening toward a surveilled life owned and operated by private capital for others' sake. The Aware Home is a record of what we have lost and what we must now find again: the rights to know and decide who knows about our lives and our futures. Such rights have been and remain the only possible foundations for human freedom and a functional democratic society.

Disrupting the surveillance dividend is the most effective means of reopening the gates to the hundreds of thousands, indeed, millions, of entrepreneurs and companies who want to meet the real needs of people and society, reuniting supply and demand without having to chase the surveillance dividend as their primary means of attracting capital. These businesses want to build aware homes and carbon-free vehicles, empower individuals, and democratize knowledge without the unacceptable psychological, social, and political costs of surveillance capitalism. Laws and regulatory frameworks that disrupt the surveillance dividend clear the way for a robust information capitalism with new alliances and ecosystems that reset our trajectory toward a democratic digital future. In the end, this will stand as one of the seminal achievements of our time, a stark alternative to the digital future envisioned by the Chinese state.

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[20] Grant Hernandez, Orlando Arias, Daniel Buentello, and Yier Jin. "Smart nest thermostat: A smart spy in your home." *Black Hat USA* (2014). https://www.blackhat.com/docs/us-14/materials/us-14-Jin-Smart-Nest-Thermostat-A-Smart-Spy-In-Your-Home-WP.pdf

Shoshana Zuboff
Testimony Submitted to the House Subcommittee on Antitrust, Commercial and Administrative Law
October 18, 2019

Lawmakers and Citizens

In support of a new competitive economic landscape, lawmakers have an opportunity to support new forms of collective action, just as nearly a century ago legal protections for the rights to organize, to bargain collectively, and to strike united lawmakers and workers in curbing the powers of monopoly capitalists. New forms of citizen solidarity are already emerging among 1) citizens who are deeply concerned over the unchecked power of the tech companies and surveillance capitalism, 2) municipalities that seek an alternative to a Google-owned "smart city" future, 3) in communities that want to resist the social costs of so-called "digital disruption" imposed for the sake of others' gain, and 4) among workers who seek fair wages and reasonable security in the precarious conditions of the "gig economy." Citizens need lawmakers' help, and lawmakers need citizen support if together we are to shift the trajectory of the digital future back toward its emancipatory promise on the way to a place that we can all call *home*.

ONLINE PLATFORMS AND MARKET POWER, PART 4: PERSPECTIVES OF THE ANTITRUST AGENCIES

HEARING

BEFORE THE

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

OF THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTEENTH CONGRESS

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ONLINE PLATFORMS AND MARKET POWER, PART 4: PERSPECTIVES OF THE ANTITRUST AGENCIES

WEDNESDAY, NOVEMBER 13, 2019

HOUSE OF REPRESENTATIVES

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND ADMINISTRATIVE LAW

COMMITTEE ON THE JUDICIARY

Washington, DC.

The subcommittee met, pursuant to call, at 2:07 p.m., in Room 2141, Rayburn House Office Building, Hon. David Cicilline [chairman of the subcommittee] presiding.

Present: Representatives Cicilline, Nadler, Neguse, Johnson, Jayapal, Scanlon, McBath, Sensenbrenner, Collins, Armstrong, and Steube.

Also Present: Representative Cline.

Staff Present: David Greengrass, Senior Counsel; John Doty, Senior Advisor; Madeline Strasser, Chief Clerk; Moh Sharma, Member Services and Outreach Advisor; Amanda Lewis, Counsel, Antitrust, Commercial and Administrative Law; Joseph Van Wye, Professional Staff Member, Antitrust, Commercial and Administrative Law; Lina Khan, Counsel, Antitrust, Commercial and Administrative Law; Slade Bond, Chief Counsel, Antitrust, Commercial and Administrative Law; Daniel Flores, Minority Chief Counsel; and Andrea Woodard, Minority Professional Staff.

Mr. CICILLINE. The subcommittee will come to order. Without objection, the chair is authorized to declare recesses at any time.

We welcome everyone to the fourth in a series of hearings investigating competition in digital markets, this one focusing on the perspectives of the antitrust agencies. I now recognize myself for an opening statement.

We are living through a moment of extreme concentration across our economy. In industry after industry, just a few companies dominate critical markets that affect the day-to-day lives of hard-working Americans. Unchecked by competition, dominant corporations can abuse their market power to raise prices for consumers, lower wages, and stifle entrepreneurship and small businesses, enriching their executives and shareholders at the expense of everyone else.

One area where this extreme concentration is most troubling is in the digital economy, where a small number of dominant plat-

forms have become critical intermediaries for the flow of commerce and information. While these platforms have delivered American consumers some benefits, there's growing evidence that these platforms are now using their power to set the terms of the market in ways that enrich them but make it impossible to compete on an even playing field.

Each day, the news is full of reports documenting how decisions by this handful of corporations increasingly determine whether a merchant, app developer, or news publisher sinks or swims.

Because several of these digital monopolies operate business models premised on the surveillance of Americans, the power they wield over us is by many measures unprecedented. Six months ago, this committee initiated a bipartisan investigation into competition issues in digital markets. This investigation follows a long tradition of congressional investigations into monopoly power, including industry-wide assessments of whether dominant corporations are abusing their market power, whether our laws are working, and how to reverse the rising tide of economic concentration.

This investigation is pursuing a similar path, and a key task for the subcommittee is understanding the enforcement record of the antitrust agencies. Over the past decade, the largest technology firms have acquired over 436 companies, many of which were actual or potential competitors, according to a New York Times report by Tim Wu and Stuart Thompson, but not a single one of these acquisitions was challenged by antitrust enforcers. In fact, only a handful of these were closely scrutinized. The last major monopolization case brought by Federal enforcers was Microsoft 20 years ago.

While these problems have plagued enforcement across markets and not just in the digital economy, the enforcement gap in these markets has created a de facto antitrust exemption for online platforms. Have the agencies failed to bring cases because of unfavorable case law, requiring congressional action to amend the law? Is this inaction due to a lack of agency resources, or is it due to a lack of will at the agencies to enforce the laws on the books?

These are the questions that the subcommittee is looking to answer through its investigation in areas that I hope will be fully addressed during today's hearing.

In closing, I want to thank Chairman Simons and Assistant Attorney General Delrahim for their appearance today and look forward to hearing their testimony.

And I now recognize the very distinguished gentleman from Wisconsin, Ranking Member Sensenbrenner, for his opening statement.

Mr. SENSENBRENNER. Well, thank you very much, Mr. Chairman.

I want to welcome Mr. Delrahim and Mr. Simons to our hearing today.

In the ordinary course of oversight of the antitrust enforcement agencies we conduct annual or biannual oversight hearings to examine the waterfront of issues before these important agencies. But today Assistant Attorney General Delrahim and Chairman Simons have graciously appeared to discuss only one set of issues before us, antitrust issues concerning the tech sector.

Like members of this subcommittee, these key government officials recognize the importance of making sure that we get right the applicability of this Nation's antitrust laws for this critical sector of our modern economy. And like us, each of them is in the midst of a searching inquiry into whether our century-old antitrust laws and our government's enforcement of those laws is adequate for the challenges presented by our new digital economy.

In our inquiry in the subcommittee, we have thus far looked at whether entities in the tech sector, particularly the largest online platforms, have or have not been accumulating and leveraging market power over competitors and other market participants. Affected entities include fellow tech innovators, news publishers, and app developers who depend upon large online platforms to reach consumers and many others.

We have also examined aspects of online data privacy and the role that online data plays in competition, particularly with very large accumulations of consumers' online data.

Today we gather to hear the perspectives of the two antitrust enforcement agencies on these and other tech issues. This will help us not only to engage in oversight of these agencies' activities in the tech sector but also to reap the benefit of those agencies' expertise and wisdom as we assess whether or not our antitrust laws and agencies are up to the task or instead need amendment or added resources.

While this hearing is narrowly focused, it should be noted that there are a number of issues before the Department of Justice that Members of Congress are monitoring closely. This includes the review of consent decrees, and it is my intention to submit questions for the record on this topic.

I encourage our witnesses and all of us to recognize that Congress and the antitrust enforcement agencies need to be careful not to overreach to extend or apply the antitrust laws in ways that end up punishing success, suppressing innovation, and ultimately limiting consumer welfare.

I thank the witnesses for coming and yield back.

Mr. CICILLINE. I thank the gentleman, the ranking member, for yielding back.

I now recognize the chairman of the full committee, the gentleman from New York, Mr. Nadler, for his opening statement.

Chairman NADLER. Thank you, Mr. Chairman, for convening today's oversight hearing of the antitrust agencies and our competition system.

As part 4 of our series of hearings on online platforms and market power, today's discussion is essential to advancing the committee's bipartisan investigation into competition in digital markets.

This hearing occurs at a critical moment. There is growing evidence that a handful of dominant platforms now control key arteries of online commerce, content, and communications. A number of important digital markets are now dominated by just one or two firms.

For example, Google controls over 90 percent of the global search market, and Facebook captures over 80 percent of all global social media revenues. By some estimates, Amazon controls about half of all online commerce in the United States.

While the open internet has delivered enormous benefits to Americans, waves of anticompetitive consolidation in digital markets have had devastating effects on key elements of our democracy and economy, such as a free and diverse press. It also threatens the survival of a key element of our economy, the American start-up. Empirical evidence suggests that the trends of increasing consolidation of market power in digital markets pose a threat to technology startups and to innovation in the U.S. economy.

For example, it has been reported that seed funding for technology startups, the initial round of investment in a startup, has declined significantly just from 2015 to 2018.

I am deeply concerned about the antitrust agencies' lax merger enforcement, which has permitted these harmful levels of concentration and the rise of market power in the digital economy.

In addition to rising consolidation, there have also been allegations of anticompetitive conduct in digital markets. For instance, as more small and medium-sized businesses become reliant on the dominant platforms to reach consumers, they have increasing concerns that discriminatory or exclusionary conduct by the platforms could destroy their business over the course of just a few days or months.

Despite mounting evidence of illegal monopolization activities by some of the dominant platforms and numerous cases brought by international enforcers, U.S. enforcers appear to be paralyzed. It has been decades, decades, since the Department of Justice or the Federal Trade Commission has brought a significant monopolization case in the tech sector. This is not just a criticism of the current administration. It has been decades since a significant monopolization case has been brought in the tech sector.

Tim Wu, a professor at Columbia University, testified before the Judiciary Committee in July that the Department of Justice court challenges against AT&T, IBM, and Microsoft, quote, "were foundational in terms of shaking up industry and creating room for new firms to grow," unquote.

I am encouraged by reports of the agencies' current investigations into the dominant tech platforms, but the decline in enforcement over the past several decades is extremely troubling—a decline, I should add, that has occurred across all industries, not just in the technology sector. I find it hard to believe that companies in all sectors have simply ceased engaging in illegal monopolization rather than the more likely explanation, which is that the agencies have been and are underenforcing the antitrust laws.

There may be a number of reasons for underenforcement by the agencies with respect to both anticompetitive conduct and to merger review, including unfavorable case law, insufficient enforcement will, and inadequate agency resources, all of which I look forward to having examined at today's hearing.

One problem Congress can most directly address is ensuring that the agencies charged with antitrust enforcement have sufficient funding. Unfortunately, appropriations of these agencies have declined over the last decade in spite of the increase in merger activity and an increase in the complexity of investigations. In real terms, agency funding in 2019, this year, was nearly 20 percent lower than in 2010.

It is vital that the antitrust agencies have the resources they need to do their jobs. I doubt that the gentlemen in front of me will disagree with that statement, at least.

While ultimately it is the responsibility of the antitrust enforcement agencies to enforce the law, Congress has an obligation to assess whether existing antitrust laws and competition policies and the will to enforce those laws and policies are adequate to address the competition issues facing our country and to take action if they are found to be lacking.

Over the past 6 months, the committee's bipartisan investigation into competition in the online marketplace has explored these questions in the context of digital markets. It is essential that we continue this important work through today's hearing and throughout this Congress as we seek to address competition problems in digital markets for the benefit of American consumers, small businesses, and workers.

With that, I look forward to hearing from our witnesses today, and I thank them for their participation.

I yield back.

Mr. CICILLINE. I thank the gentleman for yielding back.

It's now my pleasure to introduce today's witnesses.

Our first witness, Joseph Simons, was sworn in as Chairman of the Federal Trade Commission in 2018. Prior to joining the Commission, Chairman Simons was a partner at Paul, Weiss, Rifkind, Wharton & Garrison and co-chair of their Antitrust Group. He's held multiple positions at the FTC throughout his career, including assistant director for evaluation, associate director for mergers, and director of the Bureau of Competition.

Chairman Simons received his A.B. from Cornell University and his J.D. from Georgetown University Law Center, a fine, fine institution.

Our second witness is Makan Delrahim, assistant attorney general for the Antitrust Division of the United States Department of Justice. Prior to his confirmation in 2017, Mr. Delrahim assisted President Trump's transition team and was briefly deputy White House counsel. He previously served in the DOJ's Antitrust Division in 2003 as deputy assistant attorney general under President George W. Bush. Before his time in the executive branch, Mr. Delrahim was chief of staff and chief counsel to the Senate Judiciary Committee under Chairman Orrin Hatch.

Mr. Delrahim received his B.S. from the University of California, Los Angeles and his J.D. from the George Washington University School of Law.

We welcome our distinguished witnesses and thank them for participating in today's hearing.

And now, if you would please rise, I will begin by swearing you in.

Please raise your right hands. Do you swear or affirm under penalty of perjury that the testimony you're about to give is true and correct, to the best of your knowledge, information, and belief, so help you God?

You may be seated.

Let the record show the witnesses answered in the affirmative.

Please note that each of your written statements will be entered into the record in its entirety. Accordingly, I ask that you summarize your testimony in 5 minutes. To help you stay within that time, there's a timing light on your table. When the light switches from green to yellow, you have 1 minute to conclude your testimony. When the light turns red, it signals that your 5 minutes have expired.

Chairman Simons, you may begin.

TESTIMONY OF THE HONORABLE JOSEPH SIMONS, CHAIRMAN, FEDERAL TRADE COMMISSION; AND THE HONORABLE MAKAN DELRAHIM, ASSISTANT ATTORNEY GENERAL, DEPARTMENT OF JUSTICE, ANTITRUST DIVISION

TESTIMONY OF JOSEPH SIMONS

Mr. SIMONS. Chairman Cicilline, Ranking Member Sensenbrenner, and members of the subcommittee, thank you for the opportunity to appear before you today. I am pleased to talk about the Commission's current competition enforcement activities and policy priorities, particularly with regard to digital platforms. I'm also very happy to appear alongside my esteemed colleague, Assistant Attorney General Makan Delrahim.

Please know that the written statement that I submitted is on behalf of the Commission. My oral statement and responses to your questions today are my own and do not necessarily represent the views of the Commission or any individual commissioner, other than me.

First, I want to thank the committee for its work in areas that are core to our mission, such as pay for delay settlements and drug companies' abuse of the regulatory processes to thwart competition. I also very much appreciate your support in addressing recent court challenges to our 13(b) authority, which is critical.

Today, I want to briefly highlight the recent FTC competition enforcement matters and developments at the agency. In particular, the agency has taken notable actions to prevent anticompetitive mergers and conduct, including in digital markets, that are of interest to this committee and others.

Over the past 2 years, the Commission has had 43 merger enforcement actions, including seven in litigation for which we are undefeated. These cases have implications across the U.S. economy in markets for specialized software, medical devices, industrial chemicals, and familiar consumer staples.

With respect to conduct, the FTC recently voted unanimously to bring a monopolization case involving vertical restraints on a digital platform. The FTC's complaint against Surescripts alleges that Surescripts is a monopolist in two multisided platforms, one connecting doctors to pharmacies and one connecting doctors to PBMs. The complaint alleges that Surescripts used exclusive contracts and similar arrangements to protect its dominant positions in both markets.

In another matter, last year the Commission ruled that 1–800 Contacts had unlawfully entered into agreements with rivals to restrict the scope of truthful, nondeceptive online advertising. As the Commission learned through its earlier research program on adver-

tising restrictions, agreements among competitors to restrict otherwise lawful advertising often reduces competition. The FTC continues to monitor closely the behavior of participants in similar markets.

In an effort to deepen our focus on technology markets and make it a real emphasis, our Bureau of Competition shifted internal resources earlier this year to establish a Technology Enforcement Division. This dedicated group is investigating competition in U.S. technology markets and will recommend enforcement action where warranted.

For example, as Facebook recently publicized, our Technology Enforcement Division has commenced an antitrust investigation into some of Facebook's business practices.

Finally, we continue our robust policy work, including hearings on Competition and Consumer Protection in the 21st Century. We held quite a number of hearings focused on various parts of the technology sector, such as multisided platforms, algorithms, artificial intelligence, and data security. We expect to begin releasing output soon, including technology platform guidance.

We are committed to using our resources efficiently to protect consumers and to promote competition, to anticipate and respond to changes in the marketplace, and to meet current and future challenges.

Thank you for your time, and I look forward to your questions.

[The statement of Mr. Simons follows:]

Prepared Statement of
the Federal Trade Commission

Before the
Snbcommittee on Antitrust, Commercial and Administrative Law
Of the Judiciary Committee
United States House of Represeutatives

"Online Platforms and Market Power, Part 4: Perspectives of the Antitrust Agencies"

Washington, D.C.
November 13, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and Members of the Subcommittee, thank you for the opportunity to appear before you today. I am Joe Simons, Chairman of the Federal Trade Commission, and I am pleased to testify on behalf of the Commission regarding some of our current competition enforcement activities and policy priorities.[1]

For over 100 years, the FTC has worked to ensure that our nation's markets are open, vibrant, and working for American consumers. We accomplish these goals through targeted yet vigorous enforcement of the nation's antitrust and consumer protection laws, and by using our unique set of research and policy tools. Though the U.S. economy is always evolving, the FTC's structure, research capacity, and committed staff enable us to protect consumers and promote competition in an ever-changing marketplace. This testimony highlights a number of recent FTC competition enforcement matters, with notable victories in stopping anticompetitive mergers and conduct—including in digital markets that are of interest to this Committee and others. We also provide an update on some of our more significant policy initiatives, and briefly highlight some of our advocacy work, both here and abroad.

I. FTC Competition Enforcement

The Commission promotes competition through a rigorous, fact-intensive approach to law enforcement. The FTC has jurisdiction over a wide swath of the economy and focuses its enforcement efforts on sectors that most directly affect consumers and their wallets, such as health care, pharmaceuticals, consumer products and services, technology, manufacturing, and energy. The FTC shares primary jurisdiction with the U.S. Department of Justice's Antitrust Division ("DOJ") (collectively, "the agencies") in enforcing the nation's antitrust laws.

[1] This written statement represents the views of the Federal Trade Commission. The oral presentation and responses to questions by Chairman Simons are his own, and do not necessarily reflect the views of the Commission or of any other Commissioner.

A. Maintaining Competition through Robust Merger Enforcement

One of the agencies' principal responsibilities is to prevent mergers that may substantially lessen competition. Under the Hart-Scott-Rodino ("HSR") Act, parties to certain mergers and acquisitions must notify the FTC and DOJ of their intent to merge, and must observe a statutory waiting period before consummating their transactions. In general, since FY 2013, these premerger filings have increased steadily; last year, for the second year in a row, we received just over 2,000 HSR filings.[2]

Most reported transactions do not raise significant competition concerns, and the agencies clear non-problematic transactions expeditiously. But when the evidence suggests that a proposed transaction is likely to harm competition, the Commission does not hesitate to intervene. In FY 2019, the FTC challenged 21 mergers. Most of these matters were resolved with the parties through consent decrees that preserved pre-merger levels of competition.

Over the past two years, the Commission has challenged seven mergers in court, and the agency's litigation staff compiled an impressive record of success so far. Of the five challenges that occurred in FY 2018, federal courts granted preliminary injunctions in two cases;[3] the parties abandoned their mergers in the face of our court challenge in two other cases;[4] and the

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[2] The agencies received 2,100 HSR filings in FY 2018, a slight increase from FY 2017, where we received 2,052. Apart from these two years, the last time HSR filings exceeded 2,000 was in FY 2007.

[3] *FTC v. Tronox Ltd.*, 332 F. Supp. 3d 187 (D.D.C. 2018) (granting preliminary injunction); *FTC v. Wilh. Wilhelmsen Holding ASA*, 341 F. Supp. 3d 27 (D.D.C. 2018) (granting preliminary injunction). The agency also won a full administrative trial on the merits in the *Tronox* matter before an administrative law judge, before the parties ultimately settled with the agency. FTC Press Release, *FTC Requires Divestitures by Tronox and Cristal, Suppliers of Widely Used White Pigment, Settling Litigation over Proposed Merger* (Apr. 10, 2019), https://www.ftc.gov/news-events/press-releases/2019/04/ftc-requires-divestitures-tronox-cristal-suppliers-widely-used.

[4] J.M. Smucker Co. abandoned its planned acquisition of Conagra's Wesson cooking oil brand after the FTC filed suit in March 2018. FTC Press Release, *FTC Challenges Proposed Acquisition of Conagra's Wesson Cooking Oil Brand by Crisco Owner, J.M. Smucker Co.* (Mar. 5, 2018), https://www.ftc.gov/news-events/press-releases/2018/03/ftc-challenges-proposed-acquisition-conagras-wesson-cooking-oil. CDK abandoned its plans to purchase rival software vendor Auto/Mate after the Commission initiated litigation in March 2018. *In re CDK Global & Auto/Mate*, Dkt. 9382 (Mar. 20, 2018), https://www.ftc.gov/enforcement/cases-proceedings/171-0156/cdk-global-automate-matter.

Commission recently issued an opinion upholding an administrative law judge's initial decision finding liability in the fifth matter.[5] These cases raised competition issues all across the U.S. economy, implicating markets for specialized software, medical devices, industrial chemicals, and familiar consumer staples.

FY 2019 was no different, with the Commission continuing to initiate litigation when necessary to prevent anticompetitive harm. For instance, the Commission filed a motion for a preliminary injunction to block Evonik Industries AG's proposed $625 million acquisition of PeroxyChem Holding company.[6] The complaint alleges that the merger of the chemical companies would substantially reduce competition in both the Pacific Northwest and the Southern and Central United States for the production and sale of hydrogen peroxide, a commodity chemical that has a variety of end uses including bleaching pulp, de-inking recycled paper, and sterilizing food and beverage packaging. The FTC has asked the federal district court to enjoin the merger pending the outcome of an administrative trial, which is scheduled to begin January 22, 2020.

In September, the Commission issued an administrative complaint to block a merger between two of the "Big 4" largest title insurance underwriters in the nation, in order to preserve the beneficial competition that plays out in everyday real estate transactions across the United States. The complaint alleged that Fidelity National Financial, Inc.'s proposed $1.2 billion acquisition of Stewart Information Services would substantially lessen competition in state markets for title insurance underwriting for large commercial transactions, and in several local

[5] In December 2017, the FTC challenged the consummated merger of two manufacturers of prosthetic knees controlled by microprocessors. On November 1, 2019, after a full administrative trial, the Commission upheld the administrative complaint challenging the merger and ordered a divestiture of the acquired business. *In re Otto Bock HealthCare North America, Inc.*, Dkt. 9378, Comm'n Op. (Nov. 6, 2019), https://www.ftc.gov/system/files/documents/cases/d09378commissionfinalopinion.pdf.

[6] FTC Press Release, *FTC Challenges Proposed Merger of Two Hydrogen Peroxide Producers* (Aug. 2, 2019), https://www.ftc.gov/news-events/press-releases/2019/08/ftc-challenges-proposed-merger-two-hydrogen-peroxide-producers.

markets for title information services.[7] Although the Commission has required the divestiture of title plant assets in prior mergers involving Fidelity,[8] for the first time the Commission also alleged that the elimination of competition would likely harm customers seeking to purchase title insurance for large commercial transactions. The Commission authorized staff if necessary to seek preliminary relief to prevent the merger pending an administrative trial, which was scheduled to begin in February 2020. The parties abandoned the transaction after the Commission issued its complaint.[9]

One increasing challenge for the Commission in litigating competition cases is the need to hire testifying economic experts. Vigorous enforcement requires the right tools, and qualified experts are a critical resource in every FTC competition case where litigation appears likely. Over the last five years, our annual expert costs for competition matters have risen significantly. In FY 2014, the agency spent just $4.84 million on expert fees in competition cases. In FY 2018, we spent $15.84 million. For a small agency like the FTC, cost changes of this magnitude are challenging to absorb.

We are taking steps to manage these increasing expenses more aggressively, but long-term, structural changes in the economy likely mean that the cost of expert work will continue to grow.[10] Although the FTC has so far managed to allocate sufficient resources to fund the experts needed to support our cases, the agency is reaching the point where we will be unable to meet

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[7] *In re Fidelity National Financial, Inc.*, Dkt. 9385 (Sept. 6, 2019), https://www.ftc.gov/enforcement/cases-proceedings/181-0127/fidelity-national-financialstewart-information-services.

[8] *See, e.g., In re Fidelity National Financial, Inc.*, Dkt. C-4425 (Dec. 24, 2013), https://www.ftc.gov/enforcement/cases-proceedings/131-0159/fidelity-national-financial-inc-lender-processing-services.

[9] FTC Press Release, *Statement of Bruce Hoffman, Director of FTC's Bureau of Competition, on Fidelity National Financial, Inc.'s Decision to Drop Proposed Acquisition of Stewart Information Services Corporation* (Sept. 10, 2019), https://www.ftc.gov/news-events/press-releases/2019/09/statement-bruce-hoffman-director-ftcs-bureau-competition-fidelity.

[10] Today, companies can create and store vast amounts of data about their operations. These richer datasets may enable our testifying experts to conduct higher quality empirical work, but their complexity also requires more review and analysis, and therefore much more time and effort by our experts and their support staff.

these needs without compromising our ability to fulfill other aspects of the mission. The Commission appreciates Congress's attention to our resource needs, including the need to continue to hire qualified outside experts to support effective antitrust enforcement.

B. Combatting Anticompetitive Conduct in Pharmaceutical Markets

The FTC maintains a robust program to identify and stop anticompetitive conduct, especially in the nation's critical markets for health care. We appreciate the bipartisan work of this Committee to enable the Commission to address conduct more effectively by drug companies that limits competition and keeps drug prices high.

For over 20 years, and on a bipartisan basis, the Commission has prioritized ending anticompetitive "reverse payment" agreements in pharmaceutical markets.[11] These agreements involve the branded drug supplier paying a generic firm to abandon its patent challenge and agree not to sell its lower-cost generic product for a period of time. The payment allows the branded company to ensure a period in which it can maintain higher market prices—increasing U.S. health care costs—without the threat of generic competition.

In 2013, the Commission won a critical victory in *FTC v. Actavis*[12] when the U.S. Supreme Court clarified that pay-for-delay arrangements can violate the antitrust laws. This year brought another important milestone in the Commission's long-running effort to combat anticompetitive reverse payment settlements: on the eve of trial, the defendants agreed to settle the original case that led to the Supreme Court's landmark *Actavis* decision. Although we are delighted with the progress on the reverse payment front, we recognize that the economic incentives to engage in this conduct remain in place today, necessitating continued antitrust

[11] *See generally* Fed. Trade Comm'n, Pay for Delay: When Drug Companies Agree Not to Compete, https://www.ftc.gov/news-events/media-resources/mergers-competition/pay-delay (gathering materials related to the history of the FTC's efforts on this issue).
[12] *FTC v. Actavis*, 570 U.S. 756 (2013).

enforcement. For example, in March of this year, the Commission unanimously held that Impax Laboratories and Endo Pharmaceuticals had entered into a reverse payment arrangement that delayed generic entry of Opana ER, an extended release opioid used for pain relief.[13]

At the time of the *Actavis* decision, critics of our enforcement work warned that using antitrust enforcement to stop reverse payment arrangements would have dire consequences; they cautioned that settlement of pharmaceutical patent disputes would become difficult or impossible, and eventually would reduce generic firms' investment in new products. But post-*Actavis* data tell a different story.[14] The agency's sustained attack on reverse payment arrangements has not chilled patent litigation settlements under the Hatch-Waxman Act. Rather, the number of pharmaceutical patent litigation settlements reported to the FTC has actually *increased* dramatically since *Actavis* was decided.[15] What has changed is that pharmaceutical companies use far fewer anticompetitive reverse payments in their patent litigation settlements. Back in FY 2006-2007, just under half of all reported settlements included some form of reverse payment provision.[16] In FY 2016, that number fell to just one settlement out of 232 reported.[17] In

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[13] FTC Press Release, *FTC Concludes that Impax Entered Into Illegal Pay-for-Delay Agreement* (March 25, 2019), https://www.ftc.gov/news-events/press-releases/2019/03/ftc-concludes-impax-entered-illegal-pay-delay-agreement. Endo previously settled these allegations with the agency. FTC Press Release, *Endo Pharmaceuticals Inc. Agrees to Abandon Anticompetitive Pay-for-Delay Agreements to Settle FTC Charges; FTC Refiles Suits Against Generic Defendants* (Jan. 23, 2017), https://www.ftc.gov/news-events/press-releases/2017/01/endo-pharmaceuticals-inc-agrees-abandon-anticompetitive-pay-delay.

[14] For over 15 years, pharmaceutical companies have been required to report to us when they settle patent disputes so we can assess whether those settlements contain potentially problematic provisions. This information allows us to better track trends. These reporting requirements, which Congress included in the *Medicare Prescription Drug, Improvement, and Modernization Act of 2003*, have been extraordinarily helpful in not only identifying potential enforcement matters, but also providing policymakers with greater transparency. Congress recently extended these reporting requirements to settlements involving biologics and biosimilars; this new information will be included in the FTC's annual reports beginning in FY 2019.

[15] In the three years before *Actavis*, the agency, on average, received 139 final settlements annually. In FY 2016, we received 232 final settlements. *See* Bradley S. Albert & Jamie Towey, *Then, now, and down the road: Trends in pharmaceutical patent settlements after* FTC v. Actavis (May 28, 2019), https://www.ftc.gov/news-events/blogs/competition-matters/2019/05/then-now-down-road-trends-pharmaceutical-patent.

[16] *Id.*

[17] *Id.*

short, the FTC's efforts, though they continue to be very resource intensive, are helping to ensure that lower-cost generics come onto the market sooner, saving U.S. consumers billions of dollars.

In another matter involving pharmaceutical market competition, earlier this year the agency announced a settlement with Reckitt Benckiser, resolving allegations related to that firm's efforts to thwart generic competition to the company's Suboxone product, which is used to treat opioid addiction.[18] The FTC's complaint alleged that the company made knowingly false statements to the FDA, while engaging in a so-called "product hopping" scheme to shift existing patients away from the product about to face generic competition and onto another, more lucrative product that enjoyed patent protection and provided no legitimate incremental benefits. This is the first time the agency has brought a case under this theory.

To obtain FDA approval for a generic product, a generic pharmaceutical company must obtain samples of the corresponding brand product and conduct testing to verify that the generic version has the same therapeutic effect. Brand companies can use closed distribution systems and refuse to sell such samples to generics, thereby blocking the ability of companies to file a generic application. This conduct can occur in the context of FDA-mandated risk evaluation and mitigation strategies ("REMS") safety programs, which by law are not to be used to prevent competition, or via voluntary systems adopted by the brand company. The FTC supports legislative efforts to end this anticompetitive strategy while maintaining the FDA's ability to appropriately restrict the distribution of dangerous drugs.

The agency will continue to monitor this space carefully, and we will not hesitate to take vigorous action to protect the integrity of U.S. pharmaceutical markets where warranted.

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[18] FTC Press Release, *Reckitt Benckiser Group plc to Pay $50 Million to Consumers, Settling FTC Charges that the Company Illegally Maintained a Monopoly over the Opioid Addiction Treatment Suboxone* (July 11, 2019), https://www.ftc.gov/news-events/press-releases/2019/07/reckitt-benckiser-group-plc-pay-50-million-consumers-settling-ftc.

C. Competition in Technology Markets

New technologies can offer real consumer benefits, but they can also raise complex and sometimes novel competition issues. We have prioritized efforts to monitor, study, and, where necessary, bring enforcement actions to maintain competition in technology markets. We are undertaking these efforts not only in connection with the technology platforms that are the focus of this Committee's ongoing investigation, but also with respect to technologies employed by companies throughout the economy that are changing and challenging competition. The FTC's Bureau of Competition this year announced a shift in internal resources to establish a Technology Enforcement Division,[19] a dedicated group that will monitor competition in U.S. technology markets and recommend enforcement action when warranted.

Recently, the FTC voted unanimously to initiate litigation in federal court against Surescripts.[20] The FTC's complaint alleges that Surescripts is a monopolist in two two-sided platform markets associated with electronically transmitted drug prescription information.[21] The complaint alleges that Surescripts structured its contracts to lock customers into exclusive arrangements, providing "loyalty" discounts that would make it unattractive for buyers to shift their business away to Surescripts' rivals. Through a web of exclusive arrangements and other exclusionary conduct, the complaint alleges, Surescripts was able to protect its dominant position in these markets, to the detriment of U.S. consumers.

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[19] Patricia Galvin & Krisha Cerilli, *What's in a Name? Ask the Technology Enforcement Division* (Oct. 16, 2019), https://www.ftc.gov/news-events/blogs/competition-matters/2019/10/whats-name-ask-technology-enforcement-division; *see also* FTC Press Release, *FTC's Bureau of Competition Launches Task Force to Monitor Technology Markets* (Feb. 26, 2019), https://www.ftc.gov/news-events/press-releases/2019/02/ftcs-bureau-competition-launches-task-force-monitor-technology. This specialized group includes seasoned career attorneys with significant prior experience in complex markets, including markets for online advertising, social networking, mobile device markets, and technology platforms, and will include a technology fellow who will provide technical support to the division.

[20] FTC Press Release, *FTC Charges Surescripts with Illegal Monopolization of E-Prescription Markets* (Apr. 24, 2019), https://www.ftc.gov/news-events/press-releases/2019/04/ftc-charges-surescripts-illegal-monopolization-e-prescription.

[21] *Id.*

In another recent matter, the Commission ruled that 1-800 Contacts had unlawfully entered into agreements with rivals to restrict the scope of truthful, non-deceptive online advertising.[22] The conduct at issue involved agreements among competitors not to bid in auctions for certain keywords conducted by online search sites. The Commission found that consumers were deprived of information they could have used to compare and evaluate offerings from competing online sellers to obtain lower priced contacts. As the Commission learned through its earlier research program on advertising restrictions, agreements among competitors to restrict otherwise lawful advertising can blunt competitive rivalry and thereby reduce competitive pressure.[23] The FTC continues to monitor closely the behavior of participants in these and other critical technology markets.

As outlined in Commission testimony from last month,[24] current law provides the Commission with several potential avenues to counter anticompetitive conduct by large technology firms that seek to thwart nascent and potential threats by acquisition or other means. For instance, when evaluating mergers in dynamic markets, the Commission pays particularly close attention when an industry leader seeks to acquire an up-and-coming competitor that is changing customer expectations and gaining sales. Last year, the FTC relied on Section 7 of the Clayton Act to challenge the merger of market leader CDK Global and its far smaller competitor, Auto/Mate, because Auto/Mate's outsized impact meant that the merger would dampen competition from a key emerging rival. According to the complaint, the transaction would have

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[22] FTC Press Release, *FTC Commissioners Find That 1-800 Contacts Unlawfully Harmed Competition In On-Line Search Advertising Auctions, Restricting the Availability of Truthful Advertising to Consumers* (Nov. 14, 2018) https://www.ftc.gov/news-events/press-releases/2018/11/ftc-commissioners-find-1-800-contacts-unlawfully-harmed. Commissioner Noah Joshua Phillips dissented, and Commissioner Christine Wilson did not participate. This matter is currently on appeal.

[23] *See, e.g., Polygram Holding, Inc. v. FTC*, 416 F.3d 29 (D.C. Cir. 2005).

[24] Prepared Statement of the Federal Trade Commission before the S. Comm. on the Judiciary, Subcommittee on Antitrust, Competition Policy and Consumer Rights (Sept. 24, 2019), https://www.ftc.gov/system/files/documents/public_statements/1545208/p180101_testimony_-_acquisitions_of_nascent_or_potential_competitors_by_digital_platforms.pdf.

reduced competition in the already-concentrated market for specialized platform business software used by U.S. franchise automotive dealers, known as dealer management systems.[25] The Commission also is mindful that this kind of dynamic analysis may be required when the relevant products involve data. For example, in 2014 the Commission moved to block Verisk Analytics, Inc.'s proposed acquisition of EagleView, alleging that the proposed transaction would result in a virtual monopoly in the U.S. market for rooftop aerial measurement products used by insurers to estimate repair costs for property damage claims.[26] Verisk had recently entered into direct competition with EagleView by developing its own library of high-resolution aerial images, and the elimination of the firms' ever-closer competition would likely lead to higher prices and reduced incentives to innovate.

The Commission has relied on a theory of potential competition to require relief in numerous pharmaceutical markets where one firm had a product on the market while the other merging firm had a product in development that would likely provide important competition in the near future.[27] The FDA must approve pharmaceutical products in specific stages, which provides a degree of transparency and predictability as to the timing of potential entry of a new drug. Moreover, the Commission's experience in pharmaceuticals markets allows us to project the likely procompetitive effect of a new drug.[28] Of course, there are always challenges to

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[25] *In re CDK Global*, Dkt. 9382 (complaint filed Mar. 20, 2018). Shortly after the FTC issued its complaint, the parties abandoned their proposed transaction.
[26] FTC Press Release, *FTC Challenges Verisk Analytic, Inc.'s Proposed Acquisition of EagleView Technology Corporation* (Dec. 16, 2014), https://www.ftc.gov/news-events/press-releases/2014/12/ftc-challenges-verisk-analytics-incs-proposed-acquisition. The parties dropped their plans after the Commission issued its complaint.
[27] *See* Fed. Trade Comm'n, *Overview of Action in Pharmaceutical Products and Distribution* (August 2018), list of cases included in Potential Competition Mergers, at 60-67 and Innovation Market Mergers at 67-68, https://www.ftc.gov/system/files/attachments/competition-policy-guidance/overview_pharma_august_2018.pdf.
[28] Fed. Trade Comm'n, *Authorized Generic Drugs: Short-Term Effects and Long-Term Impact* ii-iii (2011), http://www.ftc.gov/sites/default/files/documents/reports/authorized-generic-drugs-short-term-effects-and-long-term-impact-report-federal-trade-commission/authorized-generic-drugs-short-term-effects-and-long-term-impact-report-federal-trade-commission.pdf (the first generic competitor's product is typically offered at a 20 to 30 percent discount to the brand product); Fed. Trade Comm., *Pay-For-Delay: How Drug Company Pay-offs Cost Consumers Billions* 8 (2010), http://www.ftc.gov/sites/default/files/documents/reports/pay-delay-how-drug-company-pay-offs-

predicting future entry and convincing a court that entry is likely.[29] Future competition cases pose challenges in weighing and assessing evidence, since predictions about entry can often be called into question.[30]

In markets beyond the pharmaceutical arena, the Commission has applied a similar analysis where neither of the merging firms has a commercially available product, but both are among only a few likely entrants into a future market. For example, in the 2013 merger involving Nielsen and Arbitron, both companies were developing cross-platform measurement services to measure viewership across TV, the Internet, and other platforms. Both firms had developed plans, invested money, and reached out to customers to begin marketing beta versions of those products. Based on these independent efforts, customers believed that Nielsen and Arbitron eventually would compete directly to provide national syndicated cross-platform measurement services. The Commission concluded that each company could be considered a likely future entrant, and that eliminating the future offering of one firm would likely lessen competition.[31]

Under certain circumstances, the acquisition of an emerging or nascent competitor may constitute anticompetitive conduct that illegally maintains a monopoly position. In 2017, the FTC charged that Questcor illegally maintained its monopoly in the United States for a drug

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cost-consumers-billions-federal-trade-commission-staff-study/100112payfordelayrpt.pdf (subsequent generic entry creates greater price competition, with discounts of 85 percent or more off the price of the brand name drug).

[29] In *FTC v. Steris Corp.*, 133 F. Supp. 3d 962 (N.D. Ohio 2015), the district court rejected the Commission's motion for a preliminary injunction to stop the merger of Steris Corporation, one of only two companies providing sterilization services to medical device firms in the United States, and Synergy Health plc, a British company with plans to expand into the United States with a new, possibly superior, sterilization technology. The court found that Synergy's entry was not probable if the merger did not occur, and allowed the merger to proceed. The Commission later dismissed its administrative complaint. *In re Steris Corp. and Synergy Health plc*, Dkt. No. 9365 (May 29, 2015).

[30] In a typical horizontal merger, competitive concerns arise from a merger that eliminates actual and direct competition between the merging parties. In a merger between an established incumbent and a potential entrant, the competitive concern arises from the elimination of the possibility of direct competition that does not currently exist, and will not be realized if the merger proceeds.

[31] *In re Nielsen Holdings, N.V. and Arbitron Inc.*, Dkt. C-4439 (Sept. 20, 2013), https://www.ftc.gov/enforcement/cases-proceedings/131-0058/nielsen-holdings-nv-arbitron-inc-matter. The Commission approved the divestiture of Arbitron's cross-platform audience measurement services to comScore, Inc.

called Acthar that treated infantile spasms and other conditions. Outside of the United States, another drug, Synacthen, was sold in direct competition with Acthar. Questcor (later acquired by Mallinckrodt) bought the U.S. rights to Synacthen, outbidding several other companies for those development rights. The anticompetitive effects of this conduct were substantial because it deprived consumers of the chance that a competitor to an extraordinarily expensive lifesaving drug would emerge but for the acquisition, and, according to the complaint, Questcor had no legitimate business purpose for buying Synacthen other than eliminating a nascent competitor that threatened its Acthar monopoly. In the stipulated final order, Mallinckrodt agreed to pay $100 million in equitable monetary relief in addition to divesting the Synacthen assets.[32]

Given the importance of these markets to consumers and to the economy, the Commission is committed to vigorous enforcement of the antitrust laws to promote current and future competition in critical technology markets.

II. Competition Policy Work

Although the Commission primarily relies on targeted law enforcement to protect competition and consumers, we also have robust research and policy functions. We do independent research; we conduct public workshops; and we share our expertise on competition issues with interested policymakers through our active amicus and advocacy programs.

Critical self-evaluation is an important part of our research agenda. For instance, in 2017, the FTC released a large retrospective study of remedies associated with mergers completed from 2006 through 2012.[33] The findings of this study helped to refine agency best practices

[32] FTC Press Release, *Mallinckrodt Will Pay $100 Million to Settle FTC, State Charges It Illegally Maintained its Monopoly of Specialty Drug Used to Treat Infants* (Jan. 18, 2017), https://www.ftc.gov/news-events/press-releases/2017/01/mallinckrodt-will-pay-100-million-settle-ftc-state-charges-it.

[33] *See* Fed. Trade Comm'n, The FTC's Merger Remedies 2006-2012, A Report of the Bureaus of Competition and Economics, January 2017, at https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf.

related to the merger remedy process. The Commission's Bureau of Economics also has a longstanding program to perform retrospective studies of consummated mergers, which began in the early 1980s and recently has become considerably more active. Probably the most prominent of the FTC's retrospective studies so far is the hospital merger retrospective project, which played a crucial role in reinvigorating the agency's hospital merger enforcement efforts.[34] FTC economists also have completed a number of retrospective analyses of horizontal and vertical transactions in health care, oil-related markets, consumer products markets, and retailing.[35]

FTC studies also can inject competition considerations into broader policy questions of significant public interest. A recent example is the 2016 Patent Assertion Entity study,[36] which evaluated the business practices of patent assertion entities ("PAEs"), firms that acquire patents in order to attempt to generate revenue by licensing or suing accused infringers. The report provided several recommendations for patent litigation reforms.

The FTC continues to pursue important competition policy research. In November 2017, the Commission launched a project encouraging academic and industry research on the impact of certificates of public advantage ("COPAs") on prices, quality, access, and innovation in health

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[34] *See* Joseph Farrell, Paul A. Pautler & Michael G. Vita, *Economics at the FTC: Retrospective Merger Analysis with a Focus on Hospitals*, 35 REV. OF INDUS. ORG. 369 (2009).

[35] *See, e.g.*, Thomas Koch, Brett Wendling, & Nathan Wilson, *The Effects of Physician and Hospital Integration on Medicare Beneficiaries' Health Outcomes* (Bureau of Economics, Working Paper No. 337, July 2018); F. David Osinski & Jeremy Sandford, *Merger Remedies: A Retrospective Analysis of Pinnacle/Ameristar* (Bureau of Economics, Working Paper, May 2018); Thomas Koch & Shawn W. Ulrick, *Price Effects of a Merger: Evidence from a Physicians' Market* (Bureau of Economics, Working Paper No. 333, Aug. 2017); Daniel J. Greenfield, Nicholas M. Kreisle, & Mark D. Williams, *Simulating a Homogeneous Product Merger: A Case Study on Model Fit and Performance* (Bureau of Economics, Working Paper No. 327, Oct. 2015); Daniel Hosken, Luke Olson, & Loren Smith, *Do Retail Mergers Affect Competition? Evidence from Grocery Retailing* (Bureau of Economics, Working Paper No. 313, Dec. 2012) – Published in the Journal of Economics and Management Strategy (Spring 2018). Research conducted by staff of the Bureau of Economics is available at https://www.ftc.gov/policy/reports/policy-reports/economics-research, and a full list of all completed FTC merger retrospectives is available at https://www.ftc.gov/system/files/attachments/press-releases/ftc-announces-agenda-14th-session-its-hearings-competition-consumer-protection-21st-century/list_of_be_retrospective_studies.pdf.

[36] Fed. Trade Comm'n, Patent Assertion Entity Activity, An FTC Study (Oct. 2016) https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf

care services.[37] COPAs are state regulatory frameworks intended to replace health care provider competition and immunize mergers and collaborations from antitrust scrutiny. The Commission has been concerned about the impact of COPAs on consumers, and has undertaken a broad effort to gather additional evidence on their effects. In particular, the FTC has encouraged original empirical research. At the FTC's June 2019 workshop, current and former staff from the Bureau of Economics discussed preliminary results from three original empirical studies of the price effects of mergers approved in the 1990s.[38] Last month, the Commission issued 6(b) orders to five health insurance companies and two health systems to collect data and information to conduct a retrospective study of two COPAs to examine the effects on prices, quality, access, and innovation for healthcare services, as well as on health system employee wages.[39]

The FTC is in the process of concluding a prominent policy initiative: its *Hearings on Competition and Consumer Protection in the 21st Century*. This extensive series of public hearings was convened to consider whether broad-based changes in the economy, evolving business practices, new technologies, and international developments warrant adjustments to competition and consumer protection law, enforcement priorities, and competition policy. The current set of hearings was modeled after a similar effort in 1995 by former FTC Chairman Bob Pitofsky, which was the first step in establishing the FTC as a modern center for "competition R&D."

The FTC worked to feature a wide variety of perspectives in these hearings. We invited legal and economic academics and consultants, public interest groups, public advocacy groups,

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[37] FTC Press Release, *FTC Staff Seeks Empirical Research and Public Comments Regarding Impact of Certificates of Public Advantage* (Nov. 1, 2017) https://www.ftc.gov/news-events/press-releases/2017/11/ftc-staff-seeks-empirical-research-public-comments-regarding.
[38] *See* A Health Check on COPAs: Assessing the Impact of Certificates of Public Advantage in Healthcare Markets. (Jun. 18, 2019), at https://www.ftc.gov/system/files/documents/public_events/1508753/slides-copa-jun_19.pdf.
[39] FTC Press Release, *FTC to Study the Impact of COPAs* (Oct. 21, 2019) https://www.ftc.gov/news-events/press-releases/2019/10/ftc-study-impact-copas.

and representatives of businesses and industries to our hearing sessions. By the conclusion of our final hearing on June 12, 2019, we had convened 14 sessions over 23 days, with thousands of people attending via webcast or in person. To date, we have received close to 950 unique comments on the covered topics. All the information related to the hearings—the transcripts, comments, presentations, and questions—is available on the FTC website. This large corpus of material on the critical issues facing modern competition and consumer protection policy has already created a valuable resource for future research by the agency, interested academics, practitioners, and policymakers.

At this stage, we are distilling the large volume of stakeholder input and generating further output, such as reports, statements, guidance, and speeches. As we have previously announced, we are prioritizing work involving platform competition, vertical mergers, and international initiatives.[40] This work will be forward-looking and will both support the Commission's enforcement mission and identify additional policy initiatives that may be important in shaping the future development of antitrust law. We expect to begin releasing some of this output soon.

Through these hearings, the Commission intends to help formulate an enduring approach to current questions about antitrust and consumer protection enforcement. We recognize that, in some areas of the law, some now question the policies that have served as the basis for what had long been a bipartisan consensus. Particularly with respect to certain antitrust issues where this consensus has been questioned, we believe these hearings were a valuable investment of our resources to determine whether adjustments are necessary.

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[40] Prepared Remarks of Chairman Joseph Simons, 46th Conference on International Antitrust Law and Policy (Sept. 13, 2019), https://www.ftc.gov/system/files/documents/public_statements/1544082/simons_-_fordham_speech_on_hearings_output_9-13-19.pdf.

III. International Engagement – Competition

In support of its competition mission and domestic antitrust enforcement, the FTC engages in significant work with international counterparts and organizations. The FTC works regularly with foreign antitrust agencies to ensure close collaboration on cross-border cases and convergence toward sound competition policies and procedures. In FY 2019, the FTC cooperated on 36 merger and anticompetitive conduct investigations of mutual concern with counterpart agencies from 21 jurisdictions. Many of these matters involved cooperation with several agencies to achieve effective, sound, and consistent outcomes. For example, with respect to the recent merger of industrial gas suppliers Praxair, Inc. and Linde AG, Commission staff worked cooperatively with staff from the antitrust agencies of Argentina, Brazil, Canada, Chile, China, Colombia, the European Union, India, Korea, and Mexico to analyze the proposed transaction and potential remedies.

The U.S. antitrust agencies also promote convergence toward sound policy through bilateral engagement with foreign competition agencies and by playing a leadership role in multilateral competition organizations. In FY 2019 we held high-level bilateral meetings with colleagues from several competition authorities around the world, including those from Canada, the European Union, India, Japan, Korea, and Mexico. Consistent with our objectives of promoting sound practices and processes, our discussions covered timely issues, including digital platforms, vertical mergers, procedural fairness, and the antitrust treatment of the exercise of intellectual property rights. Fostering both cooperation and convergence, the FTC's technical assistance program conducted 29 missions in 19 jurisdictions in FY 2019, including the placement of resident advisors in the competition agencies of Brazil, the Philippines, and Ukraine. Pursuant to its authority under the US SAFE WEB ACT, the FTC also hosted

"International Fellows" from foreign competition agencies to work directly with FTC staff to gain first-hand understanding of and experience with the practices and approaches that the FTC uses in its enforcement, which they then bring back to their agencies. The FTC has hosted 87 competition officials from 31 jurisdictions since the program's inception in 2007 through the end of FY 2019.

The FTC plays a central role in key multilateral fora dedicated to promoting sound competition policy and enforcement around the world. The FTC serves on the Steering Group of the 139-member International Competition Network ("ICN") and is active in ICN working groups that draft recommendations. For example, the FTC led the development of the ICN Recommended Practices for Investigative Process—the most comprehensive consensus best practices for competition agencies on providing due process in antitrust investigations. We also lead the ICN's efforts to promote implementation of its many work products on key topics such as merger review, the analysis of dominant firm conduct, and the conduct of effective and fair investigations. We will have additional opportunities to showcase successful U.S. experience when the U.S. antitrust agencies jointly host the ICN's annual conference next year.

Finally, the FTC works with other U.S. government agencies to address in a coordinated and effective manner competition issues that implicate broader U.S. policy interests, such as the protection of intellectual property and non-discriminatory treatment of U.S. companies, internationally, *e.g.*, recently with China and Korea. In addition, the FTC worked with the Departments of Treasury, Justice, and State, among others, on developing G7, G20, and OECD ministerial statements to achieve outcomes that furthered U.S. policy and interests involving competition in the digital economy.

IV. Conclusion

The FTC remains committed to marshalling its resources efficiently in order to protect consumers and promote competition, to anticipate and respond to changes in the marketplace, and to meet current and future challenges. We look forward to continuing to work with this Subcommittee and Congress, and we would be happy to answer your questions.

Mr. CICILLINE. Thank you, Chairman.
I now recognize Mr. Delrahim for 5 minutes.

TESTIMONY OF MAKAN DELRAHIM

Mr. DELRAHIM. Thank you, Chairman Cicilline, Ranking Member Sensenbrenner, Chairman Nadler, and distinguished members of this subcommittee. Thanks for inviting me to be before you today at this oversight hearing.

We begin by thanking the subcommittee for continuing the bipartisan support of the Antitrust Division's work to protect competition on behalf of American consumers, workers, and entrepreneurs. I also want to thank you for your leadership and oversight of some of the most challenging issues of today, such as the competitive impact of online platforms.

We have submitted a longer statement for the record. In the interest of time, I just wanted to highlight a couple of the issues just for your benefit and the committee's benefit here.

Recently, just this past week, we announced the formation of the Procurement Collusion Strike Force. It's an effort with U.S. attorneys across the country, the FBI, the Department of Defense's DCIS, as well as a number of inspectors general, and our efforts there are to detect, prevent, and prosecute criminal activity, especially when taxpayers are the victims at all levels of the government.

I will place some of the other general matters of our statement in the record. We will, with your permission, supplement the previous statement. But I wanted to highlight a few of those, but I want to get into the issue that is germane to your particular interest in this hearing, which is the online platforms and our activity there.

Related to that, I should also mention that we—that the United States sought and was granted the privilege of hosting for the first time the ICN's, the International Competition Network's annual conference. This is the most important conference of global competition enforcement agencies, and our host status for the 2020 ICN will allow the Antitrust Division and the Federal Trade Commission to showcase our ideals by promoting fundamental due process as well as a broad range of important policy issues, including digital platform competition and cartel enforcement at this event next May.

Now on to the Department's activities in digital platform markets. I know the subcommittee continues to focus on the way that consumers engage with online platforms. I'm pleased to report that the division is hard at work reviewing business practices by market-leading online platforms, which we announced in July.

To date, Facebook and Google have both publicly disclosed investigations by the division. These companies are not the only focus of our review. They are, however, an important part because of the significant role they play in the lives of so many American citizens and because they occupy a unique role in the modern era of personalized advertising supported by user data.

The work we are doing is focused in part on understanding how personalized advertising transactions work and their competitive dynamics. We're looking at how these dynamics create value for ad-

vertisers, content creators, and the American consumers who use these advertising-supported platforms.

By understanding these competitive dynamics, we can determine if the market leaders have monopoly power, how do they exercise such monopoly power, and whether the source of that power is from merits-based competition or if the source of that power is exclusionary or anticompetitive conduct.

Other online platforms make money in other ways, and we are reviewing those other business models as well.

The common thread is this: Online platforms bring together users who access information services on the platform with third party providers, products, services, or advertisement. We're concerned with the ways that the platform operators can manipulate the conditions for competition.

In some instances, the platform operators may have the incentive to improve the platform for the benefit of all of those users. In other instances, the platform operator also may compete against users of the platform and may have an incentive to disadvantage or exclude competitors.

Of course, the division did not begin its work investigating online platforms when we announced the reviews in July. Indeed, we've had a section dedicated to industries governed by information technology and network effects for more than 20 years.

It was this section that in 2008 investigated and decided to file suit against Google and Yahoo for an agreement that would have eliminated Yahoo as an independent source of online search advertising. This tech section coordinated its investigation with 15 States and Canada, and ultimately, the parties dropped their plans for the agreement rather than face a lawsuit in this field.

That section also dealt with online zero price business models and in 2012 litigated and won an injunction against H&R Block and TaxACT, that merger. The challenge was in part based on evidence that TaxACT was a maverick online startup that threatened the behemoth incumbent with a freemium business model in the market for online tax preparation services.

The division also investigated and secured a settlement in Google ITA in 2015. That settlement resolved allegations in the complaint that Google's merger with a producer of airfare pricing and shopping systems would harm competition among online flight search platforms, resulting in reduced choice and less innovation for consumers.

Although I'm not able to discuss the particulars of our ongoing investigations, I think these examples of past cases, along with some recent public remarks, can assure you that the Antitrust Division will ask the right questions as we investigate whether any platform acquired or maintained its monopoly power through anticompetitive conduct.

I look forward to your questions.

[The statement of Mr. Delrahim follows:]

Department of Justice

STATEMENT OF

MAKAN DELRAHIM
ASSISTANT ATTORNEY GENERAL
ANTITRUST DIVISION
U.S. DEPARTMENT OF JUSTICE

BEFORE THE

SUBCOMMITTEE ON ANTITRUST, COMMERCIAL AND
ADMINISTRATIVE LAW
COMMITTEE ON THE JUDICIARY
U.S. HOUSE OF REPRESENTATIVES

FOR A HEARING ENTITLED

"OVERSIGHT OF THE ENFORCEMENT OF THE ANTITRUST LAWS"

NOVEMBER 13, 2019

The Department was not notified of the new scope of the hearing until Friday November 8, 2019. Because of the late notice of the change, we are unable to clear written testimony specific to the hearing's narrowed subject matter. The Department respectfully requests the opportunity to supplement Assistant Attorney General Delrahim's written testimony after the hearing with cleared testimony on the new subject matter, as it deems necessary.

STATEMENT OF
MAKAN DELRAHIM
ASSISTANT ATTORNEY GENERAL
ANTITRUST DIVISION
UNITED STATES DEPARTMENT OF JUSTICE

BEFORE THE
SUBOMMITTEE ON ANTITRUST, COMMERCIAL
AND ADMINISTRATIVE LAW
COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE
FOR A HEARING ENTITLED
"OVERSIGHT OF THE ENFORCEMENT OF THE ANTITRUST LAWS"
NOVEMBER 13, 2019

Chairman Cicilline, Ranking Member Sensenbrenner, and distinguished members of the Subcommittee, it is an honor for me to appear before you today on behalf of the Antitrust Division of the Department of Justice. This Committee enables our efforts to enforce the antitrust laws effectively, in order to ensure that our markets continue to be competitive and benefit American consumers. I want to thank Chairman Cicilline and Ranking Member Sensenbrenner in particular for your steadfast support of the Division's efforts.

History has taught us that properly functioning competitive markets result in innovation, lower prices, and higher quality goods and services. As the Assistant Attorney General for the Antitrust Division, I take immense pride in the important work of the Division's antitrust enforcement and competition advocacy, which support the free-market competition at the heart of the American economy. Cognizant of the importance of our mission, we at the Antitrust Division strive to maximize the effectiveness of our efforts to protect the American consumer.

Despite limited resources to address ever-evolving and complex markets, the Division has risen to the occasion. My testimony today will review our extensive efforts in criminal and civil enforcement, our work in competition advocacy and policy, and our efforts to promote competition internationally.

Criminal Enforcement

Our criminal program also has been very active. We had 102 pending grand jury investigations at the close of FY 2019, the highest total since 2010. In addition to two trials this fall, we are preparing for two trials scheduled to begin between January and February. Since April alone, we have announced the first charges in six investigations.[1]

[1] All statistics are up to date as of November 1, 2019.

The Division's work protects more than the interests of consumers; it protects the interests of taxpayers as well. Five South Korean companies pleaded guilty, and agreed to enter into civil settlements, for rigging bids on U.S. government fuel supply contracts.[2] Together the companies must pay over $150 million in criminal fines and an additional $200 million in civil damages for their involvement in a decade-long bid-rigging conspiracy affecting contracts to supply fuel to the U.S. Army, Navy, Marine Corps, and Air Force bases in South Korea. The civil recoveries are the largest the Antitrust Division has obtained under Section 4A of the Clayton Act, which permits the United States to obtain treble damages when it has been injured by an antitrust violation.

These cases, which also resulted in pending charges against seven executives, required cooperation among the Antitrust Division's civil and criminal sections, the Department of Justice's Civil Division, the U.S. Attorney's Office for the Southern District of Ohio, and agents from the Federal Bureau of Investigation and Department of Defense. These cases will help set an example for how separate criminal and civil investigations can satisfy the twin objectives of holding companies and individuals accountable for their criminal conduct while expanding the Division's Section 4A recovery efforts. Moreover, the charges arising out of this investigation protect the integrity of our Defense Department's acquisition process and help ensure the U.S. military receives goods and services at the best possible prices.

In another example of the Division's commitment to safeguarding taxpayer dollars, in September, a former city official and a former executive were each sentenced to 12 months in prison after they pleaded guilty to a fraud scheme involving the federally funded Detroit Demolition program.[3]

To further these efforts, just last week, on November 5th, the Deputy Attorney General joined me in announcing the establishment of the Procurement Collusion Strike Force (PCSF). The PCSF is a partnership composed of the Antitrust Division, the U.S. Attorneys' Offices for thirteen districts around the country, the FBI, and the Inspectors General for several federal agencies. Combining the experience and expertise of these partner agencies, the PCSF will lead a coordinated national response to combat antitrust crimes and related schemes in procurement at all levels of government—federal, state, and local. Specifically, the PCSF's objectives will be, first, to deter and prevent antitrust and related crimes on the front end of the procurement process, thereby protecting taxpayer dollars before they are lost to criminal conduct, and second,

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[2] Press Release, U.S. Dep't of Justice, More Charges Announced in Ongoing Investigation into Bid Rigging and Fraud Targeting Defense Department Fuel Supply Contracts for U.S. Military Bases in South Korea (Mar. 20, 2019), https://www.justice.gov/opa/pr/more-charges-announced-ongoing-investigation-bid-rigging-and-fraud-targeting-defense.

[3] Press Release, U.S. Dep't of Justice, Former Executive at Adamo Group Sentenced for Conspiracy to Commit Honest Services Fraud in Connection with the Detroit Demolition Program (Sept. 10, 2019), https://www.justice.gov/opa/pr/former-executive-adamo-group-sentenced-conspiracy-commit-honest-services-fraud-connection; Press Release, Former City of Detroit Building Authority Official Sentenced for Bribery Conspiracy in Connection with Detroit Demolition Program (Sept. 23, 2019), https://www.justice.gov/opa/pr/former-city-detroit-building-authority-official-sentenced-bribery-conspiracy-connection.

to facilitate more effective investigation and prosecution of these crimes on the back end of the procurement process.

The Division's commitment also extends to policing consumer markets that impact Americans at the grocery store. This fall, after nearly a year of litigation, StarKist Co. was sentenced to pay a $100 million, statutory maximum criminal fine for its role in a conspiracy to fix prices for canned tuna sold in the United States.[4] This result exemplifies the Division's commitment to protecting consumers when collusion affects items that stock kitchen shelves, along with the Division's resolve to hold corporate violators to account at a litigated sentencing.

The Division's recent investigations have also included international conspiracies involving electronic components. In July, NHK Spring Co., a Japanese manufacturer of suspension assemblies used in hard disk drives, agreed to plead guilty and pay a $28.5 million fine for its role in a global price-fixing conspiracy.[5]

As American consumers purchase more online, they should know that the antitrust laws protect them from collusion in online markets. In January, a former e-commerce executive pleaded guilty to conspiring to fix the prices of posters sold online and was sentenced to serve six months.[6] This indictment is part of the Division's first online marketplace prosecution involving algorithmic pricing tools. The Division has also worked to prosecute companies and executives who fixed prices for customized promotional products sold through websites. The conspiracy not only corrupted online markets, but was carried out using social media platforms and encrypted messaging applications such as Facebook, Skype, and WhatsApp. To date, 11 defendants have been charged; five individuals and four companies have pleaded guilty, resulting in jail time for each executive and corporate criminal fines totaling nearly $10 million.[7]

Another recent criminal investigation resulted in significant prison sentences for guilty executives. At the beginning of the summer, two freight transportation executives were sentenced for their role in a conspiracy to fix prices of international freight forwarding services. The price fixing agreement, which raised prices by as much as 20 percent, victimized everyday consumers sending gifts and household goods to loved ones for the holidays. The CEO of a Louisiana-based freight-forwarding company was sentenced to 18 months' imprisonment, and the company's manager was sentenced to 15 months. Each executive also was sentenced to pay a $20,000 criminal fine and three years of supervised release. In October, a third freight executive pleaded guilty for her role in the price-fixing conspiracy and will be sentenced at a later date.

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[4] Press Release, U.S. Dep't of Justice, StarKist Ordered to Pay $100 Million Criminal Fine for Antitrust Violation (Sept. 11, 2019), https://www.justice.gov/opa/pr/starkist-ordered-pay-100-million-criminal-fine-antitrust-violation.

[5] Press Release, U.S. Dep't of Justice, Japanese Manufacturer Agrees to Plead Guilty to Fixing Prices for Suspension Assemblies Used in Hard Disk Drive, https://www.justice.gov/opa/pr/japanese-manufacturer-agrees-plead-guilty-fixing-prices-suspension-assemblies-used-hard-disk.

[6] Press Release, U.S. Dep't of Justice, Former E-Commerce Executive Pleads Guilty to Price Fixing; Sentenced to Six Months (Jan. 28, 2019), https://www.justice.gov/opa/pr/former-e-commerce-executive-pleads-guilty-price-fixing-sentenced-six-months.

[7] Press Release, U.S. Dep't of Justice, E-Commerce Company Pleads Guilty to Antitrust Charge (June 27, 2019), https://www.justice.gov/opa/pr/e-commerce-company-pleads-guilty-antitrust-charge.

Additionally, in June, a district court unsealed the indictment of two Norwegian shipping executives charged with participating in a long-running conspiracy to allocate certain customers and routes, rig bids, and fix prices for the sale of international ocean shipments. These executives remain fugitives.

The Division continues its effort to prosecute wrong-doing in the financial services industry. Last spring, two broker-dealers pleaded guilty to rigging bids for American Depository Receipts, negotiable securities that represent the shares of foreign stocks and enable Americans to invest in foreign companies, and were sentenced to pay criminal fines of more than $5 million collectively.[8] In addition, a former trader at one of the broker-dealers pleaded guilty for his participation in the bid-rigging conspiracy and is scheduled to be sentenced later this month.

The Antitrust Division also continues its efforts to identify and prosecute unlawful conduct in the generic pharmaceuticals industry—which is of vital importance to many Americans. To date, two executives have pleaded guilty to criminal antitrust violations,[9] and a company, Heritage Pharmaceuticals Inc., was charged and entered into a deferred prosecution agreement with the Antitrust Division.[10]

Since April, two individuals have pleaded guilty in the Division's investigation into bid rigging at online auctions for surplus government equipment, which protects our government from paying unlawfully inflated prices.[11] These prosecutions have put on notice companies that engage in anticompetitive conduct to the detriment of our government and taxpayers.

Criminal enforcement of the Sherman Act is an essential tool to protect competition and consumers. Criminal enforcement can be resource intensive, but it is one of our most powerful deterrents against serious violations such as price-fixing, bid-rigging, and market allocation that unambiguously disrupt the integrity of the competitive process, harm consumers, and reduce faith in the free-market system. Such harmful agreements among competitors are subject to a rule of per se illegality, and individuals who engage in such conduct—including high-level executives—appropriately face criminal accountability along with the corporations they serve.

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[8] Press Release, U.S. Dep't of Justice, Second New York Broker-Dealer Pleads Guilty to Rigging Bids for Financial Instruments in Violation of Antitrust Law (June 14, 2019), https://www.justice.gov/opa/pr/second-new-york-broker-dealer-pleads-guilty-rigging-bids-financial-instruments-violation; Press Release, U.S. Dep't of Justice, New York Broker-Dealer Pleads Guilty To Violating U.S. Antitrust Laws by Rigging Bids for Financial Instruments (May 10, 2019), https://www.justice.gov/opa/pr/new-york-broker-dealer-pleads-guilty-violating-us-antitrust-laws-rigging-bids-financial; Press Release, U.S. Dep't of Justice, Former Financial Services Executive Pleads Guilty to Rigging Bids for financial Instruments in Violation of Antitrust Law (June 27, 2019), https://www.justice.gov/opa/pr/former-financial-services-executive-pleads-guilty-rigging-bids-financial-instruments.

[9] Press Release, U.S. Dep't of Justice, Former Top Generic Pharmaceutical Executives Charged with Price-Fixing, Bid-Rigging and Customer Allocation (Dec. 14, 2016), https://www.justice.gov/atr/case-document/file/918276/download

[10] Press Release, U.S. Dep't of Justice, Pharmaceutical Company Admits to Price Fixing in Violation of Antitrust Law, Resolves Related False Claims Act Violations (May 31, 2019), https://www.justice.gov/opa/pr/pharmaceutical-company-admits-price-fixing-violation-antitrust-law-resolves-related-false.

[11] Press Release, Texas Bidder Pleads Guilty to Rigging Bids at Online Auctions for Surplus Government Equipment (Apr. 10, 2019), https://www.justice.gov/opa/pr/texas-bidder-pleads-guilty-rigging-bids-online-auctions-surplus-government-equipment.

The threat of prison for corporate decision-makers cannot easily be dismissed as the cost of doing business and thus serves as a powerful deterrent.

Given the importance of the per se rule to our criminal program, it is notable that a number of criminal defendants this past year tried to argue that the rule of reason applies to anticompetitive conduct that has long been condemned as categorically illegal. Unlike the per se standard, the rule of reason requires the court to evaluate the pro-competitive features of a restrictive business practice against its anticompetitive effects in order to determine whether the practice is unlawful. In each such case, the court ruled that the Division's application of the per se rule was correct. One noteworthy case involves heir location providers, a service to identify people who may be entitled to an inheritance from someone who died without a will. The service providers enter into contracts with those people to help secure their inheritances in exchange for a fee.

The Division charged an heir location services provider and its co-owner with entering a conspiracy with another provider to suppress and eliminate competition between them on estates they both pursued. The charge alleged that the two companies agreed that when they contacted the same heir, the first company to contact the heir would win the business and the second would not compete for that and certain remaining heirs. In exchange, the first would share a portion of the contingency fees ultimately collected from those allocated heirs. The Division was surprised when the district court agreed with defendants that they should be tried under the rule of reason and granted a motion to dismiss on statute of limitations grounds. Subsequently, the Tenth Circuit reversed the district court's dismissal and ruled it did not have jurisdiction to address the application of the rule of reason, but encouraged the district court to reconsider its rule of reason order. In February of this year, in a victory for the Division and for consumers, the district court reconsidered and found that the per se standard applied. Both defendants pleaded guilty in July.

When I addressed you last December, I described the Division's efforts prosecuting bid rigging and fraud relating to real estate foreclosure auctions. To date, 140 individuals have been charged, of whom more than 120 have pleaded guilty and 12 individuals were convicted after trial. Those efforts continue. Last winter, nine real estate investors were sentenced for their role in a conspiracy to rig bids at public real estate foreclosure auctions in Southern Mississippi.[12] One defendant awaits trial in Sacramento. Our enforcement efforts will continue to protect competition in such markets and hold accountable investors who conspire to line their pockets through illegal bid rigging and fraud while diverting money from the homeowners and mortgage holders entitled to any proceeds.

On July 11, the Division announced policy changes to incentivize corporate compliance. Division prosecutors, consistent with Department of Justice policy, now consider corporate compliance programs at the charging stage in criminal antitrust investigations. Crediting compliance at charging is the next step in our efforts to deter antitrust violations and reward good corporate citizenship. A company with a robust compliance program can actually prevent crime or detect it, minimizing harm to consumers early and saving precious taxpayer resources. In

[12] Press Release, U.S. Dep't of Justice, Nine Real Estate Investors Sentenced for Rigging Bids at Mississippi Public Foreclosure Auctions (Feb. 21, 2019), https://www.justice.gov/opa/pr/nine-real-estate-investors-sentenced-rigging-bids-mississippi-public-foreclosure-auctions.

concert with these changes, to promote transparency, we also announced revisions to our Division Manual. For the first time, we published a public guidance document that outlines what Division prosecutors look for when evaluating antitrust compliance programs.

Stepping back, the provisions of the Antitrust Criminal Penalty Enhancement and Reform Act of 2004 (ACPERA) have substantially strengthened the Antitrust Division's ability to detect and prosecute anticompetitive cartel activity through its Corporate Leniency Policy. Leniency applications have led to the majority of the Antitrust Division's international cartel prosecutions, resulting in substantial fines, prison sentences, and opportunities for recovery for victims. Several provisions of ACPERA are set to expire on June 22, 2020 pursuant to a sunset provision in the original legislation. An extension of ACPERA will allow the Department of Justice and victims of criminal antitrust violations to continue to benefit from this successful program. The Department supports the reauthorization of ACPERA and the elimination of the sunset provision.

More broadly, the Division will continue diligently to detect and deter collusion that harms American consumers, and we will remain focused on industries that have profound effects on Americans' lives.

Civil Enforcement

Mergers

Mergers can be an important tool for increasing productivity in the U.S. economy—by combining complementary assets or increasing scale—but they also can threaten harm to competition. Protecting American consumers and businesses from anticompetitive mergers is an essential element of the Division's mission. Though our resources have limits, we review, and when necessary challenge, mergers whose scope and complexity span the U.S. economy, including healthcare, advanced technology, and U.S. Government procurement. We continue to invest substantial portions of our limited resources to our merger review program to protect consumers, as well as taxpayers, and preserve competition.

On July 26, 2019, we announced[13] that the Department of Justice and attorneys general for five states[14] had reached a settlement with T-Mobile and Sprint regarding their proposed merger. The settlement requires a substantial divestiture package in order to enable a viable facilities-based competitor to enter the market. To obtain merger clearance, the companies promised to sell Sprint's prepaid business and certain spectrum assets to Dish Network. The merger and accompanying divestiture expand output significantly by ensuring that large amounts of currently unused or underused spectrum are made available to American consumers in the form of high quality 5G networks.

[13] Press Release, U.S. Dep't of Justice, Justice Department Settles with T-Mobile and Sprint in Their Proposed Merger by Requiring a Package of Divestitures to Dish (July 26, 2019), https://www.justice.gov/opa/pr/justice-department-settles-t-mobile-and-sprint-their-proposed-merger-requiring-package.

[14] Four additional states have since joined the settlement. *See* Press Release, U.S. Dep't of Justice, Justice Department Welcomes Arkansas Joining T-Mobile/Sprint Settlement (Nov. 8, 2019), https://www.justice.gov/opa/pr/justice-department-welcomes-arkansas-joining-t-mobilesprint-settlement.

In addition to securing divestitures and remedies, the Division—even with its constrained resources—remains willing and able to litigate when a proposed acquisition is likely to substantially lessen competition in a relevant market. For instance, the United States filed a complaint in August to enjoin a proposed merger between Sabre and Farelogix. The Division's investigation found that the merger would eliminate head-to-head competition to provide booking services to airlines and that Sabre seeks to acquire Farelogix to eliminate a disruptive competitor that has introduced new technology to the travel industry and is poised to grow significantly. We look forward to litigating the case and preventing Sabre from stifling competition in the travel industry.

In September, the Division filed suit to block the merger between two of only four North American manufacturers of rolled aluminum sheet for automotive applications.[15] In a novel approach for the Division, we agreed with the defendants to refer the matter to binding arbitration. Alternate dispute resolution is an important tool that the Antitrust Division can and will use, in appropriate circumstances, to maximize the effectiveness of its enforcement resources in protecting American consumers.

At the beginning of the summer, we also pursued an injunction against the merger between Quad/Graphics and LSC Communications. The Division's thorough investigation uncovered evidence that the merger would combine the only two significant providers of magazines, catalogs, and book printing services, and would deprive publishers and consumers the benefits of competition that has spurred lower prices, improved quality, and greater printing output. The parties abandoned their planned merger rather than continue with litigation.[16]

A prominent example of our efforts in healthcare is our review of the CVS Health Corporation, the nation's largest retail pharmacy chain, and its $69 billion agreement to acquire Aetna, the nation's third-largest health insurance company. Prior to the agreement, the two companies competed vigorously in the sale of individual prescription drug plans under Medicare's Part D program. On October 10, 2018, the Division filed a proposed settlement that requires Aetna to divest its nationwide individual prescription drug plan business to WellCare along with other tools Wellcare needs to compete effectively.[17] On October 25, 2018, the district court entered an order allowing the transaction to close and the settlement provisions to take effect during the pendency of the Tunney Act review process, which requires a public comment period and district court review of consent decrees. After an unusually lengthy review, the district court approved the settlement as well within the public's interest, on September 4, 2019;[18] meanwhile Wellcare completed its acquisition on November 30, 2018.

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[15] Press Release, U.S. Dep't of Justice, Justice Department Sues to Block Novelis' Acquisition of Aleris (Sep. 4, 2019), https://www.justice.gov/opa/pr/justice-department-sues-block-noveliss-acquisition-aleris-1.

[16] Press Release, Quad/Graphics and LSC Communications Abandon Merger After Antitrust Division's Suit to Block (July 23, 2019), https://www.justice.gov/opa/pr/quadgraphics-and-lsc-communications-abandon-merger-after-antitrust-division-s-suit-block.

[17] Press Release, U.S. Dep't of Justice, Justice Department Requires CVS and Aetna to Divest Aetna's Medicare Individual Part D Prescription Drug Plan Business to Proceed with Merger (Oct. 10, 2018), https://www.justice.gov/opa/pr/justice-department-requires-cvs-and-aetna-divest-aetna-s-medicare-individual-part-d.

[18] United States v. CVS Health Corp., Civ. No. 18-2340, 2019 U.S. Dist. LEXIS 150645 (D.D.C. Sept. 4, 2019).

As another example of the Division's continued vigilance in protecting competition in healthcare and related markets, on May 30, the Division obtained divestitures from Amcor's $6.8 billion acquisition of Bemis.[19] The competitors were two of only three significant suppliers of heat-seal, coated medical packaging products that are critical to the safe transportation and use of medical devices, and the divestiture will ensure ongoing competition in those markets.

In addition to price and quality effects, the Division also evaluates mergers for their effects on innovation. In February 2019, the Division secured divestitures from Thales in order for it to proceed with its proposed $5.64 billion acquisition of Gemalto.[20] Prior to this transaction, Thales and Gemalto were the world's leading providers of General Purpose Hardware Security Modules (GP HSMs), which are components important to complex encryption solutions used to safeguard sensitive government and corporate data. Successful entry into this market requires significant time and capital to design and develop offerings with comparable functionality, interoperability, and reliability. Competition also promotes improvements and upgrades to the quality and functionality of existing offerings. The Division secured the divestiture of the Thales GP HSM business, including certain intellectual property and research capabilities, to preserve competition to quickly develop innovative data security solutions and bring them to market.

Government procurement programs (and taxpayers) also benefit from competition to provide high-quality, low-cost goods and services—including procurement of mission critical technologies for the U.S. military. On June 20, 2019, the Division announced that it had required divestitures in a proposed merger between Harris and L3 Technologies.[21] Both companies were the only DoD suppliers of U.S. military-grade image intensifier tubes for night vision devices such as goggles and weapon sights. Under the proposed settlement, Harris must divest its entire night vision business, including its manufacturing facility, to an acquirer approved by the United States. In so doing, the divested business will preserve competition that has resulted in lower prices, higher quality, and shorter delivery times and has promoted innovation of image intensifier tubes with higher sensitivity and resolution.

The Hart-Scott-Rodino (HSR) Act—which imposes notification and waiting period requirements for transactions meeting certain size thresholds—is critical to modern antitrust enforcement because it allows the DOJ and FTC to identify and challenge anticompetitive mergers before transactions close. As such, the Division must protect the integrity of the HSR process. On June 10, the Antitrust Division filed a complaint and reached a settlement with Cannon and Toshiba for their scheme to evade the waiting period required by the HSR Act for

[19] Press Release, U.S. Dep't of Justice, Justice Department Requires Amcor to Divest Medical Flexible Packaging Assets in Order to Proceed with Bemis Acquisition (May 30, 2019), https://www.justice.gov/opa/pr/justice-department-requires-amcor-divest-medical-flexible-packaging-assets-order-proceed.

[20] Press Release, U.S. Dep't of Justice, Justice Department Requires Divestiture of Thales' General Purpose Hardware Security Module Business in Connection With its Acquisition of Gemalto (Feb. 28, 2019), https://www.justice.gov/opa/pr/justice-department-requires-divestiture-thales-general-purpose-hardware-security-module.

[21] Press Release, U.S. Dep't of Justice, Justice Department Requires Harris and L3 to Divest Harris's Night Vision Business to Proceed with Merger (June 20, 2019), https://www.justice.gov/opa/pr/justice-department-requires-harris-and-l3-divest-harris-s-night-vision-business-proceed.

Canon's acquisition of a Toshiba subsidiary.[22] The transacting parties created a special purpose company to hide the transaction and evade the HSR Act waiting period so that Toshiba could quickly improve its financial statement after the public discovery of financial irregularities at the company. To resolve the charges, the companies agreed to pay $2.5 million each to settle the charges and to implement HSR compliance programs and comply with inspection and reporting requirements, among other obligations.

Conduct

The Division also continues to investigate, and when appropriate, challenge conduct that may unlawfully deprive consumers of the benefits of robust competition.

On November 15, 2018, the Antitrust Division and the North Carolina Attorney General's Office announced a settlement with Atrium Health (formerly, Carolinas HealthCare System) resolving litigation that had commenced with a June 2016 complaint.[23] Atrium used its market power in the Charlotte, N.C. area to prevent health insurers from encouraging consumers to choose healthcare providers that offer better overall value. The restrictions also constrained insurers from providing consumers and employers with information regarding the cost and quality of alternative health benefit plans. The settlement prevents Atrium from enforcing anticompetitive steering restrictions in its contracts with health insurers or otherwise preventing or penalizing procompetitive steering by insurers in the future.

The Division has found some ways to leverage its limited resources to stay vigilant against anticompetitive conduct. As one example, on May 20, the Division filed an unopposed motion to intervene in a private antitrust class action challenging alleged agreements between Duke University and the University of North Carolina not to compete for each other's medical faculty.[24] The Department joined the parties' proposed settlement agreement for the limited purpose of obtaining the right to enforce an injunction designed to prevent the maintenance or recurrence of any unlawful no-poach agreements. This case is also an example of the Division's ongoing efforts against no-poach agreements to ensure that labor markets across the economy are free from anticompetitive conduct and that workers receive the benefits of robust competition for their labor.

Of course, our work against anticompetitive conduct involves numerous industries. A recent example in media, on June 17, the Antitrust Division reached settlements with CBS, Cox, E.W. Scripps, Fox, and TEGNA to resolve a lawsuit brought as part of an ongoing investigation

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[22] Press Release, U.S. Dep't of Justice, Canon Inc., Toshiba Corporation Agree to Pay $5 Million for Violating Federal Antitrust Laws (June 10, 2019), https://www.justice.gov/opa/pr/canon-inc-toshiba-corporation-agree-pay-5-million-violating-federal-antitrust-laws.

[23] Press Release, U.S. Dep't of Justice, Atrium Health Agrees to Settle Antitrust Lawsuit and Eliminate Anticompetitive Steering Restrictions (Nov. 15, 2018), https://www.justice.gov/opa/pr/atrium-health-agrees-settle-antitrust-lawsuit-and-eliminate-anticompetitive-steering.

[24] Press Release, U.S. Dep't of Justice, Justice Department Seeks to Intervene in Private Class Action to Enforce Prohibition on Unlawful "No-Poach" Agreements (May 20, 2019), https://www.justice.gov/opa/pr/justice-department-seeks-intervene-private-class-action-enforce-prohibition-unlawful-no-poach; the Division also filed a statement of interest in this case, as described, below.

into exchanges of competitively sensitive information in the broadcast television industry.[25] The Division already had reached settlements with seven other broadcast television companies resulting from the same investigation last November and December.[26] By exchanging information, the broadcasters were better able to anticipate their competitors' inventory levels and pricing conduct, which in turn helped inform the stations' own pricing strategies and negotiations with advertisers. As a result, the information exchanges distorted the normal price-setting mechanism in the spot advertising process and harmed the competitive process. The Division obtained a settlement agreement from the parties that prohibits the sharing of such competitively sensitive information.

As announced in July, the Department of Justice has opened a broad inquiry into competition involving digital platforms. We are reviewing whether and how market-leading online platforms have achieved market power and whether they have been engaging in practices that have reduced competition, stifled innovation, or otherwise harmed consumers. We are considering the widespread concerns that consumers, businesses, and entrepreneurs have expressed about search, social media, and some retail services online. We are making this review a priority of the Division, and we are proceeding in an objective and fair-minded manner and will wait to see where the evidence leads before reaching a decision on next steps. Depending on the nature of any antitrust concerns that the evidence may present, we could look to both law enforcement and policy options as solutions. We have been meeting with consumers, competitors and other participants in the digital markets to learn from their perspectives, and we welcome further input from not only those market stakeholders, but also from members of Congress, particularly this Subcommittee. While I cannot comment on the existence or progress of any specific investigations, I can assure the Subcommittee that the Division is working hard and expeditiously on this important issue to reach the right outcome under the law. Based on our expertise and our especially talented attorneys and economists, including our investigations of various matters in the digital economy and the evolving media and communications landscape over the past two decades, the Antitrust Division is well positioned to conduct this review.

Historic Decrees and Judgments

When I addressed this Committee last fall, I spoke to you about the start of our Judgment Termination Initiative. Those efforts are now moving at full pace, and we have made great progress in eliminating legacy judgments that clog court dockets, burden defendants, and no longer serve to protect competition. Our review of over a thousand such "legacy" judgments

[25] Press Release, U.S. Dep't of Justice, Justice Department Reaches Settlement with Five Additional Broadcast Television Companies, Including One National Sales Representative Firm, In Ongoing Information Sharing Investigation (June 17, 2019), https://www.justice.gov/opa/pr/justice-department-reaches-settlement-five-additional-broadcast-television-companies-0.

[26] Press Release, U.S. Dep't of Justice, Justice Department Requires Six Broadcast Television Companies to Terminate and Refrain from Unlawful Sharing of Competitively Sensitive Information (Nov. 13, 2018), https://www.justice.gov/opa/pr/justice-department-requires-six-broadcast-television-companies-terminate-and-refrain-unlawful; Press Release, U.S. Dep't of Justice, Justice Department Reaches Settlement With Nexstar Media Group Inc. in Ongoing Television Broadcaster Information Exchange Investigation (Dec. 13, 2018), https://www.justice.gov/opa/pr/justice-department-reaches-settlement-nexstar-media-group-inc-ongoing-television-broadcaster.

considers changes in conditions since their entry to determine whether these decrees are necessary to protect competition and consumers or, in some cases, if they are affirmatively harmful to competition. We have posted for public comment judgments proposed for termination in nearly 80 district courts throughout the country and have already been granted hundreds of terminations in over 70 district courts from Alaska to the Virgin Islands. For instance, we obtained termination of a 93-year old judgment that prohibited defendants from activities related to the sale of amusement park tickets here in Washington, D.C.; this summer, a Chicago federal court terminated dozens of decades-old judgments, including several relating to telegraphs, phonographs, and railroad strikes.

Relatedly, we have been reviewing the Paramount Consent Decrees, which for over seventy years have regulated how certain movie studios distribute films to movie theatres. As part of our review, we received more than 75 public comments[27] from members of the motion picture industry and the antitrust community. These comments will better inform our analysis of the continued effectiveness of the Paramount Decrees.

Nearly 80 years ago, the Division entered into consent agreements with The American Society of Composers, Authors and Publishers (ASCAP) and Broadcast Music, Inc. (BMI) to address competitive concerns arising from the market power each organization acquired through the aggregation of public performance rights held by their member songwriters and music publishers. The ASCAP decree was last amended in 2001, and the BMI decree in 1994 –a surprisingly long time ago when we think about how dramatically the music industry has changed in recent years. In light of this history, the Division recently opened a new review of both consent decrees,[28] and the public comment period ended on August 9. We received over 800 comments. The Division is reviewing those comments and continues to discuss the relevant issues with key stakeholders in the matter and will consider all information when determining whether to keep, modify, sunset, or terminate those decrees.

Competition Advocacy and Policy

In addition to our direct enforcement efforts, the Division has implemented a wide range of initiatives designed to advance competition both nationally and internationally. Although our policy and advocacy efforts do not always draw the same interest from outside observers as our enforcement cases, often they are just as essential in protecting American consumers and businesses. Let me describe a few of them.

Appellate: Amicus Initiative

While the vast majority of the Division's resources are devoted to directly enforcing the antitrust laws, the amicus program is a valued complement to enforcement. Private litigation is an important aspect of the antitrust regime that Congress created, and in particular its treble damage provision provides an additional tool to deter anticompetitive acts. The Division's

[27] *Paramount Consent Decree Review Public Comments 2018*, U.S. DEP'T OF JUSTICE, https://www.justice.gov/atr/paramount-consent-decree-review-public-comments-2018.
[28] Press Release, U.S. Dep't of Justice, Department of Justice Opens Review of ASCAP and BMI Consent Decrees (June 5, 2019), https://www.justice.gov/opa/pr/department-justice-opens-review-ascap-and-bmi-consent-decrees.

involvement in these cases, however, is important in providing guidance to the courts, to ensure they reach sound interpretations of the antitrust laws – which apply in both private and government cases – enabling effective and appropriate enforcement.

Through amicus filings, the Division is able to address developments in the case law earlier and more frequently, offering us the opportunity to have an outsized impact with our resources. The Division weighs in not out of a desire to support any particular party, but rather with an eye to assisting courts in interpreting and applying the antitrust laws according to up-to-date economic principles, thereby ensuring that robust competition can flourish throughout the U.S. economy.

In FY 2018, the Division filed five statements of interest in the district courts and eight amicus briefs in the U.S. Supreme Court and lower appeals courts in cases where the United States is not a party, as compared to just three such amicus briefs and no statements of interest in FY 2017. So far in FY 2019, the Division has filed eight statements of interest and nine amicus briefs.

These briefs touch on diverse aspects of U.S. antitrust law and related doctrines. To illustrate, the Division has weighed in three times this fiscal year through statements of interest on the topic of no-poach agreements, whereby firms agree not to poach one another's employees. The Division articulated the general rule to courts in the Western District of Pennsylvania[29] and the Middle District of North Carolina[30] that such agreements are per se unlawful unless they are ancillary to a separate legitimate transaction or collaboration. To the Eastern District of Washington, the Division explained that franchisor-franchisee businesses relationships are often legitimate collaborations with both vertical and horizontal elements and accordingly a no-poach agreement may need to be reviewed under the rule of reason to determine whether it is anticompetitive.[31] Consistent with the Division's position, this summer the Western District of Pennsylvania court adopted the per se rule for naked no poach allegations at the pleading stage in *In re Railway Industry Employee No-Poach Antitrust Litigation*.[32]

As another example of the doctrines addressed by these filings, the Division urged the Seventh Circuit in *Viamedia v. Comcast* to adopt the "no economic sense" test for unilateral

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[29] Statement of Interest of the United States, In Re: Railway Industry Employee No-Poach Antitrust Litigation, No. 2:18-mc-00798-JFC (W.D. Pa. Feb. 8, 2019), https://www.justice.gov/atr/case-document/file/1131056/download.
[30] Statement of Interest of the United States, Seaman v. Duke University, No. 1:15-cv-462 (M.D.N.C. Mar. 7, 2019), https://www.justice.gov/atr/case-document/file/1141756/download (also arguing that the state action doctrine does not apply).
[31] Corrected Statement of Interest of the United States of America, Stigar v. Dough Dough, No. 2:18-cv-244 (E.D. Wash. Mar. 8, 2019), https://www.justice.gov/atr/case-document/file/1141731/download.
[32] In Re: Railway Industry Employee No-Poach Antitrust Litigation, No. 2:18-mc-00798-JFC, 2019 U.S. Dist. LEXIS 102906 (W.D. Pa. June 20, 2019).

refusal to deal claims under Section 2.[33] In May, the Division filed a brief[34] in *Mountain Crest v. Anheuser-Busch InBev & Molson Coors*, also being heard by the Seventh Circuit. In September, the Circuit issued a decision thanking the Division for its comments and adopting the Division's views that Mountain Crest's claims went beyond the Ontario, Canada government's restrictions not to sell beer in packages with more than six containers, and therefore were not entirely exempted from Sherman Act scrutiny by the act of state doctrine.[35]

Competition Advocacy with the States

The Division has a long history offering a competition perspective on the effects of state legislation or regulation to state government officials upon request. Often in the form of an advocacy letter, the Division generally "promote[s] reliance on competition rather than on regulation where appropriate and to ensure that where regulation is appropriate, it is aligned as much as possible with competition principles."[36]

During the current fiscal year, the Division has submitted five such letters either independently or jointly with the FTC. Each letter builds on prior advocacy and enforcement efforts by one or both agencies. In one letter, the Division discouraged Texas from restricting which entities are permitted to develop facilities for the transmission of electricity in Texas.[37] In two joint letters, the Division and FTC staff encouraged Alaska[38] and Tennessee[39] to consider our longstanding guidance on curtailing or repealing certificate-of-need laws that may suppress healthcare competition. In another joint DOJ-FTC letter, the agencies encouraged Nebraska to consider our past guidance on removing unnecessary restrictions on the distribution method automobile manufacturers choose to bring their vehicles to market for consumers.[40] In another letter from October, the Department encouraged Virginia to consider the Department's prior advocacy for ways to facilitate competition by legitimate certifying bodies, while also allowing hospitals and insurers independently to decide and compete on whether to consider a physician's

[33] Brief for the United States as Amicus Curiae in Support of Neither Party, Viamedia Inc. v. Comcast Corp., No. 18-2852 (7th Cir. Nov. 8, 2018), https://www.justice.gov/atr/case-document/file/1110056/download.
[34] Brief for the United States as Amicus Curiae in Support of Neither Party, Mountain Crest, LLC v. Anheuser-Busch InBev SA/NV, No. 18-2327 (7th Cir. May 8, 2019), https://www.justice.gov/atr/case-document/file/1161171/download.
[35] *Mountain Crest, LLC v. Anheuser-Busch InBev SA/NV*, No. 18-2327, 2019 U.S. App. LEXIS 26840 (7th Cir. Sept. 5, 2019).
[36] U.S. DEP'T OF JUSTICE, ANTITRUST DIVISION MANUAL, ch. 5 (5th ed. 2018), https://www.justice.gov/atr/file/761151/download.
[37] Letter from Daniel E. Haar, Acting Chief, Competition Pol'y & Advocacy Section, Antitrust Div., U.S. Dep't of Justice to Rep. Travis Clardy, Tex. House of Reps. (April 19, 2019), https://www.justice.gov/atr/page/file/1155881/download.
[38] Letter from Daniel Haar, Acting Chief, Competition Pol'y & Advocacy Section, Antitrust Division, and Bilal Sayed, Director, Office of Pol'y Planning, Fed'l Trade Comm'n, to Sen. David Wilson, Alaska State S. (Mar. 11, 2019), https://www.justice.gov/atr/page/file/1146346/download.
[39] Letter from Daniel Haar, Acting Chief, Competition Pol'y & Advocacy Section, Antitrust Division, and Bilal Sayed, Director, Office of Pol'y Planning, Fed'l Trade Comm'n, to Rep. Martin Daniel, Tenn. House of Reps. (Mar. 7, 2019), https://www.justice.gov/atr/page/file/1146241/download.
[40] Letter from Daniel Haar, Acting Chief, Competition Pol'y & Advocacy Section, Antitrust Division, and Bilal Sayed, Director, Office of Pol'y Planning, Fed'l Trade Comm'n, to Sens. Tony Vargas and Brett Lindstrom, Neb. State S. (Mar. 14, 2019), https://www.justice.gov/atr/page/file/1146236/download.

Maintenance of Care status when making business decisions.[41] In each of these letters, the Division seeks to bring a competition perspective to the state's policy discourse that might not otherwise be fully heard and that might encourage more pro-consumer policies.

Thought Leadership

Through workshops and roundtables, the Division provides a forum for industry participants, academics, consumer advocates, and other interested parties to discuss important developments in particular business sectors, the appropriate scope of various legal doctrines, or recent advancements in our understanding of relevant economic principles.

The Division hosted a workshop in September to discuss the role of antitrust labor markets in promoting robust competition for the American worker. The workshop explored the practical considerations that antitrust enforcers and private litigants face in bringing cases that involve labor markets, including approaches to defining labor markets, labor restraints arising out of competitor collaborations, and statutory and non-statutory antitrust exemptions for labor union activities. This workshop highlighted the Division's commitment to protecting workers through addressing competition issues in our society's evolving labor markets.

The Division held two other important events this past spring. In April, the Division held a public roundtable to discuss the Antitrust Criminal Penalty Enhancement and Reform Act (ACPERA), which reduces the civil damages exposure of a company granted leniency under the Antitrust Division's Leniency Policy if the company provides civil plaintiffs with timely, satisfactory cooperation.[42] The roundtable provided a public forum for the Division to engage with the antitrust community and gain insights from judges, attorneys, academics, the business community, and other interested stakeholders on the topic of ACPERA. The Division also received written comments from members of the public on the efficacy of ACPERA.

In early May, the Division held a public workshop to explore industry dynamics in media advertising and the implications for antitrust enforcement and policy, including merger enforcement.[43] The workshop covered different types of television and online advertising, and highlighted, among other develops in the industry, the role of online and mobile advertising networks. Panelists discussed a range of topics, including the economics of advertising, developments in advertising technologies, and the competitive dynamics of media advertising in light of the rise of digital advertising. The Division is working on its analysis of the workshop and anticipates issuing a report summarizing key information discussed at the hearings, as well as public comments, later this year.

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[41] Letter from David Lawrence, Chief, Competition Pol'y & Advocacy Section, Antitrust Division, to Hon. Sam Rasoul, Vir. House of Delegates (Oct. 22, 2019), https://www.justice.gov/atr/page/file/1212231/download.

[42] Roundtable on Antitrust Criminal Penalty Amendment and Reform Act (ACPERA), ANTITRUST DIV., U.S. DEP'T OF JUSTICE, https://www.justice.gov/atr/events/public-roundtable-antitrust-criminal-penalty-enhancement-reform-act-acpera (last updated June 10, 2019).

[43] Public Workshop on Competition in Television and Advertising, ANTITRUST DIV., U.S. DEP'T OF JUSTICE, https://www.justice.gov/atr/public-workshop-competition-television-and-digital-advertising (last updated June 26, 2019).

The Division derives important lessons from our engagement with experts and thought leaders, including through these workshops, complementing the expertise we develop through investigations and enforcement. In recent remarks, I highlighted one such lesson: in markets with zero-cost products, the antitrust laws still protect competition and consumers because the antitrust laws protect both the price and non-price components of competition.[44]

For digital markets in particular, where consumers often pay nothing, price effects alone do not provide a complete picture of market dynamics. Harms to innovation and quality are also important dimensions of competition that can have far reaching effects. Privacy, for example can be an important dimension of quality, and so by protecting competition, we can have an impact on privacy and data protection. The Division has the legal tools to address such concerns and is up to the task of ensuring that our technology markets are competitive and provide the highest quality, most innovative, and most affordable products for American consumers.

Staff Education & Enrichment

Whether in our enforcement or policy efforts, I am a firm believer that key to our success is maintaining a talented and devoted staff. The Division must continue to attract and retain bright, talented, and passionate individuals—whether they be attorneys, economists, paralegals, or support staff.

One way we will draw talent is through the recently established James F. Rill Fellowship Program.[45] The Fellowship is designed to provide elite candidates of the Honors Program with a special opportunity to participate in antitrust enforcement actions and in the development and implementation of antitrust policy. Our inaugural Rill fellow recently began at the Division.

As I told the Subcommittee last December, the Division also recently established the Jackson-Nash Addresses, a lecture series to inspire and educate Division staff and the public about cutting-edge issues and developments in the field.[46] The most recent Jackson-Nash Address given by the Nobel Prize winning economist Paul Romer provided valuable insights into innovation, competition, and possible threats facing the modern digital economy.

We also have recently launched a rotation program, which provides the opportunity for Division attorneys to spend a one-year detail in the Appellate, Competition Policy & Advocacy, and International sections as a means to broaden their expertise and experience as well as help balance Division needs and resources. Six Division attorneys will be on detail in the first year of this program.

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[44] Makan Delrahim, Assistant Att'y General, Antitrust Div., U.S. Dep't of Justice, "...AND Justice for All": Antitrust Enforcement and Digital Gatekeepers, Remarks as Prepared for the Antitrust New Frontiers Conference (June 11, 2019), https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-antitrust-new-frontiers.

[45] *The James F. Rill Fellowship*, ANTITRUST DIV., U.S. DEP'T OF JUSTICE, https://www.justice.gov/oarm/james-f-rill-fellowship (last updated May 22, 2019).

[46] Press Release, U.S. Dep't of Justice, Antitrust Division Establishes the "Jackson-Nash Address" and Announces Professor Alvin Roth as Inaugural Speaker (Feb. 8, 2018), https://www.justice.gov/opa/pr/antitrust-division-establishes-jackson-nash-address-and-announces-professor-alvin-roth.

International

International engagement continues to be a top priority for the Antitrust Division. Through both case-specific cooperation and forward-thinking policy initiatives, the Division's International Program has spent the past year working with enforcers from around the world to encourage effective competition law development and enforcement. The Division's investigative teams continued to cooperate closely with their international counterparts. In FY 2019, the Division cooperated with 11 international counterparts on 20 different merger matters. For civil non-merger matters, the Division cooperated with 4 international counterparts on 5 different matters. On the criminal side, Division staff collaborated with at least 18 jurisdictions on cross-border investigations and global cartel enforcement.

When I spoke to this Committee last December, I described for you the proposal we introduced last June, the Multilateral Framework on Procedures in Competition Law Investigation and Enforcement (MFP), part of our partnership with leading antitrust agencies around the world to develop a core set of norms which would establish fundamental due process principles with meaningful review mechanisms. With the proliferation of antitrust agencies around the world, American businesses have faced antitrust reviews that are conducted pursuant to varying standards and processes in the areas of attorney client privilege to transparency to confidentiality to non-discrimination, among others. I am pleased to report that our proposal has become a reality. At the request of several partner agencies, we implemented the framework through the International Competition Network (ICN) to take advantage of existing structures and to reduce administrative burdens. In April, the ICN's Steering Group unanimously approved the framework, which has come to be known as the Framework on Competition Agency Procedures (CAP). The CAP came into effect in May with 70 founding competition agencies. Adopting the CAP is a remarkable and historic achievement for antitrust enforcement. It sends a clear signal that competition agencies across the globe—despite differences in their structures and proceedings, as well as the legal systems in which they operate—are committed to procedural fairness.

One particularly important principle in the CAP relates to attorney-client privilege. The CAP seeks to obtain participating agencies' commitment to recognize applicable privileges, including the attorney-client privilege. This is a critical procedural norm to ensure that American businesses are treated fairly by competition agencies around the world. The Division has gone to great lengths to secure proper recognition of the privilege and appropriate treatment of materials subject to it by foreign competition authorities. For example, in negotiating the United States-Mexico-Canada Agreement, the Division succeeded in adding a clause recognizing the privilege. The U.S. Trade Representative has also included it in the negotiating objectives for competition policy chapters for future trade agreements.

Over the past year, the Division has continued to maintain and expand its relationships with competition agencies around the globe. During FY 2018, we participated in over 60 meetings with fellow enforcement agencies at home and abroad. We participated in the ICN's workshops focused on key enforcement areas, including cartels, unilateral conduct, mergers and advocacy. We also were a part of the OECD's biannual Competition Committee meetings,

during which we discussed the digital economy, competition issues relating to intellectual property licensing, labor, education and fintech markets, and legal privilege and judicial review in antitrust proceedings, among other topics. We also continue to provide technical assistance to other enforcement agencies around the globe, offering programs on topics such as merger enforcement, economic investigative tools, and leniency programs.

In terms of future initiatives, the Division, with the Federal Trade Commission, will host the ICN Annual Conference in 2020. The ICN Annual Conference is the most important conference for global competition agencies and is regularly attended by a majority of ICN's 139 member-agencies. This will be the first time that the United States antitrust agencies will host the conference. We are excited to demonstrate Division's global leadership on competition policy, showcasing our multilateral efforts to promote fundamental due process through the CAP, and engage with the world on a range of other policy issues, including digital platform economy, cartel enforcement, and merger policy.

Conclusion

Having had the honor of serving as the AAG of the Antitrust Division for over two years, I continue to find the experience deeply rewarding. I am enormously grateful to work collaboratively with this Committee, and alongside the dedicated women and men of the Antitrust Division, as we protect American consumers. I am proud of the work we have done, but I recognize that we still have a lot more to do to ensure that Americans continue to benefit from a competitive economy. We will continue to leverage our limited resources to the fullest in order to meet the coming challenges, knowing the importance of our work in every American's life.

Mr. Chairman, thank you for the opportunity to testify here today. I look forward to further discussion of these issues.

Mr. CICILLINE. Thank you, Mr. Delrahim.

Before we begin the questioning, I recognize the ranking member of the full committee, Mr. Collins, for his opening statement.

Mr. COLLINS. Thank you, Mr. Chairman. I appreciate it.

And thanks for being here. This is, again, one of the bright spots, and I appreciate the chairman and ranking member on our side, and also the full committee chairman, that we can continue this. This is something that's needed to be done and, Mr. Delrahim and others, I thank you for being here.

This antitrust investigation is continuing to be one of the bright spots on this committee's agenda this term, and the importance of digital technology in our constituents' lives grows every day. The tech sector is one of the greatest forces for innovation and wealth creation in the world and our economy. Rarely in history have we witnessed such a transformative change in how we go about our lives.

Much of that change is very much for the good, but not all. Among these changes are the ways that companies compete, both fairly and unfairly, to provide goods and services to consumers. It is, therefore, critical that we work on a bipartisan basis to understand whether our current antitrust laws or our antitrust enforcement agencies are able to keep up with the task of the tech sector in the present time. We will have accomplished something important together if we can determine whether our antitrust laws need updating for the digital economy or whether the antitrust agencies need Congress' help to assure vigorous antitrust enforcement in the tech sector.

From the start of our inquiry, I made it clear that overarching principles are guiding me in this inquiry.

First, while some tech companies have become very big, and big is not necessarily bad, companies that offer new innovations, better solutions, and more consumer benefit at lower prices often become big, and they benefit society. Proposals to break up big companies just because they are big risk throwing out the baby with the bathwater and are simply punishing success.

Second, just like existing antitrust laws, proposals for new legislation should aim to keep the free market free. Proposals to construct broad new regulatory regimes should be viewed with caution. Experience shows that regulatory solutions often miss the mark, solve problems less efficiently than free markets, and can create new opportunities for anticompetitive companies to suppress competition through rent seeking. That is especially true when the regulations attempt to take on evolving problems in fast-moving markets.

The principle is particularly important to me as we seek a better way to protect privacy of consumers' online data. I announced in July of this year that I would be introducing legislation this term to achieve better protection, and I'm working hard on that legislation, and it is strongly animated by the principles that I have just laid out.

Other proposals, like laws adopted in Europe and California, threaten to entrench the market power of large incumbent tech companies under the cloak of protecting online data privacy. I want us to instead enact new Federal law that better protects privacy

without making it harder for new and small innovative companies to enter the market, jostle with the giants, and strive to become the blockbuster companies of tomorrow. We've got to keep that pipeline open.

The heads of the antitrust agencies before us today also have stated principles they believe should guide antitrust inquiries into the tech sector, and I'm looking forward again to hearing your thoughts. We have talked many times before about this, and I appreciate that as we go forward.

Again, this is what we need to be doing, and I think we have had long conversations in this arena, and I believe that the disruptors in our economy, many of these in the tech sector, have brought forth many, many good things.

But I think we're also dealing in an new age and a new environment, and this is a good look forward. Where are we right now?

Mr. Delrahim, we've talked many times about many things, and especially through music last year. Again, I appreciate your concern there. I still reiterate I'm looking forward as we move forward on consent decrees and others that that is not something that can be done without a lot of discussion and talk as we move forward. So I do appreciate that. And thanks for being here.

And again, Mr. Chairman, this is really a good time, and I appreciate your continued interest in this, and yield back.

Mr. CICILLINE. Thank you, Mr. Collins.

We will now proceed under the 5-minute rule. I recognize the gentleman from Georgia, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman.

And thank you, Mr. Delrahim and Mr. Simons, for coming today to testify.

The concentration of power in the digital marketplace is something that should concern every American, and your agencies are on the front line in addressing unlawful uses of market dominance. Digital companies are acquiring their competitors at an alarming rate. Few, if any, platforms are truly interoperable, and the collection of and capitalization on user data has reached unprecedented heights.

I'm also concerned that barriers to bringing antitrust cases have grown too high for the average American. Since the 1980s, case law has snowballed to create evidentiary standards that prevent harmed individuals from commencing meritorious suits with any hope of success.

I'm looking forward to talking with you all today about the manipulation of market power through data and the FTC's efforts to enforce our laws.

Mr. Delrahim, a year ago you argued in a speech that, quote, "data, even large amounts of it, may not act as an entry barrier in every digital market," end quote. Specifically, you said, quote, "while there has been a temptation to use data as a proxy for price when determining the anticompetitive effects of a merger or conduct," end quote, that the value of consumer data, quote, "should not be confused with price."

But just last week in a speech at Harvard Law School, you indicated that large amounts of data can entrench dominant players in digital markets and cuts out emerging competitors. You said that

data is, quote, "analogous to a new currency," end quote, and that antitrust enforcers need to be vigilant about the collection, aggregation, and commercial use of consumer data, end quote.

Has your view on the role of data in the digital marketplace changed since your speech last year?

Mr. DELRAHIM. Mr. Johnson, thanks for the question. I think both of those statements, I stand by them. I think, one——

Mr. JOHNSON. They tend to be inconsistent.

Mr. DELRAHIM. Well, let me explain. Let me explain. I don't think that you can directly correlate data with a particular price, partly because data has multiple dimensions to it.

For example, just the user data, your data or my data, could be collected by numerous people here in what we term as a nonrivalrous asset, meaning that its value does not diminish by the number of people who would have it. If I had a $10 bill, by the time I gave it to the second person, a dollar to the second person, it would be only worth $8.

However, usage data is different, and that's something we're trying to grapple with looking at that. By that, I mean your data from 2015 to 2017, your viewing habits, your purchases is not something that could be replicated by a new entrant who could start in 2019.

So your usage data has a completely different value, it is much more unique than your user data, so we have to be careful about what kind of data and how we look at it, which is why this, what you guys are doing in the oversight, is so critical, and what we continue to do to learn in this industry, the competitive impact of data, is so important.

Mr. JOHNSON. Thank you.

Do you believe that antitrust enforcers' past reluctance to view concentrated control over data as an entry barrier has been a mistake?

Mr. DELRAHIM. You know, I think it would be unfair for me to critique my predecessors' involvement of these. Every single transaction has different dimensions, and, frankly, our understanding of the marketplace. This is a fast-evolving market, and I think what the agencies know today may not be what they knew 10 years ago.

Mr. JOHNSON. Let me ask you this as my time is running out.

Mr. DELRAHIM. Sure.

Mr. JOHNSON. Do you believe that the FTC, Mr. Simons, do you believe that the FTC has an overbearance on a policy that indicates to me that you feel like the risk of litigation is something that is a primary consideration in deciding whether or not to file a complaint in the case of a merger or in anticompetitive conduct?

Mr. CICILLINE. The gentleman's time has expired.

Mr. SIMONS. So we find ourselves in a situation where we're resource constrained. So when you live in that kind of environment, you want to be careful about the complaints you do file. You don't want to file—— you want to focus on the ones that have a better chance of success and also the ones that have the most impact.

So in that sense, we are concerned about litigation risk, and if we had more resources, we could bring more cases.

Mr. JOHNSON. Thank you.

I yield back.

Mr. CICILLINE. I now recognize the ranking member of the subcommittee, Mr. Sensenbrenner.

Mr. SENSENBRENNER. Thank you, Mr. Chairman.

Last week I was in Berlin and Brussels talking about privacy, talking about competition, expressing my fear that the Europeans, led by the Germans, are attempting to use their laws on this as a way of, number one, forcing us to adopt their laws rather than enforcing ours; and secondly, being used very subtly as a protectionist mechanism for European data platforms.

Let me start out by saying that basically U.S. antitrust law was designed to protect consumers. European antitrust law is designed to protect the competition. I cast my vote with the consumers, and I think that 100 years ago our predecessors in Congress got it right. We have to improve and reform both our enforcement in an increasingly globalized economy as well as dealing with the policy differences that the United States and our foreign competitors have had.

Let me say that I have expressed repeatedly that Europe's General Data Protection Regulation, or GDPR, has been designed to squeeze out competitors and help entrench large incumbents, and it has enervated innovation.

Are either of your agencies looking at that, particularly leading up to this international conference that will be held here next May?

Mr. SIMONS. So we're very focused on the privacy issue, and in particular we've encouraged Congress to consider and adopt Federal privacy legislation.

But one of the things we're very focused on and concerned about in that effort is the issues that you've just raised with respect to GDPR in Europe. We're very concerned that adopting a program like that could end up doing exactly the opposite of what we're trying to do with our competition mission, which is to entrench the large dominant platforms at the expense of the smaller competitors and the new entrants.

By requiring opt-in consent on such a widespread basis, you put the consumer in a situation where the consumer is probably only likely to consent—confine that opt-in consent to so many competitors in the marketplace, and of course, the dominant ones would be the most likely to be able to get the consent.

And also they're consumer facing. So, for example, data brokers who aren't consumer facing would have a difficult time potentially getting that kind of opt-in consent and competing in the marketplace. And those are the folks that are providing, I think, at least in our country, data to new entrants and to smaller competitors as a kind of a substitute for what Google and Facebook collect.

Mr. SENSENBRENNER. Well, you know, let me express my concern that if the Europeans turn that screw too tightly, it's going to have a very bad impact on transatlantic commerce, which will end up having a result of a recession or worse on both sides of the Atlantic.

Now, I don't think from what I heard in Europe last week that they really have considered that very much. More importantly, they really don't care as long as the European platforms get a leg up on the American platforms.

So when we're dealing with these issues, I think we have to be very, very careful that the unintended consequence of what we're doing is not to end up encouraging protectionist policies on the part of our foreign competitors in the name of, quote, antitrust enforcement, or, quote, privacy protection.

You know, I agree with you, we need to have a Federal privacy law, which would make my arguments in Europe a lot more persuasive, I would say, but at the same time we've got to be very careful not only in what we want to accomplish, but making sure that it's limited to what we want to accomplish rather than having a lot of unintended consequences which hurt consumers on both sides of the Atlantic.

And with that statement, I yield back.

Mr. CICILLINE. I thank the gentleman.

I now recognize the distinguished gentlelady from Washington, Ms. Jayapal.

Ms. JAYAPAL. Thank you, Mr. Chairman.

And thank you both for being here.

I wanted to start in a slightly different direction, and I'll direct these questions to you, Assistant Attorney General Delrahim, and that is to discuss no-poach agreements, which are, as you know, agreements that employers make with each other in which they agree not to recruit each other's employees. And these agreements have been found to inhibit competition among employers, which, in turn, harms workers.

The FTC and the DOJ's joint guidance states that competition among employers for employees, quote, "helps actual and potential employees through higher wages, better benefits, and terms of employment."

Three years ago, the Department of Justice's Antitrust Division took a formal public instance that no-poach clauses are, per se, illegal, correct?

Mr. DELRAHIM. Correct.

Ms. JAYAPAL. And that joint FTC–DOJ guidance explicitly states from an antitrust perspective, and this is a quote, firms that——

Mr. DELRAHIM. Let me just clarify.

Ms. JAYAPAL. Yeah.

Mr. DELRAHIM. What we call naked no-poach. These are horizontal no-poach agreements. So there could be some variations to that. And these are vertical arrangements. Sometimes we see those in the franchise systems.

Ms. JAYAPAL. Well, I am going to that. And the joint FTC–DOJ guidance explicitly states from an antitrust perspective firms that compete to hire or retain employees are competitors in the employment marketplace regardless of—and this speaks to what you were just saying—whether the firms make the same products or compete to provide the same services, which seems extremely clear.

But I've been a bit concerned that the DOJ recently has started to wobble away from that very clear position. And your Department actually actively argued in favor of more lax standards for franchise employers that use no-poach agreements.

And I'm specifically going to refer you to a brief that your Department filed in Stigar v. Dough Dough in the Eastern District of my State, Washington State, arguing that franchise companies

should be held to a different standard than other kinds of employers when they use no-poach agreements. Is that what you were arguing?

Mr. DELRAHIM. We were arguing based on the law, and I'm happy to explain. Ultimately, we want to protect competition and the worker, and I'm happy to explain our reasoning for that.

We argued in multiple cases, including the Duke-North Carolina, where we took an unprecedented step, for the per se treatment of that when the defendants, not only were they arguing for rule of reason treatment, but also seeking State action immunity. So we did that. Not only did we argue, but we intervened in that.

In the franchise matters, we argued not so much that they're per se illegal, but that the rule of reason should apply when it's inside that system. And the reason for that is—some of you may know my background. I worked in my father's gas station for 8 years.

Ms. JAYAPAL. Let me just, just because I have very little time, let me just——

Mr. DELRAHIM. But this is really important for the workers that you're concerned about as we are.

Ms. JAYAPAL. Right. And here is my question, I guess, is why the Department would choose to use this discretion that you have in situations, and in fact to the point where our attorney general in my home State of Washington actually had to submit a brief where they again explicitly clarified that no-poach agreements were per se illegal and that the distinction that you were making or that your Department was making was not consistent with past positions.

The American Antitrust Institute actually wrote a paper directly disagreeing with your Department's stance on this issue.

And so I guess the question I have is, when the agency is supposed to protect workers, and I believe that that's what you have been trying to do, from the harms of anticompetitive corporate behavior, why expend significant energy and precious resources in filing these briefs that allow large franchising corporate chains to get away with using no-poach agreements under, I would argue, under pretty flimsy justifications, having read some of the documents in this case?

Because at the core of this is the fact that millions of workers are affected when employers make these agreements that undermine competition, and they, and we, I am really hoping that your agency intervenes on behalf of these workers.

I want to give you just 5 seconds.

And then I do have a question for Mr. Simons, if you want to say anything, very brief.

Mr. DELRAHIM. Well, if I could ask the chairman, this requires more than a 5-second response, and I do not want to leave your constituents and this committee with the wrong impression that somehow that there's a distinction.

I would like to explain—this stuff is, you know, it's complicated—but why it actually—our position actually benefits the exact worker that you are concerned about and the attorney general of Washington is concerned about—that's not what the case law is—and how our arguments actually protect those workers, not the reverse.

So I'm happy to explain that. Would you like me to do that now?

Ms. JAYAPAL. My time has expired, unfortunately, but I'm happy to take any information that you have on this.

Mr. DELRAHIM. Mr. Chairman, can I just quickly explain why this is so important? Let me just give you one analogy, and this is Jiffy Lube.

So if you're a franchisor and you have a franchise system and you have the folks who would invest, let's say, $350,000 to buy a Jiffy Lube franchise, and they would like to—and they invest that. So these are hardworking people employing locals.

And if they want to train the new mechanic to do whatever they do, oil changes, the other car repairs, they need to train that and make sure that the competitor within that—the other Jiffy Lube 5 miles down the road is not going to now after 6 weeks of training and the investments that they make to train that employee and probably have paid them, that that person is going to compete.

So within reason, and we said this is why it's a rule of reason, not a per se illegality, it's important for them to have that assurance, that small business owner. Why? Because if they don't, and if the attorney general from Washington's rule is in place for those vertical restraints, what do you think will happen with that new small business owner?

What they will do is say, you know what, employee? You go train yourself before I pay you and put you on the payroll, or I won't pay to train you to come in.

This is a critical issue——

Mr. CICILLINE. I've let you go over 2 minutes.

Ms. JAYAPAL. Yeah. And, Mr. Chairman, I just want to say that I think that this is a very important issue because it is a rewrite of previous Department policy and a different direction that the Department is going in making this new distinction.

Thank you, Mr. Chairman. I yield back.

Mr. CICILLINE. I now recognize the gentleman from North Dakota, Mr. Armstrong, for 5 minutes.

Mr. ARMSTRONG. Thank you, Mr. Chairman.

Mr. Simons, you said just earlier that consumers will only do a limited amount of opt-ins, when we're talking about that. And I'm curious about that, particularly because if they're standardized like a lot of them are on a platform, I mean, I would think after you've done 10, you won't care if you do 30. So I'm just interested in the rationale behind that.

Mr. SIMONS. I mean, that's possible, but the other thing that might happen is people might not want their information spread so widely. It increases the risk of a breach.

Mr. ARMSTRONG. And I think that's an important part, and I'm actually going to disregard the privacy part when I ask these questions because that is one of—I mean, the flip side to sharing data is more people have my data.

Mr. SIMONS. Right. Exactly.

Mr. ARMSTRONG. And I think that is an area where we continue to go.

Mr. Delrahim, you gave a speech in Israel, and it discussed how not all data is alike. And I'm generally curious as to what types of data are more susceptible to being used in an anticompetitive manner. Because I think from somebody like me who doesn't——

Mr. DELRAHIM. Sure.

Mr. ARMSTRONG [continuing]. I mean, understand this, which I think is most consumers, like, data is this one all-encompassing word, but it's very different, correct?

Mr. DELRAHIM. It is. It is very different. It takes many forms. And we have to take a look at that and its actual competitive impact.

And as we look at the GDPR regime that Mr. Sensenbrenner raised, in addition to what Chairman Simon said, the other thing we look at is whether that regulatory regime actually creates barriers to new entry, is the cost of that collection, and whereas an incumbent may have already gathered certain data.

But as I mentioned to Mr. Johnson, there is user data, there's usage data, and there's different qualities and attributes for each sets of data.

Mr. ARMSTRONG. And then I'm going to actually let you continue talking about the Washington versus—the franchise deal because, I mean, in a completely different sector, this is something we saw happen an incredible amount in North Dakota, which when our economy was growing is small businesses having employees taken by larger businesses after they invest.

I mean, I think one thing that particularly with any specific skill set is the first 3 months, 6 months to a year when you're training a highly skilled employee, the investment you're putting into them from a business perspective far outweighs the return you get. So you're relying on that employment to pay off in year 2, year 3, year 4.

And I know 5 seconds wasn't enough, so I'm going to allow you some time to answer it.

Mr. DELRAHIM. The chairman was generous enough to allow me more than 5 seconds, which I did.

But I think you raised a point that I think is really important, because we have to take a look at each of these restraints. Again, not a horizontal. We argued, we filed in the Wabtec case in Pennsylvania, we filed in the Duke-North Carolina case, a number of these, where we have gone in aggressively saying that this should be per se illegal. However, when it is within the system like franchise, as I explained, the rule of reason should apply. Are these reasonable restraints?

If you're saying that you can never leave for the next 6 years once I train you, well, I think a judge could find that unreasonable. However, there's limits and there's a test that our Supreme Court has put down, and I would submit what we have submitted is well within what the laws and the precedents, legal precedents are.

Mr. ARMSTRONG. And then would you expound on how that actually protects workers?

Mr. DELRAHIM. It absolutely protects workers because it provides that small business owner the incentive to actually invest and train that employee. So the new employee who wants to enter the workforce can now get trained by that franchise owner because for those first 6 weeks that they're learning how to do a tune up or a brake you don't want them to walk across the street to the other competitor.

And so those, within reason, can be—and every case is different. Every franchise, every restraint will be—should be treated differently. They should not be banned as per se illegal all the time because some plaintiffs' class has brought that case.

Mr. ARMSTRONG. And then so that's where you mean the reasonable test comes in.

Mr. DELRAHIM. Yes. There's a set of tests in its duration and its effect, and we look at those, as do the courts. And there's a set of case law that guides the factors that go into analysis.

Mr. ARMSTRONG. And then I guess this can be for either one of you, but I'll ask Mr. Simons.

As we talk about data sharing and how this creates a competitive edge, I ignored it for 4 minutes and 30 seconds. But how do we factor that privacy concern into this conversation?

Mr. SIMONS. So you mean on the competition side?

Mr. ARMSTRONG. Well, if somebody has my data and we're requiring them to share my data, that means two people have my data.

Mr. SIMONS. Right. So there's a tradeoff. I mean, you just have to balance one against the other. And if it's voluntary in terms of who shares—you know, whether the consumer's data is shared or not, that leaves it up to the consumer.

Mr. ARMSTRONG. So you're saying voluntary on the front end.

Mr. SIMONS. Yeah. I mean——

Mr. ARMSTRONG. It has to be voluntary——

Mr. SIMONS. I mean, a consumer can make a judgment—maybe there's an issue with how informed the consumer is—but the consumer can make a judgment about, do I want to be able to port all my data from one player to another, and now my data is in two places, and did I just double the risk of my data being breached?

Mr. ARMSTRONG. Wouldn't they do that on the front end, right? I mean——

Mr. SIMONS. Yes.

Mr. ARMSTRONG. On whatever service they're getting, they're going to do it——

Mr. SIMONS. Yes.

Mr. ARMSTRONG [continuing]. That's the first question they're going to get.

Mr. SIMONS. Right.

Mr. ARMSTRONG. Thank you.

Mr. CICILLINE. I now recognize the gentleman from Colorado, Mr. Neguse, for 5 minutes.

Mr. NEGUSE. Thank you, Mr. Chairman. Thank you for your leadership in hosting this important hearing.

And thank you to both the witnesses for your testimony today.

I just want to deviate from my prepared remarks for a minute because I'm struggling to follow this last exchange between Representative Armstrong and Mr. Simons. Help me understand your argument that informed consent—that essentially providing a GDPR-type condition here in the United States, that that would somehow put at risk data privacy. I'm not——

Mr. SIMONS. And it's just something to consider. It's a factor to consider.

And so the consideration is by requiring the consumer to opt—let me give you an example. Let's suppose, and this is a little bit stylized, but let's suppose you have a situation where you've got data that's not very sensitive at all, and you have data that's very sensitive. And let's suppose also that the data that's not very sensitive is data that's very kind of useful for doing targeted advertising, okay?

And so if you had an opt-in for both of those categories, the sensitive and the nonsensitive, you might end up in a situation where a consumer is just, for whatever reason, maybe it's just inertia, they don't want to automatically give consent to every business that they come across on the internet, right.

Because a lot of—like, for example, for smaller players and for new entrants for sure, they don't have a reputation maybe that's recognizable to the average consumer. So you're immediately reluctant to——

Mr. NEGUSE. But how does that harm data privacy to the extent that a consumer decides——

Mr. SIMONS. Oh. It doesn't necessarily harm data privacy so much, but what the harm is, is to competition. Because in my stylized example, you might have a situation where you don't really have harm from the nonsensitive data being used without opt-in consent to the consumer, but you have harm to competition because the small players and the new entrants are less likely to get access to it.

Mr. NEGUSE. Has the FTC done any kind of empirical study to demonstrate whether or not the new GDPR regulations implemented in Europe have resulted in a dilution of concentration of market power of various email providers and so on and so forth?

Mr. SIMONS. It would be an increase in concentration. We haven't done any ourselves, but other people are doing analysis, and the preliminary work suggests that it's concentrating share in the dominant platforms.

Mr. NEGUSE. So if you could provide——

Mr. SIMONS. Sure. Be happy to.

Mr. NEGUSE [continuing]. The specific study that you're referring to, that would be helpful for this committee to consider, obviously.

Mr. SIMONS. There's a few of them, but it's preliminary.

Mr. NEGUSE. Well, and given that last point then, I think it would be important for us to contextually remember that since it doesn't seem as though there's finality to that just quite yet.

Mr. SIMONS. No. There's not finality.

Mr. NEGUSE. I do want to just talk briefly about the settlement with Facebook earlier this year and give you an opportunity to kind of explain the methodology that the FTC used to reach the regulatory settlement that you reached.

Obviously, as I'm sure you're aware, there are a number of us in both Chambers of the Congress who were deeply disappointed, in our view, with the terms of the settlement, a $5 billion settlement. As you know, Facebook generated about $56 billion in revenue just last year, in calendar year 2018. So by my estimates, the settlement would entail about a month's worth of revenue for Facebook.

Mr. SIMONS. Yeah, about 9 percent.

Mr. NEGUSE. About 9 percent.

Mr. SIMONS. About 23 percent of their profits.

Mr. NEGUSE. Well, yeah, in a single year. And again, there are a number of other aspects of the settlement that I'd like to get to, and my time is limited. But if you could perhaps explain the methodology as to how you reached that outcome.

Mr. SIMONS. Yeah. So, first of all, let me say that I'm very disappointed that you all are disappointed. And let me try to explain why I think what we did was a terrific outcome for consumers.

So we have—first of all, I think the settlement alone stands as very—as very aggressive and much more than anything anyone else around the world has done. They haven't even come remotely close. In fact, if you took all the enforcement actions from all the privacy authorities around the world and combined them, they wouldn't even get close. So that's one.

Two, even if we wanted to do more, we don't have the authority to do more. We do not have the authority to impose fines or on our own increase the injunctive relief. We have to go to court.

So what we did is we negotiated long and very hard with Facebook to get the best relief we could get in a settlement and compare—then compare that to what we would have gotten if we had gone to court. It would have taken several years to go to court. We may have won, we may have lost. But even if we had won——

Mr. NEGUSE. I appreciate that. Let me reclaim my time.

Mr. SIMONS. Even if we had won, we would not have come anywhere close to what we——

Mr. NEGUSE. Sure. I'll reclaim my time. Sir, I wanted to give you a chance to be able to explain. I have limited time. And I appreciate your explanation. And what I was going to say is that ultimately one point that I think you and I both agree on is that the tools that the FTC has under existing statute, in my view, and I suspect perhaps in yours, could be strengthened.

And given the trend lines that are moving in this direction and the challenges that your agency faces in terms of dealing with these particular disputes, I would think that this committee could provide some leadership on that front. And so I look forward to having more conversations in that regard.

Mr. SIMONS. I would be thrilled to do that.

Mr. CICILLINE. And I'll just let the committee know we're going to do a second round, so you'll have some opportunity to follow up.

I now recognize myself for 5 minutes.

Chairman Simons, in a letter for today's hearing, Marc Rotenberg, the president of EPIC, states, and I quote, that it's increasingly clear that data protection, competition, and innovation are all on the same side in a healthy internet economy. The critical challenge now for the committee is to ensure that the Federal Trade Commission fulfills its mission and safeguards these interests. The current path is not sustainable.

And, Chairman Simons, how do you respond to concerns that the FTC has failed to act in response to numerous antitrust and privacy complaints over the past decade and has effectively ignored the obvious cost to personal privacy that has resulted from consolidation in the digital marketplace over this period? And do you agree that market consolidation in digital markets is coming at the expense of strong user privacy?

Mr. SIMONS. Well, first of all, I reject that argument.

Mr. CICILLINE. Which argument?

Mr. SIMONS. Well, the one you just stated from EPIC.

So first of all, on the privacy side, we have a hundred-year-old statute that was not in any way designed to anticipate the privacy issues that we face today. My predecessors at the FTC did an amazing job inventing essentially out of whole cloth a privacy regime that is the most aggressive in the world.

So I think if you want us to do more on the privacy front, then we need help from you. We've done as much as we can do with the tools we have. What I was trying to explain before was that we do not have authority even remotely approaching what GDPR has, what the California Act has as well. So if you want us to do more, you need to give us the authority.

In terms of——

Mr. CICILLINE. So I——

Mr. SIMONS. I'm sorry. Go ahead.

Mr. CICILLINE. So I take it from that, you do agree with the last statement that I made, that market consolidation in digital markets is, in fact, coming at the expense of strong user privacy. You're just suggesting you need some additional tools to respond to that.

Mr. SIMONS. Well, what I've said before is that the privacy issue was a critical issue to the U.S., to our country, and it involves very significant social and societal values. And in order to do privacy the right way, it has to be done with those values in mind, and you need—that needs to be——

Mr. CICILLINE. My question was a simple one. You are seeing in your work that, in fact, user privacy has been harmed as a result of this market consolidation in the digital marketplace. You just said that part of the reason is, if we want you to do more to protect user privacy, you need additional tools.

Mr. SIMONS. Right.

Mr. CICILLINE. So I take it that's made on some observations you're making about the marketplace.

Mr. SIMONS. Well, we have ongoing investigations involved in the digital marketplace, and so that's under study. I mean, not study, they're under investigation. It's not a study.

Mr. CICILLINE. Thank you.

Mr. Delrahim, in a speech that was referenced that you gave on Friday you quote Professor Shoshana Zuboff, who I've had the opportunity to meet with, and you say, in speaking of her research and her recent book, you say that she has termed the commercialization of predicting human behavior and the accompanying encroachment on privacy as a form of surveillance capitalism or the unilateral claiming of private human experience as free raw material for translation into behavioral data.

And so as we consider ways to protect America's privacy, particularly in light of how these protections may reinforce market power, shouldn't we think about addressing this underlying business model on behavioral advertising?

I mean, some have suggested we should ban it completely. Some folks, like Roger McNamee, have recently made statements about sort of recognizing the control of your data as a human right. And isn't that sort of the underlying problem that we have to address

in some way in our responding to the work of Professor Zuboff and this behavioral data collection?

Mr. DELRAHIM. Well, Mr. Chairman, you know, that's an important issue. That's a big public policy debate outside of antitrust. As I've explained, privacy and data protection could be a quality element for the purposes of antitrust, and if you have competition between different platforms, then you could compete on some of those avenues, particularly where there's a revealed preference by the user that they value privacy, and I think more and more consumers do.

As for a broader debate of whether or not we should, you know, ban that type of marketplace, as Professor Zuboff advocates, or place some limits or at least some disclosures, I think that's a debate for this body to have. I just enforce the laws that you write.

Mr. CICILLINE. But do you view that there is, in the consideration of competition and the effectiveness of the market, whether there's competition, that the impact on privacy is a factor? I think you already said that.

Mr. DELRAHIM. Absolutely.

Mr. CICILLINE. How do you think that about that issue in your competition enforcement work?

Mr. DELRAHIM. Well, we look at it, and there is—you know, what I'm happy about, with respect to some of this public discussion about antitrust, is there's this misconception that somehow, you know, the standards by which we enforce the laws is limited to price effects or just quantity effects, and it's not. The courts have repeatedly said quality, innovation, choice are elements of this, of antitrust, and the consumer welfare standard. It's just that I think we have to hone our skills, as well as familiarize the judges more with it because we haven't had many cases on those, certainly not as many as we readily prove with price effects. So I think we have to take a look and describe these types of harms as the Division has done in other cases.

Mr. CICILLINE. Thank you. My time is expired.

I now recognize Mr. Armstrong, the gentleman from South Dakota, for 5 minutes.

Mr. ARMSTRONG. Still North Dakota.

Mr. CICILLINE. Still North Dakota.

Mr. ARMSTRONG. There's been suggestions that companies with large data repositories be forced to share that data with smaller competitors, especially since data is nonrivalrous. That seems, to me, like an extreme intervention from the government. I'm going to just start with, do those proposals concern you?

Mr. SIMONS. Yeah. So it's nonrivalrous in the sense that you can duplicate it without diminishing the other—you know, the initial copy. The problem is it may be expensive and costly to produce the data set in the first place. So one example of that that we've had in our enforcement involves title plants. So it's all publicly available, right, because that's where—you know, the title plants are collecting title information and they're getting it from public sources either online or they go to the courthouse and have to get it.

So it's expensive, though, to create that title plant in the first place. And if you made the person who creates the title plant in

the first place duplicate it for free, then what's the incentive to create it in the first place?

Mr. ARMSTRONG. Do you——

Mr. DELRAHIM. I agree with that. You know, look, that's not to say that somehow the laws would not allow us to force that. We have a high burden to meet, should we want to force data sharing, but I agree with Chairman Simons that we should be very wary about doing that. Now, if there's a merger and you have two data sets, and we look at those as assets, and there's an overlap where they would have too much data, then that's one where we could say, you must sell this off—one of the sets off before we allow the merger to go through.

But as far as a company who has invested and gathered that data through investment and hard work, we should be, you know, very careful to not force that sharing upon them as the Supreme Court has warned us in the past.

Mr. ARMSTRONG. And again, I'm just prefacing this, that this is not even discussing the privacy part of that conversation, which is a whole different issue. And I think that's important in that when we talk about this, we always have to make sure that—again, that privacy is part of that conversation. Because forcing somebody to sell their data or share their data is running into that as well.

Mr. DELRAHIM. Unless they acquired it illegally, and that's a whole different story.

Mr. ARMSTRONG. Well, then we're talking criminal law, and then I can actually probably sound fairly smart about it.

So when dealing with artificial intelligence and machine learning often the benefits of innovation, an increase with larger data sets, that provides a benefit to consumers in a lot of instances, and we're going to continue to go down this road. How do we approach large collection of data in the sense that it harms consumers or is used anticompetitively but also in certain circumstances can benefit consumers?

Mr. DELRAHIM. Mr. Chairman?

Mr. SIMONS. So I think it's very fact-specific. It depends on the circumstances, and you have to weigh one against the other.

Mr. ARMSTRONG. Which gets into our problem, is if you get to be so fact-specific that it's a little difficult for us to—I mean, we have to give you guys the tools—I agree with Mr. Neguse when he left—but also at the same time, at some point in time, we have to draw some kind of bright line laws. I mean, that's regardless of where you're at in any situation. At some point in time, we have to find some area where the regulation hits a certain point.

Mr. SIMONS. Well, our whole statute and the whole statutory regime is based on reasonableness. And so reasonableness means fact-dependent.

Mr. DELRAHIM. Well, you look at the effects and you look at the harms. I think that's what we—you know, in balancing that, at least for competition. That's not to say that should you come up with some kind of a regime that affects that. But we should be very careful because there are some—lots of consumer benefits, lots of efficiencies, lots of transactions.

We just had our trilateral meeting in Ottawa just a few weeks ago, where, you know, the Canadian enforcement officials, the

Mexican enforcement officials, Mr. Chairman and I, had the privilege of attending. And, you know, to my surprise at least, the president of the antitrust authority in Mexico said she welcomed for the first time Amazon's entry into their market. They liked that because it lowered the price to the consumers, because Walmart had such a big market share in Mexico.

So I think we have to be careful about the possible positive effect some of these technologies could have. We have to just make sure that we're eliminating the harm that they'll create.

Mr. ARMSTRONG. Well, and I agree, and I agree with the reasonableness and fact-specific, but also, at some point in time, if there isn't some guiding, I mean, roadmap, then—reasonableness is a great word because it sounds great, but reasonableness can vary significantly depending on who is hearing the case, and it's hard to continue to build a company or to start innovation if your sole basis is, well, we'll cross that bridge when we get there.

Mr. SIMONS. Yeah. So one of the things we've done in the past and we're going to do in the future is put out guidelines or commentaries that try to explain what are the things we look at, and give the, you know, the private bar and business community a better sense of what is—what is over the line versus what is not over the line.

Mr. ARMSTRONG. Thank you.

Mr. CICILLINE. Thank you. The gentleman's time is expired.

I recognize the gentleman from Georgia, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you.

In the digital marketplace where data is the currency and one player has developed not just a corner on the market, but is the market, and the cost of acquiring the data has long since been exceeded by the profit, by the multibillion dollar profits that have been made, how can you promote competition in that digital marketplace if allocation of data from the only market player is off the table?

Mr. SIMONS. Well, you want to make sure that they acquired their position lawfully, because if they didn't—if they didn't——

Mr. JOHNSON. It's a given that they—well, I mean, assuming that the data was acquired in a legally permissible manner.

Mr. SIMONS. If it's acquired in a legally permissible manner and it's used in a legally permissible manner, then——

Mr. JOHNSON. But would anticompetitive——

Mr. SIMONS. No. Well, if it's used for an anticompetitive purpose, then we could go after it, and we would.

Mr. JOHNSON. Okay. All right. Okay.

Mr. Simons, Facebook has repeatedly misrepresented how it uses individuals' data, and I worry whether the FTC's settlement releases Facebook for misrepresentations that the public is only now learning about. For example, TechCrunch reported in September that Facebook had publicly exposed the phone numbers of 133 million U.S. users. Assuming Facebook had not told users it would be exposing their phone numbers this way, and assuming Facebook exposed their numbers before the settlement was finalized in June, would Facebook's misconduct be released from liability under the settlement agreement?

Mr. SIMONS. It would be released under the settlement agreement to the same extent it would be released if we went to litigation and won. No difference.

Mr. JOHNSON. In August, Bloomberg reported that Facebook had paid contractors to transcribe users' audio chats. Did the FTC settlement release Facebook from liability for that conduct?

Mr. SIMONS. I'm sorry, could you repeat that? I didn't catch that.

Mr. JOHNSON. Facebook paid contractors to transcribe users' audio chats. Did the settlement release Facebook from liability for that conduct?

Mr. SIMONS. It released Facebook from order violations that occurred prior to June 12 that did not continue past June 12. It did not release Facebook from Section 5 violations that we didn't already know about.

Mr. JOHNSON. Just yesterday, CNET reported that when some users scroll through Facebook's app on their iPhones, Facebook activates users' cameras and starts watching them. Did the FTC settlement release Facebook from liability for that——

Mr. SIMONS. I can just say what I just said and also remark that it's inappropriate for me to comment on whether or not we're conducting nonpublic investigations and——

Mr. JOHNSON. Well, no, I'm just asking whether or not——

Mr. SIMONS. And that's all part—that's all part of——

Mr. JOHNSON [continuing]. That misconduct had been exempted by the settlement agreement.

Mr. SIMONS. I don't know enough to know the answer to that question because I don't know enough to know—I don't have enough facts to know.

Mr. JOHNSON. Does the FTC——

Mr. SIMONS. But let me say one thing—and I'm sorry to interrupt you—which is that you can be assured that if there's something in the press that raises a privacy issue, our staff is either already looking at it or we'll immediately start looking at it when they see the media report.

Mr. JOHNSON. Okay. But yet you need more manpower in order to be able to respond to these complaints that seem to proliferate continuously?

Mr. SIMONS. Yes. We could use more resources, definitely.

Mr. JOHNSON. Thank you.

Does the FTC list anywhere the full universe of known order violations and known Section 5 violations for which the FTC granted the release to Facebook?

Mr. SIMONS. No.

Mr. JOHNSON. You do not list those offenses?

Mr. SIMONS. I'm sorry, maybe I didn't understand your question.

Mr. JOHNSON. Yeah. Does the FTC list anywhere the full universe of known order violations and known Section 5 violations for which you granted Facebook a release?

Mr. SIMONS. I believe they're in the complaint.

Mr. JOHNSON. In the complaint. All right. Thank you.

Mr. CICILLINE. The gentleman yields back.

I now recognize the gentlelady from Georgia, Mrs. McBath, for 5 minutes.

Mrs. MCBATH. Thank you, Mr. Chairman. And thank you all for being here today.

And I want to discuss what your work means for consumers. In our past hearings, we've talked about the consumer welfare standard, the idea that antitrust enforcement should focus on helping our consumers. We've discussed how that approach can sometimes overlook other effects such as employee mobility in the wages.

But what's striking to me is that even with this standard that is supposed to be putting consumers first, consumers are still losing out. They're still far behind. A recent New York Times piece reported that consolidation is estimated to cost the typical American household about $5,000 per year, and with few competitors, huge companies can keep charging us all more without more worrying that we'll actually—that we will actually take our business elsewhere, actually be able to do that without considering that we can take our business elsewhere.

One place that we've seen this is with the merger of Ticketmaster and Live Nation. Anyone who's bought a ticket online can tell you that the price that you see at first is often much less than what you'll pay at the time—by the time all the fees are included and all the fees that are added on. So in 2016, the New York State attorney general said that, and I quote, these fees constitute evidence of abuse of monopoly power, end quote.

So my question today is for you, Mr. Delrahim. Your office recently acknowledged that it's investigating whether Live Nation flouted the 2010 consent decree it agreed to when merging with Ticketmaster. Reporting by The New York Times suggests that Live Nation has actually retaliated against venues that use ticket platforms other than Ticketmaster, violating the consent decree and undermining competition. So behavioral remedies like this consent decree are essentially a promise that a company won't abuse its increased market power following a merger. In your view, is this a cautionary tale about the wisdom of using behavioral remedies?

Mr. DELRAHIM. Absolutely, Congresswoman, it is. And I gave a speech almost 2 years ago about the problems with behavioral remedies. Now, to assure you we have tried to do certain things, we have—all of our consent decrees the last 2 years have four new provisions in there that make them actually more enforceable. That particular consent decree is still active, and other than acknowledging what I acknowledged at the previous hearing, I won't comment on it.

Mrs. MCBATH. Okay. Also, you've been deeply critical of the use of behavioral remedies in the past, observing that they are merely temporary fixes for an ongoing problem. Yet the Division's proposed remedy for the Sprint-T-Mobile merger, includes a long list of things that T-Mobile must do. These include offering operational support, handling billing support, and meeting specific traffic management requirements. And the Division says that its settlement requires the merged entity to divest to Dish, yet the success of the remedy is contingent on all of these behavioral conditions. How can you square this with your stated commitment to structural remedies?

Mr. DELRAHIM. Well, Congresswoman, as you just mentioned, the actual remedy itself is structural. There's transition agreements to

effectuate and maximize the success of such structural remedy, just as we did in Bayer-Monsanto where we divested about $11 billion of assets. But through that period, Bayer and Monsanto had to provide transition services to BASF, and I've never said that those should be somehow shied away from.

But the actual ultimate remedy, like we had in Comcast-NBCU or Live Nation-Ticketmaster or some of the host of some of these, we should be careful. We should be something of a last resort. If there's a structural remedy available, that's what we should be going for.

Mrs. MCBATH. Okay. Thank you.

And, Mr. Simons, the FTC held a workshop earlier this year to address concerns about the online ticket sales. At that event, numerous participants called on the FTC to mandate transparent upfront pricing. What is the FTC doing to address this call to action?

Mr. SIMONS. We're still putting together the results of the workshop, and so the staff will make a recommendation to us.

Mrs. MCBATH. And may we have a live update or may we have access to that information to this committee once that's made available?

Mr. SIMONS. The committee can ask for, you know, can ask for anything, and we're very responsive.

Mrs. MCBATH. Okay. So then for the record, I'm asking that you make that——

Mr. SIMONS. Well, I mean, the chairman——

Mrs. MCBATH [continuing]. Available to the committee.

Mr. SIMONS. Yeah. If the chairman wants it, then we give it. It's done very simple.

Mrs. MCBATH. Okay. Thank you. My time is expired.

Mr. CICILLINE. Thank you.

And that gives me a moment to say thank you, Chairman Simons. Your staff has been terrific in providing technical assistance on our drug pricing effort to reduce prescription drug prices, so——

Mr. SIMONS. And we are thrilled to do it.

Mr. CICILLINE. Thank you. Thank you for that.

I now recognize myself for 5 minutes.

I want to turn, as you both know, Google is under—currently, under really immense antitrust scrutiny by State and Federal enforces as well as this subcommittee. And notwithstanding the scrutiny, Google has nevertheless announced a series of data-driven transactions over the past several months, including its multibillion dollar acquisition of Fitbit and Looker. As I've said before, Google's proposed acquisition of Fitbit would threaten to give it yet another way to surveil users and entrench its monopoly power online.

Earlier today, a coalition of public interest organizations, including Open Markets, Public Citizen, and EPIC, sent a letter to the FTC urging it to block Google's deal to buy Fitbit. As they note, "the hubris of the executive team to pursue an acquisition of this size, a proposed $2.1 billion, while under Federal and State antitrust investigations is astonishing," end quote.

So I'd ask you, Chairman Simons and Mr. Delrahim, do you think we need to consider a merger moratorium for dominant platforms during the course of these ongoing investigations?

Mr. DELRAHIM. Well, Mr. Chairman, I think there's a lot that can be done short of a merger moratorium. I think by doing that, we might risk actually harming consumers, because there could be—there could be mergers and transactions that could be procompetitive. That is not to say that if they're gaining more market share in the same defined market——

Mr. CICILLINE. So how about a qualified moratorium, a moratorium unless it was demonstrated that it was procompetitive?

Mr. DELRAHIM. Flipping the——

Mr. CICILLINE. It seems like your answer is no, but it seems like in this context where there is significant harm being imposed upon consumers, it seems like something worth considering, but I take it you disagree?

Mr. DELRAHIM. I don't necessarily disagree. I don't have a clear administration position on that, but we'd be delighted to explore that with you or, look, there's burdens of proof that you can play with as well, if people have certain market power.

Mr. CICILLINE. Chairman Simons.

Mr. SIMONS. And we're looking at the uncon—we're looking at consummated mergers as part of our Technology Enforcement Division mandate.

Mr. CICILLINE. Thank you.

Chairman Simons, I'm particularly concerned about the FTC's investigative process and whether the FTC makes best efforts to identify the full extent of the violations, especially when it comes to assessing individual liability. And so my first question is, did the FTC depose Mark Zuckerberg or Sheryl Sandberg rather than other senior employees or outside counsel who may lack decision-making authority at Facebook as part of the investigation into Facebook's 2012 consent decree violation?

Mr. SIMONS. It's inappropriate for me to talk about the specific details of the investigation that haven't—in a public forum that haven't been released before.

Mr. CICILLINE. An investigation that's concluded?

Mr. SIMONS. Yes. So, for example, we don't turn over the—we don't make public the——

Mr. CICILLINE. I'm not asking you to make public—I'm just asking were they deposed, did an action happen? Did the FTC depose Mr. Zuckerberg or Sheryl Sandberg as part of that, rather than—or did they depose either of them?

Mr. SIMONS. Oh, okay. So I understand actually that was been public already, so, no, we did not.

Mr. CICILLINE. Okay. Did the FTC depose any high level executive at Facebook as part of this investigation?

Mr. SIMONS. That's not public.

Mr. CICILLINE. Well, at the FTC's press conference, Jim Kohm, Associate Director of the Enforcement Division of the Bureau of Consumer Protection, suggested that the FTC used its power to depose Mark Zuckerberg as leverage to secure a larger settlement sum. He said, and I quote, "part of getting this tremendous result is we didn't need to depose him, but we could use that to get more protections for the public."

And so my question is, is it FTC practice to use depositions as a bargaining chip to secure a higher settlement sum? And if the

purpose of a deposition is to gather more facts, isn't it problematic to trade that away? How can the FTC determine what would constitute an appropriate settlement if the FTC hasn't finished gathering all the relevant facts particularly from the executives of the company?

Mr. SIMONS. So we looked at millions and millions of pages of documents, and even if you—even if we didn't look at his specific files, there would be emails between him and somebody else. And we would have the somebody else's files, right, and their documents.

Mr. CICILLINE. You can understand why this would be of concern to the public, that we would have traded away the right to question the decisionmaker at Facebook in a piece of litigation that you are trying to determine if they violated a consent decree.

Mr. SIMONS. Well, so we know they violated a consent—the consent order, and then that's why—that's why we prepared a complaint and were prepared to sue them. And the settlement that we reached, in my mind at least, I was assuming that if we'd gone to litigation or investigated more—we were already investigating plenty and it was taking a long time, and I wanted the consumers protected. I didn't want this to go on forever. So my own view was that even if we had discovered several more or a handful or even a lot more violations of the consent order, we still wouldn't have gotten nearly the relief we got if we had gone to court.

Mr. CICILLINE. So let me just ask my last question, Mr. Chairman, in 2008, the FTC approved Google's acquisition of DoubleClick, despite many red flags that the deal raised for user privacy and which groups like EPIC pointed out. At the time of the transaction, Google made certain privacy commitments that it broke within a few years. And again, with this notion of repeat offenders, when reviewing transactions, how does the FTC factor in a history of misrepresentations and broken promises by one of the merging parties?

Mr. SIMONS. Yeah. So one thing is clear, they don't get the benefit of the doubt. We assume the worst.

Mr. CICILLINE. Okay.

Mr. SIMONS. And we conduct ourselves accordingly.

Mr. CICILLINE. I want to thank our witnesses.

I hope you understand that the passion of this subcommittee and these questions are because these are issues we care deeply about, and we're reflecting the concerns of our constituents on all of these issues, and I hope this will continue to be an ongoing conversation because you both play a very important role in this work.

This concludes today's hearing. Thank you again to our witnesses.

Without objection, all members will have 5 legislative days to submit additional written questions for the witnesses or additional materials for the record.

And before I gavel out, I'd just ask unanimous consent that a letter from the Electronic Privacy Information Center be made a part of the record and a letter to Chairman Simons and Commissioners Chopra, Phillips, Slaughter, and Wilson be made part of the record.

Without objection, the hearing is adjourned.

[The information follows:]

MR. CICILLINE FOR THE RECORD

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November 12, 2019

The Honorable David Cicilline, Chair
The Honorable F. James Sensenbrenner, Ranking Member
House Committee on the Judiciary
Subcommittee on Antitrust, Commercial, and Administrative Law
2138 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Cicilline and Ranking Member Sensenbrenner:

We write to you regarding the hearing on "Online Platforms and Market Power, Part 4: Perspectives of the Antitrust Agencies."[1] For over two decades, the EPIC has focused public attention on emerging privacy issues, including the growing concentration of the Internet industry.[2] We write to you today to ensure that the Department of Justice and Federal Trade Commission fulfill their responsibility to the American public, and ensure competition, innovation, and the protection of consumer privacy, particularly for Internet-based services.

There are two questions you should ask Chairman Simons: (1) why has the FTC failed to act against the growing consolidation of market power in the Internet industry? (2) why has the FTC disregarded the obvious cost to personal privacy that industry consolidation has produced?

The failure of the FTC to act in these two domains has come at enormous cost, not simply to consumer privacy, but also to competition and innovation in U.S. markets.

The FTC Has Failed to Promote Competition or Consider Data Collection in Merger Review

EPIC was among the first organizations that urged enforcement agencies to consider data protection in merger reviews.[3] More than a decade ago, EPIC filed a complaint with the FTC in

[1] *Online Platforms and Market Power, Part 4: Perspectives of the Antitrust Agencies*, 116th Cong. (2019), H. Comm. on the Judiciary, Subcomm. on Antitrust, Commercial, and Administrative Law, https://judiciary.house.gov/legislation/hearings/online-platforms-and-market-power-part-4-perspectives-antitrust-agencies (Nov. 13, 2019).

[2] *See An Examination of the Google-DoubleClick Merger and the Online Advertising Industry: Hearing Before the S. Comm. on the Judiciary, Subcomm. on Antitrust, Competition Policy and Consumer Rights*, 110th Cong. (2007) (statement of Marc Rotenberg, Exec. Dir., EPIC), https://epic.org/privacy/ftc/google/epic_test_092707.pdf.

[3] In 2000, EPIC joined with our colleagues in the TransAtlantic Consumer Dialogue to urge anti-trust authorities reviewing the AOL-Time Warner deal to "condition approval of the proposed merger on the adoption of enforceable Fair Information Practices that would guarantee consumer privacy safeguards at least equal to those that would be provided under the EU Data Directive" TACD, *Merger of American Online and Time Warner an Privacy Protection* (Feb. 2000), http://test.tacd.org/wp-content/uploads/2013/09/TACD-ECOM-17-00-Merger-of-America-Online-and-Time-Warner-and-Privacy-Protection.pdf. Consumer groups anticipated almost two decades that the collection of personal data would become an increasingly important

which we urged the Commission to block Google's proposed acquisition of DoubleClick. EPIC said at the time that the acquisition would enable Google to collect the personal information of billions of users and track their browsing activities across the web.[4] EPIC correctly warned that this acquisition would accelerate Google's dominance of the online advertising industry and diminish competition. The FTC ultimately allowed the merger to go forward over the compelling dissent of Commissioner Pamela Jones Harbour.[5]

EPIC also explained to the FTC that other mergers also posed substantial risks for consumer privacy and competition. In 2011, EPIC warned the FTC that Google's dominance in the search algorithm marketplace was allowing it to preference its own content in search results.[6] Today Google occupies 88% of the search market in the United States[7] and 94% of the search market in Europe.[8] And as Tim Wu explained in his recent book, "Google wants to organize the world's information, but to do so they need to get their hands on all the information in the world."[9]

Google's Acquisition of Nest, and Facebook's Acquisition of WhatsApp Broke Privacy Commitments

Companies that protect user privacy are being absorbed by companies that do not protect privacy. In 2014, EPIC warned the FTC about the privacy risks of Google's acquisition of Nest Labs, a maker of "smart thermostats," stressing that "Google regularly collapses the privacy policies of companies it acquires' and urged the FTC to block the deal.[10] Yet the FTC let the deal go forward without any qualifications.[11]

Most notably, in 2014, Facebook purchased WhatsApp, a text-messaging service that attracted users precisely because of strong commitments to privacy.[12] WhatsApp's founder stated in

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consideration in merger review, particularly among tech firms. *See also*, EPIC Complaint to FTC regarding DoubleClick's proposed acquisition of Abacus Direct (Feb. 10, 2000) ("Not only did DoubleClick deceive consumers by claiming in multiple earlier privacy policies that information collected would remain anonymous, the company also unfairly collects and links information about Internet users without their knowledge or control.")

[4] EPIC, Complaint and Request for Injunction, Request for Investigation and for Other Relief In the Matter of Google, Inc. and DoubleClick, Inc. (Apr. 20, 2007), https://epic.org/privacy/ftc/google/epic_complaint.pdf.

[5] Dissenting Statement of Commissioner Pamela Jones Harbour, *In re Google/DoubleClick*, FTC File No. 070-0170 (Dec. 20, 2007), https://www.ftc.gov/sites/default/files/documents/public_statements/statement-matter-google/doubleclick/071220harbour_0.pdf.

[6] Letter from EPIC to the Fed. Trade Comm'n (Sept. 8, 2011), https://epic.org/privacy/ftc/google/Google_FTC_Ltr_09_08_11.pdf.

[7] *Search Engine Market Share United States of America*, Statcounter, http://gs.statcounter.com/search-engine-market-share/all/united-states-of-america.

[8] *Search Engine Market Share Europe*, Statcounter, http://gs.statcounter.com/search-engine-market-share/all/europe.

[9] Tim Wu, *The Curse of Bigness* 126 (2018).

[10] EPIC, *Google Plans Advertising on Appliances, Including Nest Thermostat* (May 22, 2014), https://epic.org/2014/05/google-plans-advertising-on-ap.html.

[11] Fed. Trade Comm'n, Early Termination Notice: 20140457: Google Inc.; Nest Labs, Inc. (Feb. 4, 2014), https://www.ftc.gov/enforcement/premerger-notification-program/early-termination-notices/20140457.

[12] EPIC, *In re: WhatsApp*, https://epic.org/privacy/internet/ftc/whatsapp/.

2012 that, "[w]e have not, we do not and we will not ever sell your personal information to anyone."[13] EPIC and the Center for Digital Democracy urged the FTC to block the deal.[14]

The FTC ultimately approved the merger after Facebook and WhatsApp promised not to make any changes to WhatsApp users' privacy settings.[15] However, Facebook announced in 2016 that it would begin acquiring the personal information of WhatsApp users, including phone numbers, directly contradicting their previous promises to honor user privacy.[16] Following this, EPIC and CDD filed another complaint with the FTC in 2016, but the Commission has taken no further action.[17] Meanwhile, antitrust authorities in the EU fined Facebook $122 million for making deliberately false representations about the company's ability to integrate the personal data of WhatsApp users.[18]

Inaction by the FTC has spurred more disregard for the privacy interests of WhatsApp users. Facebook recently said it would target WhatsApp users with ads, despite earlier statements to the contrary and opposition from WhatsApp's founders.[19] And earlier this year, Mark Zuckerberg confirmed Facebook's plans to merge WhatsApp, Facebook Messenger, and Instagram.[20] As we explained for *Techonomy*, a leading journal of tech innovation:

> If the FTC had stood behind its commitment to protect the data of WhatsApp users, there might still be an excellent messaging service, with end-to-end encryption, no advertising and minimal cost, widely loved by internet users around the world. But the FTC failed to act and one of the great internet innovations has essentially disappeared.[21]

Instead, consumers have with fewer options, Facebook has less competition, and the increased amount of data available to Facebook will make it even easier to crush the next competitor.

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[13] WhatsApp, *Why We Don't Sell Ads* (June 18, 2012), https://blog.whatsapp.com/245/Why-we-dont-sell-ads.
[14] EPIC and Center for Digital Democracy, Complaint, Request for Investigation, Injunction, and Other Relief In the Matter of WhatsApp, Inc., (Mar. 6, 2014), https://epic.org/privacy/ftc/whatsapp/WhatsApp-Complaint.pdf.
[15] *See*, Letter from Jessica L. Rich, Dir., Bureau of Consumer Prot., Fed. Trade Comm'n, to Facebook and WhatsApp (Apr. 10, 2014), https://epic.org/privacy/internet/ftc/whatsapp/FTC-facebook-whatsapp-ltr.pdf (concerning the companies' pledge to honor WhatsApp's privacy promises).
[16] WhatsApp, *Looking Ahead for WhatsApp* (Aug. 25, 2016), https://blog.whatsapp.com/10000627/Looking-ahead-for-WhatsApp.
[17] EPIC and Center for Digital Democracy, Complaint, Request for Investigation, Injunction, and Other Relief In the Matter of WhatsApp, Inc. (Aug. 29, 2016), https://epic.org/privacy/ftc/whatsapp/EPIC-CDD-FTC-WhatsApp-Complaint-2016.pdf.
[18] Mark Scott, *E.U. Fines Facebook $122 Million Over Disclosures in WhatsApp Deal*, N.Y. Times (May 18, 2017), https://www.nytimes.com/2017/05/18/technology/facebook-european-union-fine-whatsapp.html.
[19] Anthony Cuthbertson, *WhatsApp to Start Filling Up with Ads Just Like Facebook*, Independent (Oct. 1, 2018), https://www.independent.co.uk/life-style/gadgets-and-tech/news/whatsapp-update-targeted-ads-status-facebook-brian-acton-a8563091.html.
[20] Mike Issac, *Zuckerberg Plans to Integrate WhatsApp, Instagram and Facebook Messenger*, N.Y. Times (Jan. 25, 2019), https://www.nytimes.com/2019/01/25/technology/facebook-instagram-whatsapp-messenger.html.
[21] Marc Rotenberg, *The Facebook-WhatsApp Lesson: Privacy Protection Necessary for Innovation*, Techonomy (May 4, 2018), https://techonomy.com/2018/05/facebook-whatsapp-lesson-privacy-protection-necessary-innovation.

In the Commission's recent settlement with Facebook, the FTC chose not to undo the mistaken approval of the WhatsApp acquisition against the advice of consumer groups.[22] ***Far from protecting market competition and promoting innovation, the Commission is facilitating industry consolidation.***

Merger Review Should Consider Data Protection

The United States stands virtually alone in its unwillingness to address privacy as a competition issue. The merger of Facebook and WhatsApp has prompted countries in Europe to scrutinize the deal and issue fines.[23] But the FTC has repeatedly failed to even consider consumer privacy and data security in its merger review process.[24] EPIC emphasized the consequences of this failure in comments to the FTC in 2015, stating, "[i]n every instance, it was clear that the practical consequence of the merger would be to reduce the privacy protections for consumers and expose individuals to enhanced tracking and profiling."[25]

EPIC further underscored the dangers of lax enforcement in recent comments to the FTC, noting that Google and Facebook's access to consumer data "is at the very heart of why the digital platforms have been able to entrench their dominance."[26] But as Facebook and Google have developed increasingly invasive tracking of their users, the FTC failed to act. Despite an active consent decree against Facebook, the FTC allowed the company to disclose the personal information of 87 million Americans.[27] The Commission had the power to stop the scandal, simply by enforcing its previous orders in a way that protected consumer privacy.[28]

Antitrust enforcers must treat consumer privacy as the competitive harm it so clearly is. Just last week, Assistant Attorney General Delrahim warned: "it would be a grave mistake to believe that privacy concerns can never play a role in antitrust analysis."[29] Mr. Delrahim stated further, "Without

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[22] Letter from EPIC et al. to Joseph Simons, Chairman, Federal Trade Comm'n (Jan. 24, 2019), https://epic.org/privacy/facebook/2011-consent-order/US-NGOs-to-FTC-re-FB-Jan-2019.pdf.
[23] *Fuel of the Future: Data is Giving Rise to A New Economy*, Economist (May 6, 2017), http://www.economist.com/news/briefing/21721634-how-it-shaping-up-data-giving-rise-new-economy.
[24] Nathan Newman, *15 Years of FTC Failure to Factor Privacy into Merger Reviews*, Huffington Post, (Mar. 19, 2015), https://www.huffingtonpost.com/nathan-newman/15-years-of-ftc-failure-t_b_6901670.html.
[25] EPIC, Comments of the Electronic Privacy Information Center: Assessing the FTC's Prior Actions on Merger Review and Consumer Privacy, FTC File No. P143100, (Mar. 17, 2015), https://epic.org/privacy/internet/ftc/Merger-Remedy-3-17.pdf.
[26] EPIC et al., Comments on Competition and Consumer Protection in the 21st Century Hearings at 19 (Aug. 20, 2018), https://epic.org/apa/comments/EPIC-FTC-CompetitionHearings-August2018.pdf.
[27] Kevin Granville, *Facebook and Cambridge Analytica: What You Need to Know as Fallout Widens*, N.Y. Times (March 19, 2018), https://www.nytimes.com/2018/03/19/technology/facebook-cambridge-analytica-explained.html.
[28] Marc Rotenberg, *How the FTC Could Have Prevented the Facebook Mess*, Techonomy (Mar. 22, 2018), https://techonomy.com/2018/03/how-the-fte-could-have-avoided-the-facebook-mess ("If the FTC had enforced the Facebook consent order, Cambridge Analytica could not have accomplished its unprecedented data harvest.").
[29] Tony Romm, *DOJ issues new warning to big tech: Data and privacy could be competition concerns*, Wash. Post (Nov. 8, 2019), https://www.washingtonpost.com/technology/2019/11/08/doj-issues-latest-warning-big-tech-data-privacy-could-be-competition-concerns/.

competition, a dominant firm can more easily reduce quality — such as by decreasing privacy protections — without losing a significant number of users."[30]

This is precisely what EPIC has documented in antitrust and privacy complaints to the FTC for more than a decade: each acquisition by a dominant firm has led to a reduction in both competition and privacy protection.

Chairman Simons said in his nomination hearing, "the FTC needs to devote substantial resources to determine whether its merger enforcement has been too lax, and if that is the case, the agency needs to determine the reason for such failure and to fix it."[31] But Chairman Simons, when he has had the opportunity to revisit poorly conceived mergers, has failed to act. And now before the FTC is Google's planned acquisition of Fitbit, which is widely opposed by consumer organizations and those who favor market-based competition.

If the FTC approves Google's acquisition of Fitbit, it will be the 230th firm that Google/Alphabet has acquired with barely a whimper from the Federal Trade Commission.[32] This is not antitrust enforcement. This is agency negligence. The Federal Trade Commission's disregard for privacy protection and lax record of antitrust enforcement are diminishing innovation and competition in the United States economy.

It has become increasingly clear that data protection, competition, and innovation are all on the same side in a healthy Internet economy. The critical challenge now for the Committee is to ensure that the Federal Trade Commission fulfills its mission and safeguards these interests. The current path is not sustainable.

Thank you for your timely attention to this pressing issue. We ask that this statement be entered in the hearing record.

Sincerely,

/s/ Marc Rotenberg
Marc Rotenberg
EPIC President

/s/ Caitriona Fitzgerald
Caitriona Fitzgerald
EPIC Policy Director

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[30] *Id.*
[31] *Nomination Hearing Before the S. Comm. on Commerce, Sci., and Transp.*, 115th Cong. (2018) (statement of Joseph Simons, Chairman, Fed. Trade Comm'n. at 59:40), https://www.commerce.senate.gov/public/index.cfm/hearings?ID=EECF6964-F8DC-469E-AEB2-D7C16182A0E8.
[32] Wikipedia, *List of Mergers and Acquisitions by Alphabet* (Nov. 10, 2019), https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet#cite_note-303

[Whereupon, at 3:32 p.m., the subcommittee was adjourned.]

APPENDIX

Questions for the Record from the Honorable David N. Cicilline, Chairman, Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary

Questions for the Record for the Honorable Joseph Simons, Chairman, Federal Trade Commission

Merger Enforcement

1. **Please provide the performance objectives for managers in merger shops.**

The Bureau of Competition (BC) comprises several merger enforcement divisions, each led by an Assistant Director (AD) and one or more Deputy Assistant Directors (DADs). The ADs and DADs are responsible for carrying out the FTC's competition mission by executing the merger enforcement-related strategies identified in the FTC's annual performance plan.[1] These strategies include, among other things:

- Investigating potentially anticompetitive mergers using rigorous, economically sound, and fact-based analyses that enhance enforcement outcomes and minimize burdens on business; and

- Negotiating merger consent orders and winning litigated orders that have significant remedial, precedential, and deterrent effects.

2. **Are any merger shop managers evaluated based on the number of settlements they reach? If so, do you believe that this incentivizes reaching settlements over litigation?**

No, the number of settlements reached is not an element of performance management for merger shop managers.

The FTC's annual performance plan identifies the agency's performance metrics and goals, which are designed to ensure that the FTC—including its managers and senior leaders—effectively and efficiently uses its limited resources in areas where the agency can achieve the most positive change.[2] The metrics for merger enforcement treat litigated victories the same as settlements or abandoned or restructured transactions.[3] Likewise, we compute consumer savings across all merger enforcement actions (whether resolved through litigation or settlement), and total consumer savings compared to the amount of resources allocated to our merger program.[4]

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[1] FTC, FISCAL YEAR 2018 PERFORMANCE REPORT AND ANNUAL PERFORMANCE PLAN FOR FISCAL YEARS 2019 AND 2020 at 36-37, https://www.ftc.gov/system/files/documents/reports/fy-2019-20-performance-plan-fy-2018-performance-report/2020-app-apr.pdf.
[2] *Id.* at 42.
[3] *Id.* at 38 (Key Performance Goal 2.1.1).
[4] *Id.* at 39-40 (Key Performance Goals 2.1.2 & 2.1.3).

3. How does the Commission incentivize staff to recommend and litigate cases where it finds there has been—or is likely to be—harm to competition, even where that litigation may end in a loss?

The FTC does not shy away from litigating difficult cases, and this message is consistently conveyed to staff. Of course, the Commission must consider litigation risks when it determines how best to use its limited resources—but staff knows the Commission does not expect a 100 percent "win" rate. For example, the Commission has brought and prevailed in Supreme Court cases addressing reverse payment pharmaceutical agreements and the state-action doctrine, even after losing at the lower court level.[5] In the last few years, the agency tried and lost two hospital merger challenges in federal district court, only to prevail at the appellate level.[6] And just a couple of weeks ago, the agency lost a preliminary injunction action in federal district court regarding an industrial chemical merger.[7] When the Commission votes to bring these and other challenging cases and to devote considerable resources to them, even after exhaustive discussions of litigation risk, the Commission clearly signals to staff that the Commission has their backs when they seek to vigorously enforce the antitrust laws.

4. Is litigation a risk factor that the Commission considers when deciding whether to challenge a merger?

Yes, the Commission must consider litigation risk as part of our responsibility to be effective stewards of the resources entrusted to us. Antitrust merger litigation is a fast-paced, labor-intensive process, and we are always mindful of resource constraints when weighing enforcement options. But when we determine that a merger poses competitive harm, we do not let concerns over litigation risk dictate our decision to litigate. In assessing when and how to bring an enforcement action in the public interest, we consider multiple factors, but arguably the most important factor is the strength of the evidence. In evaluating the case, we look at the three legs of the stool of any good antitrust case: documents, witnesses, and economic analysis. We try to build merger challenges that have all three legs, but we very often bring cases that have only two—maybe even one—of the three legs.

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[5] *FTC v. Actavis, Inc.*, 570 U.S. 136 (2013) (rejecting lower courts' rulings immunizing reverse-payment settlements that were within the "scope of patent" and allowing antitrust scrutiny under a rule of reason analysis); *FTC v. Phoebe Putney Health Sys.*, 568 U.S. 216 (2013) (rejecting lower courts' rulings that state action doctrine immunized hospital acquisition from antitrust laws because state did not clearly and affirmatively express a policy allowing the special-purpose entity hospital authorities to make acquisitions that substantially lessened competition).

[6] *FTC v. Advocate Health Care Network*, 841 F.3d 460 (7th Cir. 2016); *FTC v. Penn State Hershey Med. Ctr.*, 838 F.3d 327 (3d Cir. 2016). In each case, the FTC alleged that the proposed merger would substantially reduce competition for general acute care inpatient hospital services sold to commercial health plans, leading to higher healthcare costs and lower quality service in local communities, but the district court rejected the FTC's proffered geographic market. On appeal, both circuit courts overturned the district court's decision and validated the FTC's geographic market analysis. The decisions acknowledged the commercial reality of U.S. hospital competition: that because patients prefer to receive hospital services close to home, employers require—and commercial health plans must offer—access to in-network hospitals close to where their employees live. This dynamic—rather than where patients living in the market might travel for healthcare if the cost of hospital services were to rise—determines the relevant geographic market.

[7] *FTC. v. Rag-Stiftung*, No. 1:19-cv-02337-TJK (D.D.C. Feb. 3, 2020), https://ecf.dcd.uscourts.gov/cgi-bin/show_public_doc?2019cv2337-150.

Of course, we entertain proffered settlement offers that we believe will restore competition, especially when we are confident that the settlement outcome will rival what we might obtain via protracted litigation.

5. Is it appropriate for the Commission to consider litigation risk when deciding whether to vote out a complaint in a merger or case of anticompetitive conduct if the Commission otherwise believes the transactiou or conduct violated the antitrust laws?

Yes, consideration of litigation risk is always appropriate and necessary. Antitrust litigation is incredibly resource intensive, and we have an obligation to be good stewards of the resources that Congress has allocated to carry out our dual competition and consumer protection missions. When we decide whether to pursue litigation, we evaluate the likelihood that our enforcement efforts will result in relief to consumers. For the same reason, we also consider whether accepting a well-crafted settlement could resolve the alleged harm much faster, and without expending resources to litigate the case.

Nevertheless, lawsuits are central to effective antitrust enforcement, and the Commission does not hesitate to litigate when necessary. The unprecedented level of antitrust litigation by the Commission over the last two years—including four merger challenges approved unanimously by the Commission and filed in the last two months—shows this. [8]

Litigation risk is just one of many factors that inform the agency's enforcement priorities. Early in my term as Chairman, I identified five factors that I use in prioritizing our enforcement efforts:

i. Does the conduct pose a substantial threat to consumers?
ii. Does the conduct involve a significant sector of the economy?
iii. Does the FTC have experience that will allow it to make an impact quickly and efficiently?
iv. Does the conduct present a legal issue that would benefit from further study, and potentially have a significant effect on antitrust jurisprudence?
v. Does the conduct involve unilateral conduct by dominant firms in industries with substantial network effects?[9]

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[8] *See, e.g.*, FTC Press Release, *FTC Files Suit to Block Edgewell Personal Care Company's Acquisition of Harry's, Inc.* (Feb. 3, 2020), https://www.ftc.gov/news-events/press-releases/2020/02/ftc-files-suit-block-edgewell-personal-care-companys-acquisition; FTC Press Release, *FTC Challenges Consummated Merger of Companies that Market Body-Worn Camera Systems to Large Metropolitan Police Departments* (Jan. 3, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-challenges-consummated-merger-companies-market-body-worn; *FTC Press Release, FTC Alleges Post Holdings, Inc.'s Proposed Acquisition of TreeHouse Foods, Inc.'s Private Label Ready-to-Eat Cereal Business will Harm Competition* (Dec. 19, 2019), https://www.ftc.gov/news-events/press-releases/2019/12/ftc-alleges-post-holdings-incs-proposed-acquisition-treehouse; FTC Press Release, *FTC Challenges Illumina's Proposed Acquisition of PacBio* (Dec. 17, 2019), https://www.ftc.gov/news-events/press-releases/2019/12/ftc-challenges-illuminas-proposed-acquisition-pacbio.

[9] Prepared Remarks of Chairman Joseph Simons, Georgetown Law Global Antitrust Enforcement Symposium at 4-5 (Sept. 25, 2018),

Following these principles, I believe that the agency is able to deliver the most bang for its buck in bringing litigation cases.

6. **When was the last time that the Commission voted to file a complaint in a case that involved a new or novel theory of harm? Please provide a description of that case.**

On December 17, 2019, the Commission, by unanimous vote, authorized an action to challenge Illumina, Inc.'s proposed acquisition of Pacific Biosciences of California under Section 2 of the Sherman Act and Section 7 of the Clayton Act.[10] The complaint alleged that Illumina violated Section 2 of the Sherman Act by seeking to acquire and therefore extinguish PacBio, a nascent competitive threat to Illumina's 90-percent share monopoly in the U.S. market for next-generation DNA sequencing systems. The complaint also alleged that the proposed acquisition would eliminate current competition and prevent increased future competition between Illumina and PacBio.[11] Two weeks after the Commission issued its complaint, the parties abandoned their transaction.

I note this is not an isolated example. There have been other firsts in the past year, including our first case to preserve competition in private label foods.[12]

7. **According to a September report by the Washington Center for Equitable Growth, non-merger enforcement has been at historical lows over the past two years.[13] What is your response to this report?**

As the report itself noted, "numbers do not tell the entire story." I am proud of the Commission's substantial record on non-merger enforcement during my time as Chairman. The Commission unanimously supported the agency's first action involving a multi-sided

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https://www.ftc.gov/system/files/documents/public_statements/1413340/simons_georgetown_lunch_address_9-25-18.pdf.

[10] FTC Press Release, *FTC Challenges Illumina's Proposed Acquisition of PacBio* (Dec. 17, 2019), https://www.ftc.gov/news-events/press-releases/2019/12/ftc-challenges-illuminas-proposed-acquisition-pacbio.

[11] In addition to issuing an administrative complaint, the Commission authorized staff to seek a temporary restraining order and a preliminary injunction in federal court, if necessary, to maintain the status quo pending the administrative proceeding. *Id.*

[12] FTC Press Release, *FTC Alleges Post Holdings, Inc.'s Proposed Acquisition of TreeHouse Foods, Inc.'s Private Label Ready-to-Eat Cereal Business will Harm Competition* (Dec. 19, 2019), https://www.ftc.gov/news-events/press-releases/2019/12/ftc-alleges-post-holdings-incs-proposed-acquisition-treehouse. Outside the merger context, the Commission also brought its first pharmaceutical product-hopping case this year. The Commission's complaint alleged that the pharmaceutical company made knowingly false statements to the FDA while engaging in a "product hopping" scheme to shift existing patients away from the tablet product about to face generic competition and onto another, more lucrative film product that enjoyed patent protection and provided no legitimate incremental benefits. FTC Press Release, *Reckitt Benckiser Group plc to Pay $50 Million to Consumers, Settling FTC Charges that the Company Illegally Maintained a Monopoly over the Opioid Addiction Treatment Suboxone* (July 11, 2019), https://www.ftc.gov/news-events/press-releases/2019/07/reckitt-benckiser-group-plc-pay-50-million-consumerssettling-ftc.

[13] Michael Kades, *The State of U.S. Federal Antitrust Enforcement*, Washington Center for Equitable Growth (Sept. 2019), https://equitablegrowth.org/wp-content/uploads/2019/09/091719-antitrust-enforcement-report.pdf.

health information platform,[14] the first case alleging pharmaceutical product hopping as an illegal method of maintaining a monopoly,[15] and most recently, a case filed with the New York Attorney General alleging an illegal course of conduct to maintain high prices for off-patent drugs.[16] In addition, we have many investigations underway.

While there is more variation in the number of competition conduct cases brought from year to year as compared to the FTC's merger enforcement numbers, rest assured that conduct cases are a priority. During the two years that I was the Director of the FTC's Bureau of Competition from 2001-2003, the Commission filed 25 non-merger cases and opened 100 investigations. My commitment to challenging anticompetitive conduct continues today.

Three points are worth noting to provide context regarding the Commission's approach to conduct cases. First, although conduct enforcement is often targeted at the most harmful conduct, our case selection is also about helping to evolve the law. For example, the *Actavis* matter was just one case, but it has been the lynchpin of the Commission's bipartisan, decades-long effort to push back against anticompetitive reverse-payment patent settlements that deter generic drug competition.[17] Second, conduct enforcement matters are particularly time-consuming and often require significant resources to see through to the end. Again, *Actavis* was finally settled last year with broad injunctive relief—a full ten years after the Commission filed its complaint in federal court. Finally, done well, conduct enforcement can have deterrent effects beyond a single case. Again using *Actavis* as an example, one reason for a significant drop off in civil non-merger cases is that the Commission has prioritized challenging reverse-payment pharmaceutical settlements. As a result, there are far fewer problematic settlements.[18]

8. How do you think the Commission should analyze transactions involving a private equity buyer? Do these transactions raise any unique issues?

The Commission applies the same methods and analysis to mergers involving all types of investors and owners, including acquisitions made by private equity buyers. I joined a Commission statement in *Staples/Essendant* that addressed concerns that private equity buyers

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[14] FTC Press Release, *FTC Charges Surescripts with Illegal Monopolization of E-Prescription Markets* (Apr. 24, 2019), https://www.ftc.gov/news-events/press-releases/2019/04/ftc-charges-surescripts-illegal-monopolization-e-prescription.

[15] FTC Press Release, *Reckitt Benckiser Group plc to Pay $50 Million to Consumers, Settling FTC Charges that the Company Illegally Maintained a Monopoly over the Opioid Addiction Treatment Suboxone* (July 11, 2019), https://www.ftc.gov/news-events/press-releases/2019/07/reckitt-benckiser-group-plc-pay-50-million-consumerssettling-ftc.

[16] FTC Press Release, *FTC and NY Attorney General Charge Vyera Pharmaceuticals, Martin Shkreli, and Other Defendants with Anticompetitive Scheme to Protect a List-Price Increase of More Than 4,000 Percent for Life-Saving Drug Daraprim* (Jan. 27, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-ny-attorney-general-charge-vyera-pharmaceuticals-martin.

[17] *FTC v. Actavis, Inc.*, 570 U.S. 136 (2013).

[18] The data show that the FTC's *Actavis* litigation has had a substantial deterrent effect in significantly reducing the kinds of reverse-payment agreements that are most likely to impede generic entry and harm consumers. *See* FTC BUREAU OF COMPETITION, AGREEMENTS FILED WITH THE FEDERAL TRADE COMMISSION UNDER THE MEDICARE PRESCRIPTION DRUG, IMPROVEMENT, AND MODERNIZATION ACT OF 2003: OVERVIEW OF AGREEMENTS FILED IN FY 2016 (May 2019), https://www.ftc.gov/reports/agreements-filed-federal-trade-commission-under-medicare-prescription-drug-improvement-fy2016.

require additional scrutiny.[19] As explained in that statement, the antitrust laws focus on curbing harm to the competitive process. Concerns about the motivations of the private equity buyer in that case were unrelated to an analysis of how the acquiring company might use the acquired business to harm the competitive process.

I will keep an open mind when assessing the facts presented in each merger case, but in general, I do not believe acquisitions by private equity buyers require unique scrutiny.

9. **According to Columbia Law School Professor Tim Wu, dominant technology platforms have completed more than 350 mergers and acquisitions to date. Many of these involved Facebook and Google acquiring actual and nascent competitors. Professor Wu observed, "As with a basketball referee who never calls a foul, the question is whether the players have really been faultless—or whether the referee is missing something." How do you respond to the Professor Wn's concern that the agency has been missing something when it comes to merger enforcement in digital markets?**

I was not at the Commission when many of these mergers were reviewed, and therefore do not have first-hand knowledge of how those decisions were reached. But I am sensitive to concerns that the Commission might have missed something. To that end, the Commission is considering whether to use its Section 6(b) authority to examine past mergers and acquisitions by large technology platforms.

Addressing anticompetitive conduct in the technology sector is one of my top priorities. I created the Bureau of Competition's new Technology Enforcement Division to take a fresh look at the markets in which technology platforms compete. If appropriate, the Commission will take action to counter any harmful effects of coordinated or unilateral conduct by technology firms. As we demonstrated in our complaint challenging the Illumina/PacBio merger, acquisitions can be a method of monopolization and so are actionable under a monopolization theory.

10. **You have repeatedly stated that you are committed to blocking "killer acquisitions." Has the Commission challenged any killer acquisitions under your leadership, or developed policies for doing so? If so, please describe the relevant transactions or policies.**

We are aware of concerns that certain firms may be engaging in so-called "killer acquisitions" that have the effect of eliminating nascent or potential competitors, and we are taking this issue very seriously. On the enforcement front, we continue to scrutinize mergers between large incumbents and smaller rivals for potential harm to innovation competition.[20] For example:

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[19] Statement of Chairman Joseph J. Simons, Commissioner Noah Joshua Phillips, and Commissioner Christine S. Wilson Concerning the Proposed Acquisition of Essendant, Inc. by Staples, Inc., File No. 181-0180 (Jan. 28, 2019), https://www.ftc.gov/system/files/documents/public_statements/1448328/181_0180_staples_essendant_majority_statement_1-28-19.pdf.

[20] This is consistent with the FTC's past practice. *See, e.g.,* FTC Press Release, FTC, Mallinckrodt Will Pay $100 Million to Settle FTC, State Charges It Illegally Maintained its Monopoly of Specialty Drug Used to Treat Infants

- The Commission recently successfully challenged Illumina's proposed acquisition of PacBio, preserving competition in the U.S. market for next-generation DNA sequencing systems.[21]

- The Commission challenged a consummated acquisition in which the market leader in microprocessor prosthetic knees, Otto Bock, eliminated a primary competitive threat, Freedom Innovations.[22]

- As recently as a few weeks ago, the Commission, by unanimous vote, challenged the consummated acquisition of VieVu, LLC by Axon Enterprise, Inc., the largest provider of body-worn camera systems to large, metropolitan police departments in the United States.[23]

As a complement to our enforcement work, the Commission is considering the use of its Section 6(b) authority to examine past acquisitions by large technology platforms to better understand what was done with the acquired assets.

11. In November, the FTC published a proposed consent order approving Bristol-Myers-Squibb's $74 billion acquisition of Celgene, subject to the divestiture of Celgene's Otezla for $13.4 billion. Although the proposed divestiture is the largest that a U.S. antitrust agency has required in a merger enforcement matter, two commissioners dissented from the order, arguing that the Commission's analysis of pharmaceutical mergers remains narrowly focused on questions of product overlap and neglects critical questions about whether the transaction is likely to facilitate anticompetitive conduct or hamper innovation.

a. Do you believe that an analytical approach that focuses on product overlap is sufficient to capture all potential anticompetitive effects of pharmaceutical mergers?

(Jan. 18, 2017), https://www.ftc.gov/news-events/press-releases/2017/01/mallinckrodt-will-pay-100-million-settle-ftc-state-charges-it (blocking acquisition because Questcor "acquired the rights to its greatest competitive threat, a synthetic version of Acthar, to forestall future competition").

[21] FTC Press Release, *Statement of Gail Levine, Deputy Director of FTC Bureau of Competition, Regarding the Announcement that Illumina Inc. has Abandoned Its Proposed Acquisition of Pacific Biosciences of California* (Jan. 2, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/statement-gail-levine-deputy-director-ftc-bureau-competition.

[22] FTC Press Release, *FTC Commissioners Unanimously Find that Consummated Merger of Microprocessor Prosthetic Knee Companies was Anticompetitive; Assets Must Be Unwound* (Nov. 6, 2019), https://www.ftc.gov/news-events/press-releases/2019/11/ftc-commissioners-unanimously-find-consummated-merger.

[23] FTC Press Release, *FTC Challenges Consummated Merger of Companies that Market Body-Worn Camera Systems to Large Metropolitan Police Departments* (Jan. 3, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-challenges-consummated-merger-companies-market-body-worn.

No, and our analysis is not so limited. In every merger investigation during my tenure, the Commission has evaluated a wide range of theories of competitive harm.[24] For example, in every pharmaceutical merger investigation during my tenure, including *Bristol-Myers Squibb/Celgene*, the Commission has analyzed whether the merger would likely result in harm to innovation competition. We evaluate whether each merger would result in a meaningful decline in the number of firms capable of innovating in specific therapeutic areas (including for generic drugs) and the number of drug manufacturers overall.

Section 6.4 of the *Horizontal Merger Guidelines* explains the FTC's innovation effects analysis.[25] Under Section 6.4, the agencies will consider whether a merger is likely to diminish innovation competition by reducing the merged firm's incentive to continue with an existing product-development effort, or by reducing the merged firm's incentive to initiate development of new products.

As the *Guidelines* instruct, the first type of harm to innovation is most likely to occur if at least one of the merging firms is engaging in efforts to introduce new products that would capture substantial revenue from the other merging firm. In the *BMS/Celgene* matter, the Commission determined the acquisition would result in this type of harm to innovation, and ordered BMS to divest Otezla in order to preserve BMS's incentive to continue developing its own oral product for treating moderate-to-severe psoriasis.[26]

When evaluating whether a merger will reduce the merged firm's incentive to develop new products in the future, we look to whether the merger will diminish innovation competition by combining two of a small number of firms with the strongest capabilities to successfully innovate in a specific direction.[27] The Commission evaluated this theory in *BMS/Celgene*, as it does in every pharmaceutical merger investigation, but the evidence developed in *BMS/Celgene* indicated that this type of harm to innovation competition was unlikely to occur.

b. Please identify all pharmaceutical mergers reviewed by the FTC during your tenure as Chairman where the Commission's analysis extended beyond product overlap concerns.

As stated above, the Commission evaluates a wide range of theories of competitive harm in every pharmaceutical merger investigation. In every case, staff considers each relevant theory

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[24] This is consistent with past Commission practice. For example, in the *Teva/Allergan* matter, the Commission evaluated three additional potential theories of harm beyond individual product overlaps: whether the transaction would likely lead to anticompetitive effects from the bundling of generic products; whether it would likely decrease incentives to challenge the patents held by brand-name pharmaceutical companies and bring new generic drugs to market; and whether it might dampen incentives to develop new generic products. Statement of the Federal Trade Commission In the Matter of Teva Pharm. Indus. Ltd. and Allergan plc, No. C-4589 (July 27, 2016), https://www.ftc.gov/system/files/documents/public_statements/973673/160727tevaallergan-statement.pdf.

[25] U.S. Dep't of Justice & FTC, Horizontal Merger Guidelines (2020), https://www.ftc.gov/system/files/documents/public_statements/804291/100819hmg.pdf.

[26] FTC Press Release, *FTC Requires Bristol-Myers Squibb Company and Celgene Corporation to Divest Psoriasis Drug Otezla as a Condition of Acquisition* (Nov. 15, 2019), https://www.ftc.gov/news-events/press-releases/2019/11/ftc-requires-bristol-myers-squibb-company-celgene-corporation.

[27] Horizontal Merger Guidelines § 6.4.

of harm and, based on the evidence gathered during the investigation, evaluates whether each theory supports a challenge to the transaction.[28]

I appreciate that the price of pharmaceutical products has a significant impact on American consumers' health care costs. I believe that the Commission's rigorous scrutiny of pharmaceutical mergers and anticompetitive conduct[29] is a critical component of fulfilling our mission to protect American consumers, and is one of the agency's most lasting legacies.

c. Please identify all pharmaceutical mergers blocked by the FTC where the Commission's theory of harm extended beyond product overlap concerns.

The Commission has challenged numerous pharmaceutical mergers based on concerns other than product overlaps. For example, the Commission has challenged numerous pharmaceutical mergers to protect innovation competition.[30] The Commission has also challenged pharmaceutical mergers to protect vertical competition. For example, in the *Teva/Allergan* matter, the Commission issued a consent order that required Teva Pharmaceuticals Industries Ltd. to offer its active pharmaceutical ingredient (API) customers the option of entering into long-term API supply contracts.[31] The order resolved concerns that Teva's acquisition of the

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[28] *See, e.g.*, Statement of the Federal Trade Commission In the Matter of Roche Holding and Spark Therapeutics, File No. 191-0086 (Dec. 16, 2019), https://www.ftc.gov/system/files/documents/public_statements/1558049/1910086_roche-spark_commission_statement_12-16-19.pdf (noting that "[m]erger investigations are highly fact-specific, and the determination of whether a transaction will result in potential competitive harm requiring an enforcement action is driven by evidence.").

[29] The Commission recently filed a complaint against Vyera Pharmaceuticals, LLC, alleging an anticompetitive scheme to preserve a monopoly for the life-saving drug, Daraprim. FTC Press Release, *FTC and NY Attorney General Charge Vyera Pharmaceuticals, Martin Shkreli, and Other Defendants with Anticompetitive Scheme to Protect a List-Price Increase of More than 4,000 Percent for Life-Saving Drug Daraprim* (Jan. 27, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-ny-attorney-general-charge-vyera-pharmaceuticals-martin.

[30] *See, e.g.*, FTC Press Release, *FTC, Mallinckrodt Will Pay $100 Million to Settle FTC, State Charges It Illegally Maintained its Monopoly of Specialty Drug Used to Treat Infants* (Jan. 18, 2017), https://www.ftc.gov/news-events/press-releases/2017/01/mallinckrodt-will-pay-100-million-settle-ftc-state-charges-it (blocking acquisition because Questcor "acquired the rights to its greatest competitive threat, a synthetic version of Acthar, to forestall future competition"); FTC Press Release, *FTC Puts Conditions on Novartis AG's Proposed Acquisition of GlaxoSmithKline's Oncology Drugs* (Feb. 23, 2015), https://www.ftc.gov/news-events/press-releases/2015/02/ftc-puts-conditions-novartis-ags-proposed-acquisition (requiring divestitures of in-development BRAF and MEK inhibitor drugs to ensure development of the BRAF and MEK inhibitors continues uninterrupted, and competition in BRAF and MEK inhibitor markets is not reduced); FTC Press Release, *FTC Puts Conditions on Generic Drug Maker Lupin Ltd.'s Proposed Acquisition of Gavis Pharmaceuticals LLC* (Feb. 19, 2016), https://www.ftc.gov/news-events/press-releases/2016/02/ftc-puts-conditions-generic-drug-marketer-lupin-ltds-proposed (requiring divestitures to ensure continued development of generic mesalamine ER capsules, which Lupin and Gavis were developing independently at the time of the merger). For a brief overview of the many other pharmaceutical mergers the Commission has blocked to protect innovation competition, *see* FTC HEALTH CARE DIVISION STAFF, OVERVIEW OF FTC ACTIONS IN PHARMACEUTICAL PRODUCTS AND DISTRIBUTION (Sept. 2019), https://www.ftc.gov/system/files/attachments/competition-policy-guidance/20190930_overview_pharma_final.pdf.

[31] FTC Press Release, *FTC Requires Teva to Divest Over 75 Generic Drugs to Settle Competition Concerns Related to its Acquisition of Allergan's Generic Business* (July 27, 2016), https://www.ftc.gov/news-events/press-releases/2016/07/ftc-requires-teva-divest-over-75-generic-drugs-rival-firms-settle.

generic pharmaceutical business of Allergan plc would increase Teva's incentive to withhold eight APIs from other manufacturers, to benefit newly acquired Allergan products.[32]

In most pharmaceutical mergers, the companies have been willing to divest products and intellectual property sufficient to resolve the Commission's concerns without litigation.

12. At the time of your nomination, you submitted responses to a questionnaire from the Senate Committee on Commerce, Science, and Transportation. In one of your answers, you wrote:

> **The FTC needs to devote substantial resources to determine whether its merger enforcement has been too lax, and if that's the case, the agency needs to determine the reason for such failure and to fix it. Even if the evidence shows no such failure, it would be good practice to evaluate more systematically the Commission's merger enforcement program through the regular use of retrospective studies to prevent potential problems in the future. It would also be good practice to extend the retrospectives to non-merger matters as well.[33]**

a. Please identify the number of merger retrospective studies the Commission has pursued during the course of your tenure as Chairman and describe the scope and subject of each study.

b. Please describe the finding of each study.

The Commission's merger retrospective program is an ongoing effort to evaluate the competitive effects of past mergers and acquisitions. Merger retrospectives are an important part of the Bureau of Economics (BE) research program, a significant goal of which is to improve the economic analysis performed to support the Commission's enforcement activities. BE typically has a number of merger retrospectives ongoing at any point in time, including now. The time required to complete these important studies may vary based on a number of factors—not the least of which includes our economists' caseload of enforcement matters, which has been particularly demanding given current staffing levels.

Since the start of my tenure, we have completed several merger retrospectives and have made significant progress on several more. A recently completed study addresses the important question of how the acquisition of the physician practices by hospital systems can affect quality

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[32] APIs are central inputs in manufacturing finished dose form pharmaceutical products. API supply sources must be designated in a drug's FDA marketing application. Switching to a non-designated API source requires a generic drug maker to supplement its Abbreviated New Drug Application (ANDA), a process that can take as long as two years or even more. Consequently, a generic drug manufacturer's API supply options are limited to the sources qualified under its ANDA. Analysis of Agreement Containing Consent Orders to Aid Public Comment, In the Matter of Teva Pharm. Indus. Ltd. and Allergan, plc, No. C-4589 (July 27, 2016), https://www.ftc.gov/system/files/documents/cases/160727tevaallergananalysis.pdf; *see also* Statement of the Federal Trade Commission In the Matter of Teva Pharm. Indus. Ltd. and Allergan plc, No. C-4589 (July 27, 2016), https://www.ftc.gov/system/files/documents/public_statements/973673/160727tevaallergan-statement.pdf.

[33] Joseph Simons, Questionnaire Response, Senate Committee on Commerce, Science, and Transportation (Jan. 31, 2018), https://www.commerce.senate.gov/services/files/6c4149af-3023-4825-90f1-3c38e279fd0d.

of care.[34] The outcomes studied represent the progression of hypertension and diabetes patients into worse health states. These outcomes were selected because they are common but serious health problems experienced by the subject population, Medicare beneficiaries. The results indicate that hospital acquisitions of existing physician practices have no statistically significant clinical benefits for the health outcomes considered. This is particularly interesting because the same researchers found in an earlier study that expenditures increased following these mergers.[35] A related, nearly completed study looks at the impact of mergers between physician practices on health outcomes and finds mixed results, depending on the types of practices and the health outcomes considered.

BE staff presented initial results from retrospective studies of two hospital mergers at a June 2019 FTC workshop on certificates of public advantage (COPAs).[36] One study looked at the 1998 hospital merger in Asheville, North Carolina, which the study found resulted in estimated price increases of approximately 20 percent relative to control hospitals.[37] The second study focused on a 1997 hospital merger in Columbia, South Carolina, and found no significant price effects.[38] One possible explanation for the different results is that there were more competitors in the South Carolina case than there were in the North Carolina case.

In order to continue investigating the impact of mergers that are shielded from antitrust scrutiny by COPAs, in October 2019, the Commission issued orders to five health insurance companies and two health systems to provide information that will help the agency conduct retrospective analyses of the effects of two more recent hospital mergers that proceeded subject to COPAs. The FTC intends to collect information over the next several years as part of this effort. The retrospective studies will examine the effects of the COPAs on price, quality, access, and innovation for healthcare services, but also the impact of hospital consolidation on employee wages. Once this multiyear study is complete, the FTC plans to report publicly on its findings.

In addition to our ongoing studies, we currently are working on developing a protocol that will provide the agency with a more systematic framework for identifying and carrying out merger retrospective studies. We also are exploring the possibility of hiring additional economists to increase our capacity for carrying out these studies—something that is possible because of the additional resources that are available to us. As always, we thank the Committee for its continuing support for the FTC's mission.

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[34] This paper followed the usual progression of economic research, which is to release a draft of the paper once the results have largely been obtained, but for the analysis to continue to undergo revision as the authors receive feedback. A draft of this research was released as a Bureau of Economics working paper in 2018, https://www.ftc.gov/reports/effects-physician-hospital-integration-medicare-beneficiaries-health-outcomes.

[35] Thomas G. Koch, Brett W. Wendling & Nathan E. Wilson, *How Vertical Integration Affects the Quantity and Cost of Care for Medicare Beneficiaries*, 52 J. HEALTH ECON. 19 (2017).

[36] FTC Workshop, *A Health Check on COPAs: Assessing the Impact of Certificates of Public Advantage in Healthcare Markets* (June 18, 2018), https://www.ftc.gov/news-events/events-calendar/health-check-copas-assessing-impact-certificates-public-advantage.

[37] *See* slides for *The Mission Health COPA: Evidence on Price Effects from CMS HCRIS Data*, Lien Tran & Rena Schwarz (at 37-53), https://www.ftc.gov/system/files/documents/public_events/1508753/slides-copa-jun_19.pdf.

[38] *See* slides for *Palmetto Health COPA: Evidence on Price Effects*, Kishan Bhatt (at 18-36), https://www.ftc.gov/system/files/documents/public_events/1508753/slides-copa-jun_19.pdf.

c. Please describe what these studies revealed about the efficacy of the Commission's merger review and enforcement efforts and about how they can be improved.

Although dozens of merger retrospectives have been published, that still is a relatively small sample size. Moreover, the mergers studied are not necessarily representative of the population of mergers. For instance, the studies tend to be concentrated, out of necessity, in industries where relevant data are readily available. As a result, these studies should be interpreted as measuring the effectiveness of specific (non-)enforcement decisions and not as the average price effect of a representative sample of consummated mergers.

Nevertheless, the main implication of this research is that mergers in concentrated markets can lead to price increases, which is consistent with standard economic theory. Given our limited knowledge, it is impossible to draw either broader conclusions about the effectiveness of enforcement or specific guidance as to what market characteristics are more likely to result in anticompetitive mergers. Nevertheless, we hope to address this problem by developing a more systematic merger retrospectives program.

d. Please identify all steps the Commission has taken to evaluate more systematically the Commission's merger enforcement program.

I believe merger retrospectives are critical to ensuring the success of our merger enforcement program. Evaluation of our past choices can provide valuable guidance for our future decisions. The FTC has long been at the forefront of conducting retrospective studies. FTC economists have authored or coauthored more than twenty-five studies that have estimated the effects of mergers on competition.[39] FTC staff have also authored retrospective studies of Commission-ordered divestitures and merger remedies.[40] For example, the most recent study looked back at Commission orders issued between 2006 and 2012. The report found that the agency's process for designing and implementing merger remedies is generally effective and in most cases resulted in remedies that preserved or restored competition that would have been lost due to the merger. The study also identified certain areas in which improvements could be made, particularly for divestitures of limited asset packages in horizontal, non-consummated mergers.

The Commission's *Hearings on Competition and Consumer Protection in the 21st Century* are another important component of our merger retrospective efforts. I announced the *Hearings* with the intention that they would stimulate internal and external evaluation of and commentary on the Commission's law enforcement program. I believe the *Hearings* sessions, including the full day session on merger retrospectives, and public commentary have already done this, and we

[39] FTC Bureau of Economics, List of FTC Bureau of Economics Merger Retrospective Studies (Apr. 2019), https://www.ftc.gov/system/files/attachments/press-releases/ftc-announces-agenda-14th-session-its-hearings-competition-consumer-protection-21st-century/list_of_be_retrospective_studies.pdf.

[40] FTC Staff Report, THE FTC'S MERGER REMEDIES 2006-2012: A REPORT OF THE BUREAUS OF COMPETITION AND ECONOMICS (2017), https://www.ftc.gov/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics; FTC Staff Report, A STUDY OF THE COMMISSION'S DIVESTITURE PROCESS (1999), https://www.ftc.gov/reports/study-commissions-divestiture-process.

continue to think critically about these issues.[41] In fact, we currently are working on developing our protocols for identifying viable candidates for future merger retrospective studies. As noted above, the additional resources allocated by Congress will allow us to make developing a more systematic program more feasible, but we still need additional resources in order to build a robust retrospectives program.

The Commission also engages in less formal retrospective learning. As part of its regular antitrust work, staff often investigates mergers and other business activity in the same industries, often in the same geographic market. These subsequent investigations can reveal the effects of earlier transactions and provide some insight into prior enforcement decisions.

Settlement Policy

13. The FTC's recent settlement with Facebook contained an extremely broad release from legal liability. Since violations of many consumer protection statutes—such as the Children's Online Privacy Protection Act (COPPA)—also constitute violations of the FTC Act, it would appear that the proposed settlement releases Facebook from claims under COPPA and other consumer protection statutes. Is that correct?

There has been considerable misunderstanding of the release clause in the 2019 order, which, in fact, is not extremely broad. First, the order only releases claims for known violations of the FTC Act. FTC staff investigated all such potential violations, including allegations received from interest groups and issues reported by the press. Based on these investigations, staff determined there were no known valid claims as of June 12, 2019, other than those addressed in the 2019 order. Thus, the release would not preclude the FTC from addressing any subsequently discovered violation of law by Facebook that occurred prior to or after June 12, 2019. This would include direct violations of the FTC Act, or of any rule or statute the FTC enforces, including the COPPA Rule.

Second, the release of known and unknown claims for violation of the 2012 order is much less dramatic than commonly portrayed. The law in most jurisdictions is very clear that the doctrine of *res judicata* (or claim preclusion) releases all claims, known and unknown, that could have been brought in an order enforcement action.[42] Thus, all the FTC's order enforcement actions, both settlements and victories in court, effectively release all known and unknown claims for order violations. Because preclusion law is different for violations of law (*e.g.*, the FTC Act), the FTC's *de novo* consumer protection settlements (the vast majority of the agency's orders) are

[41] FTC, *Hearings on Competition and Consumer Protection in the 21st Century: Merger Retrospectives* (Apr. 12, 2019), https://www.ftc.gov/news-events/events-calendar/ftc-hearing-14-merger-retrospectives.

[42] *United States v. ITT Continental Baking Co.*, 420 U.S. 223, 238 (1975) ("[A] consent decree or order is to be construed for enforcement purposes basically as a contract."); *see also Int'l Union of Operating Eng'rs-Emp'rs Constr. Indus. Pension, Welfare, and Training Trust Funds v. Karr*, 994 F.2d 1426, 1429-30 (9th Cir. 1993) (holding claims for breach of the same contract barred by *res judicata*) (citing *McClain v. Apodaca*, 793 F.2d 1031, 1034 (9th Cir. 1986)); *May v. Parker-Abbott Transfer & Storage, Inc.*, 899 F.2d 1007, 1009-11 (10th Cir. 1990) (same); *TechnoMarine SA v. Giftports, Inc.*, 758 F.3d 493, 499-501 (2d Cir. (2013). The legal analysis in the D.C. Circuit is more complex, but appears to lead to the same result. *See United States Indus. v. Blake Constr. Co.*, 765 F.2d 195 (D.C. Cir. 1985).

simply irrelevant. The fact that the provision is explicit in the 2019 order does not change the legal reality that such a release is not only common, but also automatically prescribed by law.

14. What other Commission orders have contained a comparably broad release of known and unknown order violation claims, as well as all known Section 5 claims?

No other Commission order explicitly contains the same provision. However, as indicated above, all of the FTC's settlement orders addressing order violations, both administrative and federal court orders, effectively contain the same release for known and unknown claims for order violations under the doctrine of *res judicata*.

15. Does the FTC complaint list the full universe of known order violations and known Section 5 violations for which the FTC has granted Facebook release?

The complaint in the Facebook matter alleges all violations that were known to the FTC prior to June 12, 2012.

16. Did the FTC record a full list of conduct that it investigated as potential order violations but ultimately determined did not violate the order?

FTC investigations are non-public, but staff keeps records of what it investigates.

17. Did the FTC record a full list of conduct that it investigated as potential Section 5 violations but ultimately determined did not violate Section 5?

See response to QFR 16, above.

18. Last year, the FTC uncovered a wage-fixing scheme among several health staffing companies in Integrity Home Therapy. Although wage fixing is a clear violation of the antitrust laws, the FTC decided against securing any meaningful relief, declining to secure a finding of admission or liability or to issue formal notification to third parties. In other words, upon discovering that companies were clearly violating the law, the FTC's response was to tell companies not to break the law. FTC Commissioner Chopra has described this as a "no-consequence" settlemeut. Uuder what conditions—if any—do you think "no consequence" settlements that solely order a respondent to cease and desist are appropriate?

I disagree that the Commission's order in the *Your Therapy Source* matter is of "no consequence." The Commission's order not only requires respondents to stop engaging in the anticompetitive conduct, but also allows the Commission to seek civil penalties for order violations, which can be a powerful deterrent against recidivism.[43]

[43] *See* Statement of the Federal Trade Commission Concerning the Commission's Consent Order, In the Matter of Your Therapy Source, LLC, Neeraj Jindal, and Sheri Yarbray, C- 4689 (Oct. 31, 2019), https://www.ftc.gov/system/files/documents/public_statements/1552414/171_0134_your_therapy_source_commission_statement.pdf.

When appropriate, the Commission seeks equitable monetary remedies to compensate victims for losses resulting from unlawful conduct. But our investigation in the *Your Therapy Source* matter did not yield evidence that any therapists' wages were actually reduced as a result of the illegal agreement to fix wages.[44] The lack of such evidence may be explained by the fact that FTC staff launched an investigation very quickly after learning of the invitation to collude, and stopped the conduct before it had an effect.

I also disagree that Commission enforcement actions ever impose "no consequences" for the wrongdoer. Whenever the Commission charges a company with violating a statute it enforces, we are affirming that we have collected evidence sufficient to give a majority of the Commission a reason to believe that the defendant has violated the law. This public action is a statement of what the law requires and how the company has failed to comply with it. The defendant must agree to stop the illegal conduct, and the Commission may seek additional relief, including monetary equitable remedies, when appropriate. And if the defendant violates the Commission's order, for instance by engaging in the illegal conduct again, it will be subject to civil penalties for each day and for each violation of the order.

19. In October, the Commission filed a complaint charging the high-end cosmetics company Snnday Riley for posting fake reviews at the CEO's direction. These fake reviews deceived consnmers and distorted fair competition. Yet the FTC's proposed settlement inclndes no monetary relief, no notice to consnmers, and no admission of wrongdoing. In other words, this company was found clearly breaking the law—and the FTC's remedy is to tell them not to break the law again. This appears to be part of a pattern of "no-consequence" settlements at the FTC. As Commissioner Chopra pointed ont in his dissent, honest companies may wonder if they are losing ont by following the law. Does failing to penalize lawbreakers incentive law-abiding companies to break the law?

I disagree that this was a "no consequence" settlement, or that the proposed relief in the Sunday Riley case incentivizes companies to break the law.

As a general matter, it is important to note that over the years the Commission has obtained thousands of no-money orders, and we believe these orders impose both specific and general deterrence. In the *Sunday Riley* case, the Commission's proposed complaint alleges violations of Section 5 of the FTC Act relating to Sunday Riley employees having deceptively posted reviews of Sunday Riley products on a third-party website. The Commission's proposed cease and desist order names the company CEO individually and has strong injunctive provisions. It prohibits misrepresenting the status of any endorser or person reviewing a product and failing to disclose any endorser's unexpected material connection; and it requires the company to instruct all employees, agents, and representatives as to their disclosure responsibilities and to get signed

[44] The lack of evidence indicating that any therapists' wages were reduced as a result of the illegal conduct also weighed against requiring respondents to provide notice of the Commission's action to individual therapists targeted by the unlawful conduct. Individual notice would have been unlikely to facilitate recovery in private civil litigation. The Commission will, however, take steps to ensure that the order and facts of the *Your Therapy Source* matter are disseminated as widely as possible in order to educate staffing firms, home healthcare workers, and small businesses about the illegality of wage fixing. *See id.* at 2-3.

acknowledgements from them. If Sunday Riley or its CEO violate this order, the U.S. Department of Justice (DOJ) can sue them in federal court and seek large civil penalties. The FTC investigation and resulting negotiations likely cost Sunday Riley significant attorney fees, and the case resulted in considerable negative publicity. Other companies do not want to be subjected to investigations, legal fees, injunctive provisions, compliance costs, reputational costs, and possible future civil penalties—all of which are serious consequences.

Investigative Process

20. In November, California's Attorney General filed a petition in California State Court to enforce a subpoena against Facebook. According to the filing, Facebook has broadly refused to comply with the subpoena by, among other things, refusing to search communications among Facebook's senior executives. Did Facebook try to thwart the FTC's investigation in similar ways? If so, did the FTC take actions in court or otherwise to ensure compliance with FTC discovery requests?

I am unable to comment on our nonpublic investigations. As a general matter, the Commission has authority to compel the production of documents and information if parties do not comply with Commission-issued compulsory process for documents and information in law enforcement investigations. When recipients of process requests move to quash or limit, the Commission makes public its ruling on such a motion.[45]

21. What is the Commission doing to make sure that FTC staff have the support it needs to obtain information from all levels of companies that they are investigating, up to and including the CEOs?

The Office of General Counsel (OGC) has a vigorous program to obtain judicial enforcement of FTC compulsory process. Commission staff is encouraged to contact OGC whenever staff experiences, or even anticipates, a problem with obtaining compliance with a Commission subpoena or civil investigative demand. OGC litigation attorneys then work closely with staff to determine the best course of action to achieve compliance. Early involvement by OGC staff serves to put the process recipient on notice that FTC staff is serious about possible enforcement, which often is sufficient to motivate compliance. However, if a recipient continues to stonewall a Commission investigation, OGC staff are more than willing to file a process enforcement action in federal district court to obtain full compliance.

22. Is the agency's Office of General Counsel prepared to fully and aggressively support staff if and when they need it to enforce FTC-issued subpoenas against any company that may decide they want to ignore such requests, including Facebook?

Yes.

[45] *See, e.g.*, Order Denying Petition to Limit Civil Investigative Demand and Subpoena Duces Tecum, In the Matter of Civil Investigative Demand to Johnson & Johnson and Subpoena Duces Tecum to Johnson & Johnson, No. 191-0152 (Oct. 18, 2019), https://www.ftc.gov/system/files/documents/petitions-quash/johnson-johnson/1910152jjpetitiontoquash.pdf.

23. How does the number of subpoena enforcement actions in antitrust matters compare to the number in consumer protectiou matters? If there is a difference, what accounts for the disparity?

Since 2008, the Commission has commenced 41 process enforcement proceedings. These include proceedings to enforce FTC-issued subpoenas, civil investigative demands, and orders to file reports under 15 U.S.C. § 46. Of these 41 proceedings, 27 related to matters investigated by the Bureau of Consumer Protection, and 14 related to matters investigated by the Bureau of Competition or other projects involving competition. When comparing these numbers it is important to keep in mind that a significant portion of the Commission's competition docket involves review of proposed mergers notified under the Hart-Scott-Rodino (HSR) Amendments to the Clayton Act.[46] Under the HSR Act, parties to certain mergers and acquisitions must file premerger notification and wait for government review. After an initial waiting period, if the agency needs additional information, it often issues compulsory process that solicits broad information about the parties' transaction. The parties are prohibited from closing their deal until the waiting period outlined in the HSR Act has passed or the government has granted early termination of the waiting period. As a result, the HSR review process provides a powerful incentive for parties to submit the information that the agencies requested, which allows the Commission to obtain necessary information without resorting to judicial enforcement.

Executive Accountability

24. In your view, when is it appropriate for the FTC to hold individual executives accountable for order violations in which they participated?

This is necessarily a very fact-specific analysis. The Commission first must determine whether we can prove the elements necessary to obtain relief under controlling legal precedent and the provisions of the underlying injunction. Second, the Commission considers whether naming the individual would result in more effective final relief, whether it would better protect consumers, and whether it would be appropriate given the level of the individual's involvement.

25. Please describe what steps the FTC takes to investigate the iuvolvement of individual executives in corporate order violations.

We tailor investigations to the underlying facts and order provisions. That said, in undercover investigations, our attorneys and investigators look for corporate filings, registrations, bank accounts, insider information, consumer complaints, and accounts of former employees. We also share and obtain information, where permissible, with/from our criminal and state law enforcement partners. In open investigations, we look to the same evidence, but also send specific discovery demands to the defendants pursuant to the monitoring provisions in the order. In addition to sending discovery to the investigation's targets, we often send subpoenas to third parties who have relevant information. We craft these demands, among other things, to determine which individuals in the company have responsibility for, and knowledge of, the

[46] 15 U.S.C. § 18a.

practices under investigation. Our standard order provisions also allow us to depose individuals in the target company, and we take that step in appropriate circumstances.

26. Please identify all instances since January 2015 in which the FTC held individual executives accountable for order violations.

The FTC enforces its orders through civil penalty and contempt actions. The Commission currently has pending contempt actions naming individuals as defendants in the *Sanctuary Belize*[47] matter, which went to trial on January 20, 2020; the *Health Research Labs*[48] matter filed in December 2019; and the *Netforce*[49] matter filed in January 2020. The Commission also charged two executives in a recent antitrust filing.[50] Since 2015, we won cases against individuals who were already under FTC order in the following matters: *Blue Hippo*,[51] *GM Funding*,[52] *Lakhany*,[53] *iSpring*,[54] *Capital Home Advocacy*,[55] *Daniel Chapter One*,[56] *Cedarcide*,[57] and *Hi-Tech*.[58] Additionally, for strategic reasons, the FTC will occasionally choose to address an individual's order violations through a *de novo* case. The *CD Capital*,[59] *F9 Advertising*,[60] and *Debtpro 12*[61] matters are examples of this strategy.

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[47] *In re Sanctuary Belize Litig.*, No. 1:18-cv-03309 (D. Md.), https://www.ftc.gov/enforcement/cases-proceedings/0223171/ameridebt-inc.
[48] *FTC and State of Maine v. Health Research Labs., Inc.*, No. 2:17-cv-00467 (D. Me.), https://www.ftc.gov/system/files/documents/cases/netforce_amended_complaint.pdf.
[49] *FTC v. Noland et al.*, No. cv-20-0047 (D. Ariz.), https://www.ftc.gov/system/files/documents/cases/netforce_amended_complaint.pdf.
[50] FTC Press Release, *FTC and NY Attorney General Charge Vyera Pharmaceuticals, Martin Shkreli, and Other Defendants with Anticompetitive Scheme to Protect a List-Price Increase of More than 4,000 Percent for Life-Saving Drug Daraprim* (Jan. 27, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-ny-attorney-general-charge-vyera-pharmaceuticals-martin.
[51] *FTC v. Bluehippo Funding*, No. 08-Civ-1819 (S.D.N.Y) (contempt entered 2016), https://www.ftc.gov/enforcement/cases-proceedings/052-3092/bluehippo-funding-llc-bluehippo-capital-llc.
[52] *FTC v. Damian Kutzner*, No. 8:16-cv-00999 (C.D. Cal. 2017), https://www.ftc.gov/enforcement/cases-proceedings/x030002/damian-kutzner-0.
[53] *FTC v. Sameer Lakhany*, No. 8:12-cv-337 (C.D. Cal.) (contempt order entered 2015), https://www.ftc.gov/enforcement/cases-proceedings/112-3136/lakhany-sameer-credit-shop-llc-fidelity-legal-services-llc.
[54] *US v. iSpring Water Sys.*, No. 1:19-cv-01620 (N.D. Ga. 2019) (civil penalties for violation of FTC Order), https://www.ftc.gov/enforcement/cases-proceedings/172-3033-c4611/ispring-water-systems-llc-federal.
[55] *FTC v. American Home Servicing Ctr. et al.*, No. 8:18-cv-00597 (C.D. Cal. 2018), at https://www.ftc.gov/enforcement/cases-proceedings/172-3138/capital-home-advocacy-center.
[56] *US v. Daniel Chapter One*, No. 1:10-cv-01362 (D.D.C. 2015) (civil penalties for violation of FTC Order), https://www.ftc.gov/enforcement/cases-proceedings/082-3085/daniel-chapter-one.
[57] *FTC v. Dave Glassel*, No. 4:12-cv-4631 (N.D. Cal. 2018), https://www.ftc.gov/enforcement/cases-proceedings/112-3128/springtech-77376-llc-also-dba-cedarcidecom-et-al/
[58] *FTC v. Hi-Tech Pharm., Inc. et al.*, 1:04-cv-03294 (N.D. Ga. 2017), at https://www.ftc.gov/enforcement/cases-proceedings/022-3165/national-urological-group-inc-et-al.
[59] *FTC v. CD Capital Inv.*, No. 8:14-cv-01033 (C.D. Cal. final order 2019), at https://www.ftc.gov/enforcement/cases-proceedings/132-3289/cd-capital-investments-llc.
[60] *FTC v. F9 Advert.*, No. 3:19-cv-01174 (D. P.R. 2019), https://www.ftc.gov/enforcement/cases-proceedings/1723164/f9-advertising-llc.
[61] *FTC v. DebtPro123*, No. SACV:14-00693 (C.D. Cal. final order 2015), https://www.ftc.gov/enforcement/cases-proceedings/132-3112/debtpro-123-llc.

27. The Commission has been criticized for not holding Facebook CEO Mark Zuckerberg personally liable in its $5 billion settlement with Facebook over extensive privacy violations and, furthermore, in not requiring Zuckerberg's appearance as the company's ultimate decision-maker for a deposition during the investigation. What is the Commission doing to ensure that CEOs of large companies are held accountable when their companies violate antitrust law with the CEO's knowledge or at his or her direction?

As you indicate, the Commission and the DOJ did not sue Mr. Zuckerberg personally. However, it is totally inaccurate to suggest that the FTC failed to investigate his role in Facebook's violation or that the 2019 order does not hold him accountable. The FTC thoroughly investigated Facebook, including a review of Mr. Zuckerberg's role in the alleged violations. Among other things, staff carefully reviewed tens of thousands of documents, including emails between key decision makers. The settlement is based upon a careful analysis of the facts uncovered in that review, as well as the law. Significantly, Mr. Zuckerberg's primary asset, Facebook, agreed to pay a massive fine. Had the FTC named Mr. Zuckerberg, any fine assessed against him likely would have been paid by Facebook. Furthermore, as I have noted before, it was highly unlikely that any court would have levied fines approaching the $5 billion we obtained via settlement. Finally, and most importantly, under the settlement, Mr. Zuckerberg must now personally certify compliance with the 2019 order four times every year. That certification is subject to both civil and criminal penalties. This relief represents significantly more accountability than could reasonably have been achieved with the legal tools at the Commission's disposal through continued litigation.

28. The Department of Justice's *Justice Manual* states: "In instances where the Department reaches a resolution with a company before resolving matters with responsible individuals, Department attorneys should take care to preserve the ability to pursue individuals. A Department attorney seeking to allow the release of civil claims related to the liability of individuals based on a corporate settlement must document the basis for the determination that further action against the individuals is not necessary or warranted, and must obtain written supervisory approval of the decision to allow the release of civil claims in the case."[62] Did the FTC follow the *Justice Manual's* recommended approach and document the basis for determining that further action against Mark Zuckerberg or other individuals at Facebook was not necessary or warranted? If not, why not?

The FTC is an independent agency and is not bound by the *Justice Manual*. However, the Commission's procedures for settlement are even stricter than those set forth in the DOJ's *Justice Manual*. No attorney at the Commission, neither a trial attorney nor any manager in their supervisory chain, can settle any matter without approval from the Commission, effectuated by a majority vote on the record. To obtain such permission, staff needs to write a detailed memorandum justifying all the relief they propose. That reasoning is reviewed by the relevant Bureau front office (Consumer Protection or Competition) and the Bureau of Economics.

[62] U.S. Dep't of Justice, 4-3.100: Pursuit of Claims Against Individuals, https://www.justice.gov/jm/jm-4-3000-compromising-and-closing.

Moreover, Commissioners and their advisors have every opportunity to seek additional information or clarification from staff. The Commission follows this procedure in all cases, including the Facebook order enforcement matter.

29. In their statement, the Commissioners who voted in favor of the proposed settlement with Facebook stated: "Here, we have made the determination that, in light of the meaningful relief we have achieved, retaining the ability to sue Mr. Zuckerberg for past order violations we did not find and for which have been personally liable would not serve the public interest." How did the Majority Commissioners reach this conclusion?

See response to QFR 27, above.

30. When assessing whether to hold individual executives accountable for order violations, what role does a firm's size play in the Commission's analysis?

See response to QFR 31, below.

31. Are there any factors that differentiate the FTC's analysis of individual liability for executives at large companies versus at small companies?

The FTC conducts the same analysis, regardless of the size of a firm, to determine whether to hold an individual liable for violations of the FTC Act. First, we determine whether we can prove the elements necessary to obtain individual injunctive and monetary relief under controlling legal precedent. Second, we consider whether naming the individual is necessary and appropriate to obtain effective final relief and protect consumers.

When determining whether to name an individual officer liable for the acts of a corporation, the Commission considers whether the person's conduct demonstrates a need to have the person under order to protect the public in the future, and whether the person has assets that could contribute to consumer redress or should be disgorged to prevent unjust enrichment. To obtain effective relief, particularly in fraud cases, it is often necessary to name the principles of closely held companies because those individuals can avoid the injunctive requirements of a court order simply by setting up a new corporate entity. Similarly, the principals of closely held companies engaged in fraud often are more directly involved in the unlawful conduct and more likely to pay themselves an outsized share of the proceeds. For these reasons, as a practical matter, it is often more likely to be necessary to name the executives of small, transient companies, especially those engaged in fraud, to protect consumers from future injury, and to get money back to consumers.[63]

[63] The Commission recently, by unanimous vote, authorized a federal court action against Vyera Pharmaceuticals, LLC, alleging an elaborate anticompetitive scheme to preserve a monopoly for the life-saving drug, Daraprim. The complaint seeks remedial injunctive relief as well as equitable monetary relief to provide redress to purchasers who have overpaid for the drug. The complaint also names Martin Shkreli and Kevin Mulleady, who allegedly were directly responsible for orchestrating the anticompetitive scheme, as well as Phoenixus AG, Vyera's parent company. FTC Press Release, *FTC and NY Attorney General Charge Vyera Pharmaceuticals, Martin Shkreli, and Other Defendants with Anticompetitive Scheme to Protect a List-Price Increase of More than 4,000 Percent for Life-*

Technological Capabilities

32. Earlier this year, the Commission established a Tech Task Force, which later became the Technology Enforcement Division (TED) when it was converted into a permanent Division within the Bureau of Competition.

a. What are the biggest obstacles to enforcement, if any, that TED currently faces?

The largest obstacle to enforcement remains resources. We created the now-renamed TED using existing resources, which meant reallocating personnel from other enforcement Divisions in BC to TED. Since it became a permanent Division, we have expanded TED's leadership to mirror the structure in other permanent Divisions in BC. We have also supplemented its initial staffing with technologists, detailees from within the Commission, and additional newly-hired attorneys in order to address some of these resource challenges.

I am not aware of any legal obstacles to enforcement at this time. As outlined in the Commission testimony, current law provides the Commission with several potential avenues to counter anticompetitive conduct in technology markets, including conduct by technology firms that seek to thwart nascent and potential threats by acquisition or other means.[64]

Combatting anticompetitive conduct in the technology sector is one of my top priorities and we are devoting significant resources to this effort. I greatly appreciate your support for additional resources for the FTC's competition mission.

b. How many attorneys are on the TED's staff who work exclusively on the TED's caseload and when was each of them hired?

As of today, TED has 20 attorneys, and we expect one attorney to join soon. As a result of the additional funding provided in the most recent budget, we intend to add four more attorneys to the Division. When the now-renamed TED was launched, the Bureau of Competition moved 15 attorneys to this unit from other Divisions within the Bureau. That realignment was completed in April 2019. TED has since hired three additional attorneys, who started their positions in the last two months. Additional attorneys have been detailed from other parts of the Commission and are now working full time on TED matters. Division leadership consists of an Assistant Director and two Deputy Assistant Directors. In addition, the Compliance Division of the Bureau of Competition has designated an attorney to work with TED on remedy issues that may arise in the context of investigations and potential enforcement actions.

Saving Drug Daraprim (Jan. 27, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-ny-attorney-general-charge-vyera-pharmaceuticals-martin.

[64] Prepared Statement of the Federal Trade Commission before the H. Comm. on the Judiciary, Subcommittee on Antitrust, Commercial and Administrative Law (Nov. 13, 2019), https://www.ftc.gov/system/files/documents/public_statements/1553856/p180101_house_competition_oversight_testimony_-_platforms_part_4_11-13-2019.pdf.

c. How many full-time technologists are on the TED's staff who work exclusively on the TED's caseload and when was each of them hired?

TED has two technologists on staff: one started work in January 2020, and the other will start in early February 2020. Both are dedicated to the work of the Division.

d. How many full-time economists are on TED's staff who work exclusively on the TED's caseload and when was each of them hired?

TED does not have any economists on staff. The FTC has a separate Bureau of Economics, which helps the FTC evaluate the economic impact of its actions by, among other things, providing economic analysis for competition investigations. BE economists are not permanently assigned to work with specific BC or BCP divisions, but are assigned to investigations on a case-by-case basis, taking into consideration not only industry knowledge but also the types of economic expertise each case is likely to require.

Seven economists are currently heavily involved in the work of TED. These economists have tenures at the FTC ranging from around three years to over a decade, and in total represent approximately fifty years of merger enforcement experience at the FTC.

33. Several FTC consent orders have required firms to engage independent third-party assessors to perform security assessments. What processes does the FTC have in place to ensure third-party security assessments are trustworthy and accurate?

The FTC insists on third-party assessors in situations that demand significant levels of expertise. The FTC's orders allow us to refuse to approve an assessment from an assessor who lacks that expertise, or who has shown any indication of not being trustworthy or accurate. Compliance attorneys within the Division of Enforcement, working with attorneys and others from the relevant Division, review all assessors' reports and ask follow-up questions to enhance our understanding of the assessors' processes and conclusions, as well as address any apparent inconsistencies or holes in the assessment. We require companies under order to carry the cost of retaining assessors rather than bear the extremely high cost with our limited budget.

34. Some commentators have suggested that the FTC's decisions to allow Facebook to acquire Instagram and WhatsApp resulted from a lack of understanding of the relevant technology markets. What are you doing to ensure that the TED—as well as other divisions reviewing mergers in technology markets—do not make erroneous decisions due to a lack of understanding of the relevant markets?

I agree that it is important that the FTC have sufficient technical, policy, and economic expertise to consider whether mergers in technology markets could harm competition. That is why I created TED within BC: to marshal resources and expertise to tackle competition issues in the technology sector. I am confident in our ability to understand the relevant industry practices and markets and evaluate mergers and other business conduct.

The recent public *Hearings* were designed to further our knowledge.[65] They included sessions on a number of issues relating to technology and digital markets, including: the identification and analysis of collusive, exclusionary, and predatory conduct by digital and technology-based platform businesses; the antitrust framework for evaluating acquisitions of potential or nascent competitors in digital marketplaces; innovation and intellectual property policy; privacy, big data, and competition; and algorithms, artificial intelligence, and predictive analytics. We received over 900 public comments, which we have reviewed.

TED is hard at work and they are pursuing all leads. The Division has an open-door policy and encourages those with concerns about competition in technology markets to contact them.[66] Likewise, a number of other BC Divisions focus on technology sectors and are carefully considering technological changes and related antitrust implications.

FTC Hearings

35. In September 2018, the FTC launched a series of pnblic hearings to examine "whether broad-based changes in the economy, evolving business practices, new technologies, or international developments may require adjustments to competition and consumer protection law, enforcement priorities, and policy." Has the FTC produced any summaries, findings, or reports following the hearings? If yes, please describe these materials and whether they have been made available to all of the relevant divisions at the agency and Commissioner offices.

The Office of Policy Planning (OPP) has worked closely with all the relevant Bureaus, Divisions, and Offices at the Commission following the hearings, and has provided numerous briefings and resource material to the Commissioners and their offices.

On January 10, 2020, the FTC and DOJ released for public comment draft 2020 *Vertical Merger Guidelines* that would, if adopted, replace the DOJ's 1984 *Non-Horizontal Merger Guidelines*.[67] A number of public comments on the *Hearings* suggested that the agencies should provide updated guidelines and additional guidance on how the agencies evaluate vertical mergers. These Guidelines were prepared and released as part of the Commission's follow-on work product from the *Hearings*.

The FTC expects to release a report on the international hearings, which took place over two days in late March 2019.[68]

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[65] FTC, *Hearings on Competition and Consumer Protection in the 21st Century*, https://www.ftc.gov/policy/hearingscompetition-consumer-protection.
[66] FTC, Inside the Bureau of Competition: Technology Enforcement Division, https://www.ftc.gov/about-ftc/bureaus-offices/bureau-competition/inside-bureau-competition/technology-enforcement-division.
[67] FTC Press Release, *FTC and DOJ Announce Draft Vertical Merger Guidelines for Public Comment* (Jan. 10, 2020), https://www.ftc.gov/news-events/press-releases/2020/01/ftc-doj-announce-draft-vertical-merger-guidelines-public-comment.
[68] FTC, *Hearings on Competition and Consumer Protection in the 21st Century: The FTC's Role in a Changing World* (Mar. 25-26, 2019), https://www.ftc.gov/news-events/events-calendar/ftc-hearing-11-competition-consumer-protection-21st-century.

In addition, OPP staff are preparing several guidance documents and staff papers as *Hearings* follow-on projects.

36. Does the FTC plan to make public any work product that is a result of the hearings? If so, what process will the FTC have in place to identify whether this work product has support among Commissioners?

As noted above, the FTC and DOJ recently released for public comment draft 2020 *Vertical Merger Guidelines*, and we hope to release a report on the international hearings as well. The Commissioners review and vote to release all formal staff reports, Commission reports, and guidelines; we plan to follow that process for other *Hearings* output.

37. How much did the FTC spend on its public hearings?

The costs directly attributable to the *Hearings* were $562,956.27.

The vast majority of the costs expended related to providing audio/visual services to the public. This amount included onsite video and live webcast hosting, as well as creating a video archive. This provided the public with the greatest transparency into the Commission's hearings. Another significant area of costs included travel and room rentals so that the agency could obtain a wider diversity of views by holding several of the hearings outside the Washington, D.C. area.

38. What type of data did the FTC collect through its public hearings?

The Chairman's announcement of the *Hearings* and the call for comments indicated that "[t]he Commission is especially interested in new empirical research that indicates (or contraindicates) a causal relationship with respect to any of the topics identified for comment."[69] Unfortunately, we have not received this type of information to date.

We are exploring what additional research the agency can do with its limited resources to achieve this goal.

39. In what specific ways have the FTC's hearings on digital platforms and the relationship between privacy, big data, and competition helped TED better investigate potential violations in the tech sector and, when they find violations, bring and win these cases?

The agency does not publicly comment on any pending law enforcement investigation.

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[69] Prepared Remarks of FTC Chairman Simons Announcing the Competition and Consumer Protection Hearings at 2 (June 20, 2018), https://www.ftc.gov/system/files/documents/public_statements/1385308/prepared_remarks_of_joe_simons_announcing_the_hearings_6-20-18_0.pdf; FTC, *Hearings on Competition and Consumer Protection: Public Comment Topics and Process*, https://www.ftc.gov/policy/advocacy/public-comment-topics-process.

TED is actively investigating conduct, including consummated mergers, in the technology sector. The *Hearings* covered a number of topics relevant to these ongoing investigations, and the learning and thinking from the *Hearings* is informing that investigative work.

40. In September, the head of the FTC's Office of Policy Planning (OPP), Bilal Sayyed, stated in a speech that is his office is planning to release a guidance document on the application of the antitrust laws to conduct by technology platforms. What are you doing to ensure that OPP's work will complement the work and mission of the Bureau of Competition?

As noted above, the OPP is working closely with all relevant components of the agency on all work product resulting from the *Hearings*. Any formal guidance documents would be voted on by the Commission for public release.

41. Is OPP working with the attorneys in TED to craft these guidelines? If yes, please describe how.

Yes. OPP is preparing the draft in conjunction with BC personnel, including managers and staff from TED.

42. Is OPP coordinating closely with the Department of Justice to craft these guidelines? If yes, please describe how.

The FTC is keeping DOJ informed of our work on this possible guidance document and will welcome their input.

43. What are you doing to ensure that the various parts of the agency are working to support each other in the agency's efforts to promote competition and aggressively enforce the antitrust laws?

The dual mission of the agency, and the support that BE provides for both missions, helps to ensure that the FTC continues to leverage its resources and expertise to vigorously enforce the antitrust laws. TED, in particular, is receiving support for its work from throughout the agency. TED is consulting with staff from BCP's Office of Technology Research and Investigation, which focuses on issues at the intersection of technology with the FTC's consumer protection mission, including fraud, privacy, data security, online and mobile advertising, payment systems, and malware. More generally, BC and BCP leadership are in regular contact and hold regularly-scheduled meetings to ensure consistency in enforcement, and also to flag relevant issues discovered by one Bureau that may implicate the other Bureau's enforcement priorities.

44. What steps does the FTC take to ensure that outside interests do not improperly influence the agency's policy aud enforcement decisions?

We took significant steps to ensure that a wide variety of views were reflected during the *Hearings*. We invited legal and economic academics, legal and economic consultants, public interest groups, public advocacy groups, and representatives of businesses and industries to our

hearing sessions. Overall, we hosted over 350 unique non-FTC participants over 24 days of public hearings. We sought public input and, to the greatest extent possible, facilitated informed comments from a wide range of interested parties. For example, before each hearing, we released an agenda, a list of participants, and a list of specific questions for public comment. The comment period also extended well beyond the date of each specific hearing, to allow interested parties to comment on the discussion at the public session. We streamed each hearing session live, and posted a video of the hearing session on our website as a resource for those who could neither attend nor watch live. We also released a transcript of each hearing session shortly after it concluded.

We have received over 900 unique comments on our hearings topics. The FTC posted all germane comments on our website shortly after we received them, allowing the public to comment on points raised.

More generally, the Commission and its staff regularly review arguments and advocacy of parties, persons, and interest groups who comment to us or appear before us on enforcement and policy matters. We always carefully evaluate the information and arguments on the merits.

45. Have you ever received or sent communications from a non-government email or phone number to an executive at a firm under investigation or with a pending merger?

No, I have had no such communications with an executive. I was once contacted via text, on my personal phone, by counsel for one of the parties in an ongoing merger investigation. Counsel was seeking a meeting prior to a Commission vote to authorize an enforcement action, to which I agreed. The Commission subsequently voted to initiate an enforcement action. The matter is now in litigation.

Conflicts of Interest

46. The Commission's rules require former FTC employees to obtain clearance for working on matters that may have been pending while they were employed by the Commission. Please identify how many of these requests the Commission received for each month since January 2017.

A former Commission employee must seek and receive clearance before appearing before a current Commission official or providing behind-the-scenes assistance on a matter that was pending during his or her Commission service, or that "directly resulted from" such a matter.[70] Many "clearance matters" are resolved informally. Such informal resolutions may result in former employees not filing for clearance at all—either because they have been advised that clearance would not be granted, or because a request for clearance is not necessary (*e.g.*, a matter was initiated after the former employee's departure). Thus, the number of reported clearance

[70] 16 C.F.R. § 4.1(b)(2). This rule also requires a former employee to seek and receive clearance before participating in a Commission matter (even if the matter had not yet been initiated formally) if non-public documents or information pertaining to that matter likely would have come to the former employee's attention during the course of his or her official duties, and the employee left the Commission within the previous three years.

requests may be under- and/or over-inclusive. Having said that, the FTC's ethics officials received the following number of clearance requests covering the period of January 1, 2017 to January 10, 2020, broken out by month.

Month/Year	Number of Requests Received	Notes
1/17	1	
2/17	4	
3/17	2	
4/17	2	
5/17	0	
6/17	1	
7/17	3	This number includes one request withdrawn after employee was advised by an FTC ethics official that clearance was not required.
8/17	5	This number includes three requests withdrawn after employees were advised by FTC ethics officials that clearance was not required.
9/17	0	
10/17	0	
11/17	1	
12/17	0	
1/18	0	
2/18	1	
3/18	2	
4/18	2	This number includes one request withdrawn after employee was advised by an FTC ethics official that clearance was not required.
5/18	1	This number includes one request withdrawn after employee was advised by an FTC ethics official that the request would be denied.
6/18	0	
7/18	0	
8/18	0	
9/18	0	
10/18	0	
11/18	1	
12/18	1	
1/19	1	
2/19	4	
3/19	2	
4/19	3	
5/19	1	
6/19	2	

7/19	5	
8/19	5	
9/19	7	
10/19	1	
11/19	1	
12/19	5	
1/2020	2	This number reflects requests received as of February 4, 2020.
TOTAL	**66**	

47. Since January 2017, how many FTC enforcement actions or investigations had a respondent or defendant represented by a former director of the Bureau of Competition, Bureau of Economics, or Bureau of Consumer Protection, or by a former FTC Commissioner?

Apart from clearance requests, the FTC does not track the participation of former Commission employees in FTC enforcement actions or investigations. Based on the clearance requests received and identified above, a former FTC Commissioner or Director represented a respondent or defendant in eight enforcement actions or investigations. This number excludes one request to participate in a matter submitted by a former Director. The excluded request, submitted in May 2018 and identified above, was withdrawn after a former Director received guidance from an FTC ethics official that the request would be denied.

Expert Costs

48. The FTC Office of Inspector General (OIG) identified the escalating costs of expert witnesses as one of the two top "management challenges" facing the FTC in 2019. Please describe each step of the process by which the Commission selects an economic expert or consulting firm to retain, including any processes for setting up competitive bidding, for negotiating fees, and for determining fees.

In October 2019, I instructed staff to adopt several changes in expert acquisition and contract management practices, across both the competition and consumer protection missions. The goal of these changes, which are broadly outlined below, is to reduce expert costs.

- Enhance competition in the expert retention process.
- Use internal experts whenever feasible and consider lower-cost outside expert and support team options.
- Document the processes and considerations involved with expert contracting decisions, including the use of internal experts and support teams.
- Rigorously manage contracts to ensure efficient use of expert resources.

49. Please describe how contracts for outside experts and consulting firms are structured.

The FTC has historically awarded time and materials contracts for outside experts and consulting firms.[71] However, staff also may consider using alternative expert contract structures to manage costs.

50. Please identify any features of the current contract structure that might incentivize outside experts and consulting firms to complete their work in a more or less cost-effective manner.

Termination for cause is the ultimate incentive for any outside expert to perform his or her obligations in an appropriate manner. Staff may also consider using alternative expert contract structures to align incentives and manage costs.

In addition, staff is to maintain detailed data on expert expenditures for each matter. I expect these data will help staff obtain better terms in contract negotiations, select more cost-effective expert teams, and more effectively manage future expert engagements.

51. Please identify what processes the Commission has in place to monitor and review the work performed by outside economic experts and consulting firms.

BC litigating teams work with BE staff to monitor expert and consulting firm performance under engagement contracts.

In addition, the FTC has a series of controls in place such that every dollar added to expert contracts must first proceed through a multistage review. This ensures that decision-makers at all levels are continually aware of expert spending and agree with any allocation of additional funds.

52. In its November 2019 report, the OIG identified several instances where the FTC failed to fully document the process by which it selects experts. Please identify what steps the Commission is taking to rectify this shortcoming.

If staff determines that using an internal expert and/or support team is not feasible for a particular enforcement action, staff must document why an outside expert and/or support team are necessary, and why internal resources are not a viable option.

40 U.S.C. § 559

53. 40 U.S.C. § 559 states: "An executive agency shall not dispose of property to a private interest until the agency has received the advice of the Attorney General on whether the disposal to a private interest would tend to create or maintain a situation inconsistent with antitrust law." Please provide a full list of matters on

[71] Time and materials contracts are indefinite quantity contracts with fixed hourly rates for each labor category that may be required during the engagement with a not-to-exceed amount beyond which the contractor is not authorized to work. These contracts allow for direct expenses (*e.g.*, travel costs, data purchases) incurred as a result of the engagement. Because of the indefinite nature of time and materials contracts, the FTC may fund the work in increments.

which the FTC has consulted with the Attorney General pursuant to this statutory provision.

The cited provision relates to the disposition of Federal property by Federal agencies. The FTC does not dispose of Federal properties subject to this provision.

Political Influence

54. Please identify all officials from the Office of Policy Planning, the Office of General Counsel, the Bureau of Competition, the Bureau of Consumer Protection, and the Bureau of Economics that have attended meetings in the White House complex since January 2017 and describe the circumstances of each meetiug.

The FTC does not keep a log of its interactions with the White House complex. In consultation with relevant staff, I have attempted to provide the most complete response possible. Many SES-level officials have left the agency between January 2017 and the present, so I cannot state that this is a definitive list of meetings attended by the listed FTC officials at the White House complex during the time in question for the Offices and Bureaus requested.

Month/Year	Bureau/Office	Official	Subject Matter
5/17	Bureau of Economics (BE) Office of Policy Planning (OPP)	David Schmidt, Assistant Director Tara Isa Koslov, Acting Director	Interagency Drug Pricing and Innovation Task Force meeting to discuss drug pricing policies and related anticompetitive practices
6/17	BE	David Schmidt, Assistant Director	Interagency Drug Pricing and Innovation Task Force meeting to discuss drug pricing policies and a meeting to discuss the drug supply chain
7/17	BE	David Schmidt, Assistant Director	Interagency meeting to discuss pharmacy benefits managers
9/17	Bureau of Consumer Protection (BCP)	Daniel Kaufman, Deputy Director	Interagency meeting with National Economic Council staff to discuss Privacy and Data Security
10/17	Bureau of Competition (BC), OPP	Ian Conner, Former Deputy Director (now Director) Tara Isa Koslov, Acting Director	Interagency meeting with National Economic Council staff to discuss Healthcare Competition Executive Order
11/17 (two occasions)	OPP	Tara Isa Koslov, Acting Director	Interagency meeting to discuss report required by Executive Order on Healthcare Competition
11/17	OPP	Tara Isa Koslov, Acting	Discussion with National

		Director	Security Council staff regarding licensure portability for military spouses
11/17	BCP	James Kohm, Associate Director	Meeting with Domestic Policy Council staff to discuss Made in USA labeling matters
12/17	BE, OPP	David Schmidt, Assistant Director Tara Isa Koslov, Acting Director	Interagency Healthcare Competition Executive Order Report Working Group meeting to discuss drafting report
12/17	OPP	Tara Isa Koslov, Acting Director	Interagency Healthcare Competition Executive Order Report Working Group meeting to discuss drafting report
12/17	OPP	Tara Isa Koslov, Acting Director	Meeting with Brookings Institution representatives and Interagency Healthcare Competition Executive Order Report Working Group
1/18	BE, OPP	David Schmidt, Assistant Director Tara Isa Koslov, Acting Director	Interagency Healthcare Competition Executive Order Report Working Group meeting to discuss drafting report
2/18	OPP	Tara Isa Koslov, Acting Director	Meeting of report working group for Executive Order on Healthcare Competition and Choice
2/18	OPP	Tara Isa Koslov, Acting Director	Meeting with Hoover Institution representatives and Interagency Healthcare Competition Executive Order Report Working Group
4/18	BCP	James Kohm Associate Director	Meeting with Domestic Policy Council staff to discuss Made in USA labeling matters
6/18	OPP	Bilal Sayyed, Director	Interagency meeting with Privacy Policy staff to discuss Privacy Issues
7/18	BCP	James Kohm, Associate Director	Meeting with Domestic Policy Council staff to discuss Made in USA labeling matters
8/18	OPP	Bilal Sayyed, Director	Interagency meeting with the National Economic Council

			staff to discuss Healthcare Competition Executive Order
8/18	OPP	Bilal Sayyed, Director	Lunch with Kathleen Kraninger
9/18	BCP	Andrew Smith, Director	Interagency meeting with Privacy Policy staff to discuss Privacy issues
10/18	BE	David Schmidt, Assistant Director	Interagency Healthcare Competition Executive Order Report Working Group meeting to discuss health care provider laws
12/18	BCP	Andrew Smith, Director	Meeting with Privacy Policy staff to discuss Privacy issues
1/19	BCP	Mary Engle, Associate Director	Interagency meeting with National Economic Council staff to discuss transparency and surprise medical billing
2/19	OPP	Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss transparency and surprise Medical billing
3/19	OPP	Bilal Sayyed, Director	Interagency meeting with Domestic Policy Council staff to discuss transparency and surprise Medical billing
3/19	BE	Aileen Thompson, Assistant Director	Interagency meeting with National Economic Council staff to discuss antitrust and healthcare.
3/19	BCP	Jennifer Leach, Associate Director	Interagency meeting with Director of Policy staff to discuss the First Lady's Policy for Youth Programs Executive Order
5/19	BCP	Andrew Smith, Director	Interagency meeting with Privacy Policy staff to discuss Privacy issues
5/19	OPP	Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss State Health Care Competitiveness Index
6/19	BCP	Andrew Smith, Director	Interagency meeting with Privacy Policy staff to discuss Privacy issues

6/19	OPP	Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss State Health Care Competitiveness Index
7/19	BCP	Andrew Smith, Director Mary Engle, Associate Director	Interagency meeting with Domestic Policy Council to discuss the use of algorithms in the distribution of social media content
7/19	OPP	Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss State Health Care Competitiveness Index
8/19	Office of General Counsel (OGC)	Reilly Dolan, Principal Deputy General Counsel Alden Abbott, General Counsel	Interagency meeting with Domestic Policy Council to discuss the use of algorithms in the distribution of social media content
8/19	BE, OPP	David Schmidt, Assistant Director Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss healthcare price transparency and State Healthcare Competitiveness Index
9/19	BCP, OGC	Andrew Smith, Director Reilly Dolan, Principal Deputy General Counsel Alden Abbott, General Counsel	Interagency meeting with Domestic Policy Council to discuss the use of algorithms in the distribution of social media content
9/19	BCP	James Kohm, Associate Director	Meeting with Domestic Policy Council staff to discuss Made in USA labeling matters
9/19	OPP	Bilal Sayyed, Director	Interagency meeting with National Economic Council staff to discuss Healthcare Competition Executive Order
10/19	BCP	Andrew Smith, Director	Interagency meeting with Automated Vehicle Fast Track Action Committee to discuss drafting strategy for automated vehicles
10/19	BCP	Daniel Kaufman, Deputy Director	Meeting with National Economic Council staff to discuss BCP issues
10/19	BC	Bruce Hoffman, Former Director; Ian Conner,	Interagency meeting with National Economic Council

		Former Deputy Director (now Director)	staff to discuss Healthcare Competition Executive Order
12/19	BCP	Jennifer Leach, Associate Director	Interagency FLOTUS Be Best Ambassadors celebration

Statutory Authority

55. Under current law, the Commission has the authority to obtain equitable monetary relief under Section 13(b) of the FTC Act. Do you have concerns about the Commission's continued ability to do so? If so, what are your recommendations for actions Congress could take, or should refrain from taking, in support of the Commission's existing authority to obtain equitable monetary relief as a means of holding violators of the FTC Act accountable and providing redress to their victims?

I am gravely concerned that recent judicial decisions have substantially threatened the Commission's ability to use Section 13(b). Congress should clarify the Commission's remedial authority under Section 13(b) to ensure the FTC can continue to get meaningful monetary relief for American consumers.

Section 13(b) of the FTC Act is the FTC's primary, and most efficient and effective, way of providing redress to injured consumers.[72] The relevant portion of Section 13(b), often referred to as the "final proviso," authorizes the FTC to sue in federal court and states as follows: "in proper cases, the Commission may seek, and after proper proof, the court may issue, a permanent injunction." Since the 1980s, courts across the country have held that Section 13(b) allows all types of equitable relief, including money judgments to remedy consumer injuries. In 1994, Congress acknowledged and strengthened the Commission's ability to use Section 13(b) to obtain full monetary relief when it added language to the final proviso of Section 13(b) expanding venue and service of process.[73]

Over the years, the Commission has secured billions of dollars in relief in a wide variety of cases using its Section 13(b) authority, including telemarketing fraud, anticompetitive pharmaceutical practices, data security and privacy, scams that target seniors and veterans, and deceptive business practices, just to name a few.

But the Seventh Circuit's recent *Credit Bureau Center* opinion effectively eliminated the FTC's ability to obtain equitable monetary relief in Illinois, Indiana, and Wisconsin, and it may tempt other courts to follow suit. The court, overruling decades of its own precedent holding otherwise, held that the word "injunction" in the statute allows only behavioral restrictions and not

[72] 15 U.S.C. §53(b).

[73] Federal Trade Commission Act Amendments of 1994, S. Rep. No. 103-130, at 15-16, *as reprinted in* 1994 U.S.C.C.A.N. 1776, 1790-91. As the Senate Report noted, "Section 13 of the FTC Act authorizes the FTC to file suit to enjoin any violation of the FTC Act. The FTC can go into court ex parte to obtain an order freezing assets, and is also able to obtain consumer redress…The FTC has used its section 13(b) injunction authority to counteract consumer fraud, and the Committee believes that the expansion of venue and service of process in the reported bill should assist the FTC in its overall efforts." *Id.*

monetary remedies.[74] In addition, the Third Circuit's *ViroPharma* decision held that the FTC may sue under Section 13(b) only when a violation is either ongoing or "impending" at the time the suit is filed, which puts an unnecessary limitation on the Commission's ability to obtain relief for consumers who have been harmed by unlawful conduct that occurred in the past but is not ongoing.[75]

The issue in *Credit Bureau Center* is pending in the courts of appeals for the Third and Eleventh Circuits and is also pending before the Supreme Court in three separate petitions. The Supreme Court is looking at a related question in *Liu v. SEC*, and it is possible that the Court's ruling could adversely affect the FTC's monetary redress authority. The ambiguity created by these cases increases defendants' incentive to litigate instead of settle with the FTC, and increases the agency's costs.

To restore the status quo, Congress should clarify Section 13(b) to reaffirm the Commission's longstanding authority to secure all types of equitable relief, including restitution and disgorgement. In addition, Congress should revise Section 13(b) to clarify that the Commission may sue in federal court to obtain equitable relief even if conduct is no longer ongoing or impending when the suit is filed.

56. Section 19 of the FTC Act authorizes the Commission to seek remedies that are broader than those available under Section 13(b), including damages. Specifically, Section 19 authorizes the Commission to seek this additional relief from a party that is subject to a final FTC order involving an unfair or deceptive act or practice if a "reasonable man" would have known that the act or practice was dishonest or fraudulent.

a. Please identify any cases where the FTC has pursued damages under Section 19 during your leadership.

During my leadership, the FTC has brought many cases under Section 19(a)(1) for violations of rules governing unfair or deceptive acts or practices (UDAP), and we have sought equitable monetary remedies under both 19(a)(1) and Section 13(b), such as disgorgement and restitution.[76] When making awards in these cases, courts do not specify which section of the FTC Act they are relying on. Although "damages" can technically be broader than disgorgement and restitution, as a practical matter they are often equivalent. Moreover, defendants often do not have enough assets to cover restitution judgments, so there is little to gain by seeking the potentially broader scope of damages relief.

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[74] *FTC v .Credit Bureau Center, LLC*, 937 F.3d 764 (7th Cir. 2019).
[75] *FTC v. Shire ViroPharma Inc.*, 917 F.3d 147 (3d Cir. 2019).
[76] Recent examples where we have sought relief under both Section 13(b) and 19(a)(1) include: *FTC v. James Noland, et al.*, No. 2:20-cv-00047 (D.Az. 2020), at https://www.ftc.gov/enforcement/cases-proceedings/x0100166/james-d-noland-jr-success-health; *FTC v. Educare Centre Services, Inc. et al.*, No. 3:19-cv-00196 (W.D.Tx. 2019), at https://www.ftc.gov/enforcement/cases-proceedings/192-3033/educare-centre-services-inc; *FTC and Utah v. Nudge, LLC et al.*, No. 2:19-cv-00867 (D.Utah 2019), at https://www.ftc.gov/enforcement/cases-proceedings/182-3016/nudge-llc.

As for Section 19(a)(2), we have not pursued damages or any other monetary remedies under this section for UDAP violations during my tenure for a number of reasons. Most importantly, we can sue for damages or other relief under Section 19(a)(2) only at the conclusion of an administrative case and all subsequent judicial proceedings, which can take years. In the meantime, there is a significant risk that defendants will dissipate assets, and there is no practical way of preserving them. Moreover, to get any monetary relief in such cases, we have to cross the high hurdle of showing that a "reasonable man would have known under the circumstances" that the conduct was "dishonest or fraudulent."

As a practical matter, consumers are much better served if the FTC brings cases in federal court for injunctive remedies and equitable monetary relief under Section 13(b). In Section 13(b) cases, unlike those that could be brought under Section 19(a)(2), the FTC can readily obtain asset freezes; does not have to complete an adjudicative process before seeking restitution in a separate proceeding; does not face a 3-year statute of limitations; and does not have to prove that in addition to being deceptive or unfair, that a practice was also "dishonest or fraudulent." In addition, the only court to consider the issue has held that Section 19 does not allow disgorgement of ill-gotten gains.

At bottom, I—like other Chairmen and Commissioners before me—seek to use the most efficient tool at my disposal to achieve the best outcome for consumers, and that is what I have done in my tenure. As you know, however, the Commission's ability to use Section 13(b) is facing significant challenges now, and I ask that you clarify the statute to permit the Commission to use this critical tool as courts, for decades, have allowed.

b. Commissioner Chopra has noted that deceptive acts can undermine competition by disfavoring honest businesses. Do you agree that the FTC should assert claims of deception in competition cases where the deceptive act or practice appears to have harmed competition and fair business rivalry?

I agree that it is important for the Commission to combat conduct not only because it harms consumers, but also because it undermines competition. I also agree that deception can be the basis of an anticompetitive act. In fact, when I was the Director for the Bureau of Competition, we brought two cases where we alleged that deceptive practices where at the heart of the anticompetitive scheme: *Rambus* and *Unocal*.[77] And if similar conduct appeared in future cases, I still would support alleging that the company behaved deceptively.

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[77] Compl. at ¶ 1, *In re Union Oil Comp. of Cal.*, Dkt. No. 9305 (Mar. 4, 2003), https://www.ftc.gov/sites/default/files/documents/cases/2003/03/030304unocaladmincmplt.pdf; ("Unocal actively participated in the CARB RFG rulemaking proceedings and engaged in a pattern of bad-faith, deceptive conduct, exclusionary in nature, that enabled it to undermine competition and harm consumers."); Compl. at ¶ 2, *In re Rambus Inc.*, Dkt. No. 9302 (June 18, 2002), https://www.ftc.gov/sites/default/files/documents/cases/2002/06/020618admincmp.pdf ("By concealing this information—in violation of JEDEC's own operating rules and procedures—and through other bad-faith, deceptive conduct, Rambus purposefully sought to and did convey to JEDEC the materially false and misleading impression that it possessed no relevant intellectual property rights.").

Questions for the Record from Representative Hank Johnson
Hearing on Online Platforms and Market Power, Part 4:
Perspectives of the Antitrust Agencies
November 13, 2019

1. **Chairman Simons, it's my understanding that the FTC's Bureau of Competition as well as its Consumer Protection Bureau have recently been involved in examining the cybersecurity practices of automobile dealer management software systems. In fact, not long ago, the Consumer Protection Bureau brought and settled an action against one software provider for failing to take reasonable steps to secure consumers' data, which resulted in a breach of data affecting approximately 12.5 million individuals. Meanwhile, the Competition Bureau has been engaged in the investigation of a different software provider under the auspices that its utilization of strong data security protocols could implicate antitrust concerns. Can you please provide some insight into whether the two bureaus are coordinating on important policy issues like the impact of antitrust laws on data security?**

The Commission's organizational structure, at all levels, contributes to its ability to effectively investigate conduct and consider policy issues that implicate both competition and consumer protection missions. For example, at the staff level, Bureau of Competition (BC) and Bureau of Consumer Protection (BCP) staff consult with one another to share expertise gained from recent investigations. Similarly, BC and BCP leadership communicate regularly to ensure consistency in enforcement and to flag relevant issues discovered by one Bureau that may implicate the other Bureau's enforcement priorities. Importantly, the Commissioners themselves ensure that both missions are taken into account: we and our staff see all case-related materials generated by each Bureau, which allows us to directly synthesize competition and consumer protection issues. The agency's five-member bipartisan membership also ensures that critical issues are fully explored during Commission deliberations.

MS. JAYAPAL FOR THE RECORD

Questions for the Record from Representative Pramila Jayapal
Online Platforms and Market Power, Part 4: Perspectives of the Antitrust Agencies
November 11, 2019

Questions for FTC Chairman Joe Simons:

1. **What decision-making process does the FTC utilize to determine the appropriate consequences to impose on lawbreaking companies?**

The Commission uses its enforcement authority to impose consequences for law violators, to reverse the harm caused by the defendant's illegal conduct, and to deter illegal conduct in the future. Choosing the right remedy will depend on the type of violation and the defendant's role in the violation. When staff recommends that the Commission initiate a legal challenge, the recommendation will often include remedial options for the Commission to consider.

Remedies available to the Commission under a variety of statutes fall into three general categories: conduct, structural, and monetary. When the Commission deliberates, it chooses the remedy that is most likely to stop or prevent harm to consumers and, when appropriate, return money to those harmed by the defendant's illegal behavior. In some cases, the defendant is willing to negotiate a settlement of charges in lieu of litigation, and the Commission will issue a consent order along with a complaint that outlines what the defendant has done to violate the law. These negotiated settlements have the force of law, and if the defendant violates the terms of a Commission order, the defendant may be subject to civil penalties. In other cases, the Commission will prosecute its allegations in federal court or in an administrative proceeding to obtain an enforceable injunction against the conduct, as well as other fencing-in relief. In appropriate cases, the Commission may also seek monetary relief in federal court. The Commission does not have the authority to impose monetary relief in an administrative proceeding.

2. **What factors does the FTC rely on to determine whether debarment is an appropriate consequence to impose on defendants that have engaged in anticompetitive behaviors?**

The Commission has never used debarment in a competition case.[79] Because anticompetitive conduct cases typically occur in markets with few competitors, debarment would limit competition, which potentially would exacerbate the competition problem. As a result, we would only consider debarment in the rarest—if any—competition cases.

[79] I am aware that certain commentators have advocated for using debarment in addition to jail time and fines in order to more effectively deter criminal violations of the antitrust laws. *See* Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Sanctions*, 6(2) COMPETITION POLICY INT'L at 3-39 (2010), https://www.competitionpolicyinternational.com/assets/0d358061e11f2708ad9d62634c6c40ad/CPIAutumn2010eBook.pdf. Because the FTC does not have criminal authority to enforce the antitrust laws, I do not have a view on whether debarment would be an appropriate deterrent to criminal conduct. It is my understanding that debarment is not used anywhere for civil antitrust violations.

3. What factors does the FTC rely on to determine whether defendant companies should be required to inform affected parties that they have been harmed?

In many consumer protection cases, the FTC disburses the funds collected from defendants directly to consumers; in these cases, the FTC notifies consumers that they may have been harmed by illegal conduct and are entitled to a refund.[80] In some circumstances, the Commission may require the defendant to notify those affected by its illegal conduct so they can take steps to avoid monetary harm or a threat to their health or safety in the future. When deciding whether to require notice, factors that we consider include: whether those harmed have an ongoing relationship with the defendant; whether they are forgoing other treatments in reliance on defendant's deceptive claims; whether they would otherwise learn about the defendant's illegal conduct on their own; and whether they need notice in order to seek relief available to them under other laws, including state law.[81] The Commission has an interest in making sure the public is aware of our enforcement actions, and in providing sufficient relief to those harmed so that the defendant is unlikely to violate the law again.

4. What factors does the FTC rely on to determine whether defendants should be required to inform affected workers that they have been harmed by anticompetitive behaviors?

I would rely on the factors listed above. Just as consumers are entitled to robust competition for the products and services they buy, workers are entitled to robust competition among employers when they seek employment. Wage-fixing agreements among competing employers are *per se* illegal under the antitrust laws, and the Commission is committed to promoting competition in labor markets for the benefit of all workers.

5. Where the FTC determines that companies made agreements that undermined competition in the labor market and harmed workers, why is the FTC not requiring that those companies provide notice to impacted workers?

Wage-fixing agreements among employers are *per se* illegal, and companies must have programs in place to avoid forming agreements with competing employers that harm workers.[82] When the FTC discovers such an agreement, we will act quickly to stop the illegal behavior, as we did in

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[80] Once an FTC lawsuit or settlement is final and the defendants have paid the money the court orders, the Office of Claims and Refunds in the Bureau of Consumer Protection develops a plan for returning that money to the right people. If there is money left over at the conclusion of the refund program, or if there is not enough money to provide meaningful refund amounts, then the FTC sends the money to the U.S. Treasury, where it is deposited into the General Fund. According to the most recent report on the FTC's refund program, FTC cases resulted in more than $2.3 billion in refunds for consumers between July 2017 and July 2018. FTC OFFICE OF CLAIMS AND REFUNDS, 2018 FTC ANNUAL REPORT ON REFUNDS TO CONSUMERS (Feb. 2019), https://www.ftc.gov/system/files/documents/reports/2018-annual-report-refunds-consumers/annual_redress_report_2018.pdf.

[81] We also consider whether notice is practicable; for example, whether there is a viable means to identify and contact consumers who may have been affected by the conduct.

[82] *See* U.S. Dep't of Justice & FTC, Antitrust Guidance for Human Resource Professionals at 3 (Oct. 2016), https://www.ftc.gov/system/files/documents/public_statements/992623/ftc-doj_hr_guidance_final_10-20-16.pdf (explaining that "naked wage-fixing or no-poaching agreements among employers, whether entered into directly or through a third-party intermediary, are per se illegal under the antitrust laws").

the Your Therapy Source case, before the agreement has any effect on wages. In the right circumstances—such as when the illegal agreement has actually depressed wages paid to workers—the Commission will consider notifying affected workers or seeking other relief to make them whole.

6. **In the case of *Your Therapy Source*, the FTC found clear evidence that Texas staffing agencies broke the law by secretly making agreements to set low wages for the hard- working therapists they employed and even inviting more agencies to engage in this illegal practice. However, the FTC did not require the defendant agencies to provide notice to impacted workers. Why did the FTC decline to require that affected parties be notified?**

I joined the Commission's statement finalizing the order in this case because, after reviewing all the facts uncovered in our investigation and considering over 100 public comments, I did not believe the order needed to include a requirement to provide notice of the Commission's action to individual therapists targeted by the unlawful conduct.[83] Our investigation did not indicate that any therapists' wages were reduced as a result of the illegal wage-fixing agreement, so individual notice would have been unlikely to facilitate recovery in private civil litigation.[84] The Commission will take steps to ensure that the order and the facts of this case are disseminated as widely as possible in order to educate staffing firms, home healthcare workers, and small businesses about the illegality of wage fixing.

7. **What criteria does the FTC use to determine that an admonishment alone is an appropriate consequences to impose on lawbreaking companies?**

If your question implies that the Commission's cease-and-desist orders are mere admonishments, I strongly disagree with that characterization. The Commission will issue a cease-and-desist order to stop the illegal conduct alleged in a complaint and to prevent it from happening again. Commission cease-and-desist orders routinely require respondents to submit periodic reports on their efforts to comply with the order. If the Commission determines that a respondent is not fulfilling its legal obligations, the Commission may seek enforcement of the order and the imposition of civil penalties.[85]

8. **Does the FTC consider admonishments to be a sufficient deterrent to stop companies from engaging in anticompetitive behavior? On what basis has the FTC made that determination?**

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[83] Statement of the Federal Trade Commission Concerning the Commission's Consent Order, In the Matter of Your Therapy Source, LLC, Neeraj Jindal, and Sheri Yarbray, C-4689 (Oct. 31, 2019), https://www.ftc.gov/system/files/documents/public_statements/1552414/171_0134_your_therapy_source_commission_statement.pdf.

[84] Notice of the illegal wage-fixing agreement also might have caused consumer confusion, given that none of the therapists' wages were reduced as a result of the illegal agreement.

[85] Failing to submit a complete compliance report can violate Section 10 of the FTC Act, 15 U.S.C. § 50, and lead to civil penalties even in the absence of any violation of the order's other terms.

To reiterate, I do not believe the Commission's cease-and-desist orders are mere admonishments. The Commission's ability to seek civil monetary penalties for cease-and-desist order violations, and to order compliance reporting and monitor compliance, deters respondents from engaging in the prohibited conduct in the future. The possibility of a subsequent private action for treble damages also may have a deterrent effect.

9. **Where the FTC has imposed the power to impose broader consequences on lawbreaking companies, when does the FTC find it appropriate to impose only an admonishment?**

Again, the Commission's orders are not admonishments; they are legally enforceable injunctions. The Commission will continue to seek relief commensurate with the facts and circumstances of each case, including, where appropriate, disgorgement, notice to those affected, and admissions of liability for individuals involved.

10. **Does the FTC commit to carefully scrutinizing each negotiated settlement to determine what remedy would best make the workers who have been harmed by anticompetitive behavior whole?**

Yes, absolutely.

11. **Does the FTC commit to carefully scrutinizing each negotiated settlement to determine what remedy would most effectively deter illegal and anticompetitive conduct by corporations?**

I commit that we will consider all available options for stopping anticompetitive and other illegal conduct, obtaining redress for those harmed, and deterring future violations in every negotiated order.

MR. BUCK FOR THE RECORD

Subcommittee on Antitrust, Commercial and Administrative Law
Hearing on Online Platforms and Market Power, Part 4:
Perspectives of the Antitrust Agencies
Questions for the Record

Qnestion submitted by Representative Buck

1. **In recent months, several issues concerning Apple have raised attention. These include Apple's practices involving its App Store, as discussed in a July 2019 Wall Street Journal article.[78] Other issues include Apple's practices involviug the onliue provision of news, Apple's expansion into audiovisual services, and European authorities' increased focus on and criticism of Apple's payment system. Finally, there may be questions concerning Apple's use of data. Will you consider these issues as you examine whether large online platforms are engaging in practices to consolidate domiuaut market power?**

I will keep an open mind when assessing the facts presented in each investigation and enforcement action.

Vigorous enforcement in the technology sector is a top priority for me. I created the Bureau of Competition's new Technology Enforcement Division to monitor competition in technology markets, investigate any potential anticompetitive conduct in those markets, and take enforcement actions when warranted.

[78] Tripp Mickle, *Apple Dominates App Store Search Results, Thwarting Competitors*, Wall. St. Journal (July 23, 2019), https://www.wsj.com/articles/apple-dominates-app-store-search-results-thwarting-competitors-11563897221.

Questions for the Record
Department of Justice
Assistant Attorney General
Makan Delrahim
U.S. House of Representatives
House Judiciary Committee
Subcommittee on Antitrust
At a hearing entitled
"Online Platforms and Market Power, Part 4:
Perspectives of the Antitrust Agencies"
November 13, 2019

Questions submitted by Ranking Member Jim Sensenbrenner

1. **Three years ago, the Division concluded a review of the ASCAP and BMI consent decrees, ultimately concluding that the decrees should not be modified. That multi-year review consisted of various rounds of public comments focused on very specific proposals. In June, the Division lannched its current review by soliciting comment on a number of very high-level questions with regard to the decrees rather than any specific proposals. Yet, in August, it was reported that the Division might take action on the decrees before the end of this year.**

    a. **Why does the Division feel that it needs to take action on the decrees at this time? What prompted the Division's review, and subsequent anuouncement, and what does the Division hope to achieve with this review?**

Response:

From 1890, when the antitrust laws were first enacted, until the late 1970s, the United States frequently sought entry of antitrust judgments whose terms never expired. Recognizing that perpetual antitrust judgments rarely serve to protect competition, in 1979, the Antitrust Division adopted the practice of including a ten-year sunset provision in nearly all of its antitrust judgments. Perpetual judgments entered before the policy change, however, remain in effect indefinitely unless a court terminates them.

In 2018, the Antitrust Division embarked on a review of its more than a thousand outstanding perpetual antitrust judgments and, when appropriate, sought termination of them.

To date, seventy-six of seventy-eight jurisdictions have terminated legacy judgments. As part of the review of legacy antitrust judgments, the Division sought public comment on the ASCAP and BMI decrees. The Division advised Congress when it opened the comment period. That comment period ended in August 2019. The Division received over 800 comments from parties, stakeholders, and citizens, and these comments are publicly posted on the Division's website at https://www.justice.gov/atr/antitrust-consent-decree-review-public-comments-ascap-and-bmi-2019. As the Division reviews the comments, it continues to be engaged actively with the parties and industry stakeholders.

b. If the Division were to decide to make changes to the current decrees will you commit to ensuring the public, as well as the relevant Committees of Congress, have ample opportunity to review and respond to any specific proposed changes before moving forward?

Response:

Congress has a very important role with regard to this issue, and the Division intends to continue its engagement with Congress, and of course, will continue to abide by its obligations under the Music Modernization Act. Furthermore, we would welcome any views you have on these decrees.

2. **Last year, Congress unanimously passed the Music Modernization Act, which was the product of years of legislative discussion between my colleagues in both chambers and stakeholders on all sides of the music industry. A key part of the MMA that led to consensus support was a provision that establishes an enhanced oversight role for Congress in any DOJ review of the ASCAP and BMI consent decrees. The inclusion of this provision reflected an understanding that terminating the ASCAP and BMI consent decrees, even over a long time period, creates significant risk of causing the exact kind of market chaos the MMA solves. I understand that the Department recently solicited comments relating to the decrees and you have made public comments suggesting that you intend to take additional steps to seek changes. If – at some point - the Division intends to sunset these decrees, close consultation with Congress is necessary to ensure that such chaos can be avoided through the implementation of an alternative framework before DOJ takes any action toward sunsetting them, and certainly before terminating them.**

a. Should you take such action, can you detail how you would anticipate complying with those requirements, and additionally how you would anticipate working with Congress to develop an alternative music licensing framework in advance of any action?

Response:

Congress has a very important role with regard to this issue, and the Division intends to continue its engagement with Congress, and of course, will continue to abide by its obligations under the Music Modernization Act. Furthermore, we would welcome any views you have on these decrees.

b. Any termination, sunset or controversial modification of the decrees prior to implementation of an alternative framework will undoubtedly result in significantly increased litigation against ASCAP and BMI. To what extent is the Division factoring in this increased litigation risk in determining how to proceed on these decrees?

Response:

The Division appreciates the potential ramifications of an abrupt termination of the ASCAP and BMI decrees without some form of transition. The Division has engaged in extended discussions with numerous parties from all parts of the music industry and will continue to consult with Congress and with such industry stakeholders, as appropriate and as necessary under the Music Modernization Act, before reaching any conclusions with respect to the appropriate action regarding the ASCAP and BMI consent decrees.

c. How does the amount of resources devoted within the past five years to non-mandated reviews of the decrees – the first finding that the decrees remain necessary and should not be altered at all – compare to the resources expended by the Division in the actual administration of the decrees over the same period of time?

Response:

The Division's resources are not just limited, but have in fact declined in real terms by about thirty percent over the last decade. The vast majority of the Division's resources are now, and have been, devoted to directly enforcing the antitrust laws, and I am proud of the merger, conduct, and criminal cases we are bringing, as well the cases we are still developing. The judgment termination initiative is a low-cost, high-impact complement to our enforcement work.

3. For several decades, as you know, ASCAP and BMI have operated under consent decrees administered by the Department of Justice. Within the Antitrust Division Manual, the Department of Justice indicates that consent decrees should not be presumptively terminated "when there is a pattern of noncompliance with the decree or there is longstanding reliance by industry participants on the decree." The Antitrust Division Manual also snggests that consent decrees that fall into this category do not qualify for expedited review. U.S. Dep't of Justice, Antitrust Division, Antitrust Division Manual III-147–48 (5th ed. 2018).

a. Do you believe there has beeu "lougstanding reliance by industry participants" on the consent decrees governing ASCAP and BMI? If so, wouldn't it be more appropriate to review the consent decrees under the Division's traditional approach, instead of an expedited review process?

Response:

The Division appreciates the potential ramifications of an abrupt termination of the ASCAP and BMI decrees without some form of transition. The Division has engaged in extended discussions with numerous parties from all parts of the music industry and will continue to consult with Congress and with such industry stakeholders, as appropriate and as necessary under the Music Modernization Act, before reaching any conclusions with respect to the appropriate action regarding the ASCAP and BMI consent decrees.

Questions submitted by Rep. Buck

4. **In recent months, several issues concerning Apple have raised attention. These include Apple's practices involving its App Store, as discussed in a July 2019 Wall Street Journal article.[1] Other issues include Apple's practices involving the online provision of news, Apple's expansion into audiovisual services, and European authorities' increased focus on and criticism of Apple's payment system. Finally, there may be questions concerning Apple's use of data. Will you consider these issues as you examine whether large online platforms are engaging in practices to consolidate dominant market power?**

Response:

Department policy limits my ability to comment on, confirm, or deny the existence of specific investigations, but please be assured that the Division thoroughly investigates allegations of potential antitrust violations and if such a violation is found, it will take whatever actions are necessary to protect competition and consumers.

Questions from Rep. Cicilline

Conduct Enforcement

5. **The *Financial Times* recently reported that criminal prosecutions for price-fixing have reached a historic low for the third consecutive year.[2] According to this report, the Trump Administration's Antitrust Division has brought fewer criminal antitrust prosecutions than any administration in the last 50 years. Is it your view that market participants are no longer engaging in price-fixing at the rates they previously had?**

Response:

The Division is committed to antitrust enforcement against cartels and collusion. These are some of the most egregious antitrust violations—price fixing, bid rigging, and customer and territorial allocation. The Division's criminal sections have been very busy and in FY2019, we brought the first charges in six criminal investigations involving government victims, the financial sector, electronic components, and the commercial construction industry, where victims of antitrust and fraud conspiracies include hospitals and schools. Underscoring how busy we are on developing new criminal matters, the Division closed FY2019 with over 100 pending grand jury investigations, the highest total since 2010. The Division also opened 38 new grand jury investigations in FY2019, more than any year since FY2009. Moreover, in support of our continuing efforts to combat antitrust crimes and related schemes in government procurement, grant, and program funding, in November 2019, the Justice Department announced the Procurement Collusion Strike Force (PCSF). The PCSF is an interagency

[1] *See* Tripp Mickle, *Apple Dominates App Store Search Results, Thwarting Competitors* (July 23, 2019) (available at https://www.wsj.com/articles/apple-dominates-app-store-search-results-thwarting-competitors-11563897221).

[2] Kadhim Shubber, *US price-fixing prosecutions at historic low for third straight year*, FIN. TIMES (Nov. 5, 2019), https://www.ft.com/content/a3b75c80-fe74-11e9-be59-e49b2a136b8d.

partnership among the Antitrust Division, 13 U.S. Attorneys' Offices, and investigators from the Federal Bureau of Investigation and four federal inspectors general.

Our efforts to develop new criminal matters continue to bear fruit. In a two-week span in February 2020, the Division announced charges against seven executives and one company, including the indictment of an executive and a guilty plea from a senior executive, in the Division's long-running investigation into collusion in the generic pharmaceutical industry.

6. Why has criminal enforcement been at a historic low for the past three consecutive years?

Response:

The Antitrust Division's mission is to protect American consumers and taxpayers by deterring, detecting, and prosecuting antitrust crimes. That mission cannot be evaluated purely in terms of criminal fines. There are other important measures of criminal enforcement, such as individual charges, guilty verdicts, prison sentences, and obtaining restitution for victims. Moreover, as our response to Question 5 indicates, not only are our investigations at a ten-year high, but we have recently announced significant charges in vital markets such as the generic pharmaceutical industry, rooted out collusion cheating the American taxpayer, fought to ensure competition for vulnerable victims such as schools and hospitals, and obtained guilty verdicts in trials against a former currency trader and the former chief executive officer of Bumble Bee Foods.

Resolutions of corporate criminal matters can result in significant fines, but they often are followed by individual resolutions and trials that require significant resources but do not yield blockbuster fines. These cases nevertheless are an important part of the Division's enforcement program. In recent years, Division fine totals were driven in substantial part by record-breaking fines obtained in our financial services and auto parts investigations. That resulted in "blockbuster" years—from 2012 through 2015, the Division assessed criminal fines over $1 billion each year, with a high of $3.6 billion in 2015—where criminal fines were greater than fines imposed in previous years. These investigations are now in their later stages, with corporate plea resolutions (the primary driver of the fine statistics) largely completed. Much of the Division's criminal resources have shifted, therefore, to trials of individuals and other high-priority matters that take time to become public. This is consistent with the typical life-cycle of criminal cartel investigations.

That said, our recent fines have been significant. In fact, fines obtained in Division cases doubled from FY2017 to FY2018, and doubled again from FY2018 to FY2019. By way of example, in September 2019, StarKist Co. was ordered to pay a $100 million, statutory maximum criminal fine after a judge rejected its inability to pay claims after nearly a year of litigation over the issue. In March 2019 and November 2018, five South Korea companies agreed to plead guilty to rigging bids for the supply of fuel to U.S. military bases and pay $156 million in criminal fines. In separate civil settlements, the same five companies also agreed to resolve parallel civil antitrust and False Claims Act violations and pay an additional $236 million in total.

Finally, in addition to and coupled with the cyclical nature of our casework, the 2011 decision to close half of the Division's existing criminal sections,[3] and the length of time it took to finalize those closures, has had a significant effect on criminal enforcement.

7. Since your time leading the Antitrust Division, how many monopolization cases under Section 2 of the Sherman Act has the Division brought?

Response:

Where there is evidence of anticompetitive conduct by a firm with significant market power, the Division is not afraid of investigating and, where warranted, challenging it. At the Division, we take our facts as we find them. If an investigation yields evidence a Section 2 violation has taken place, we will not shy away from bringing an appropriate case.

8. Please identify, to the nearest 10 hours, the number of attorney hours that the Antitrust Division has devoted since January 2017 to its own enforcement actions.

Response:

At this time, we are not able to provide exact statistics regarding personnel devoted specifically to these particular ongoing non-public matters, however the Division employs hundreds of attorneys whose primary duties are to conduct investigations of potentially anticompetitive conduct or mergers and take whatever actions are necessary to protect competition and consumers.

9. Please identify, to the nearest 10 hours, the number of attorney hours that the Antitrust Division has devoted since January 2017 to any Section 2 investigations.

Response:

At this time, we are not able to provide exact statistics regarding personnel devoted specifically to these particular ongoing non-public matters. Employees of the Division are salaried government employees whose duties often include handling multiple cases simultaneously.

Merger Enforcement

10. Please identify the performance objectives for section chiefs.

Response:

Sections chiefs are members of the Senior Executive Service, established by Congress under the Civil Service Reform Act of 1978. Under 5 USC § 3131, the Senior Executive

[3] Press Release, U.S. Dep't of Justice, Justice Department Announces More Than $130 Million in Cost Saving and Efficient Measures to Utilize Resources More Effectively (Oct. 5, 2011), https://www.justice.gov/opa/pr/justice-department-announces-more-130-million-cost-saving-and-efficiency-measures-utilize.

Service is administered so as to "ensure that compensation, retention, and tenure are contingent on executive success which is measured on the basis of individual and organizational performance (including such factors as improvements in efficiency, productivity, quality of work or service, cost efficiency, and timeliness of performance and success in meeting equal employment opportunity goals)." Division staff and employees are dedicated public servants who consistently demonstrate that their foremost objective is to advance the Division's mission of protecting competition and consumers.

11. Are any section chiefs evaluated based on the number of settlements they reach? If so, do you believe that this incentivizes reaching settlements over litigation?

Response:

Under 5 USC § 3131, the Senior Executive Service is administered so as to "ensure that compensation, retention, and tenure are contingent on executive success which is measured on the basis of individual and organizational performance (including such factors as improvements in efficiency, productivity, quality of work or service, cost efficiency, and timeliness of performance and success in meeting equal employment opportunity goals)." Division staff and employees are dedicated public servants who consistently demonstrate that their foremost objective is to advance the Division's mission of protecting competition and consumers.

12. How does the Division incentivize staff to recommend and litigate cases where it finds there has been—or is likely to be—harm to competition, even where that litigation may end in a loss?

Response:

The mission of the Antitrust Division is to promote economic competition through enforcing and providing guidance on antitrust laws and principles. The Division firmly believes in this mission and endeavors to hire staff who share that belief.

13. How does the Division factor in litigation risk when deciding whether to challenge a merger?

Response:

While litigation risk is one of many factors the Division considers in evaluating enforcement actions, it is important for the Division to bring cases, even risky ones, where it believes a transaction or conduct is illegal.

14. Is it appropriate for the Division to consider litigation risk when deciding whether to file a complaint in a merger or a case of anti-competitive conduct if the Division otherwise believes the transaction or conduct is illegal under antitrust law?

Response:

While litigation risk is one of many factors the Division considers in evaluating enforcement actions, it is important for the Division to bring cases, even risky ones, where it believes a transaction or conduct is illegal.

15. How do you think the Division should analyze transactions involving a private equity buyer? Do these transactions raise any unique issues?

Response:

Transactions involving a private equity buyer are subject to the same antitrust laws and standards as those governing any other buyer. In analyzing transactions, the Division considers all relevant market characteristics.

16. What percentage of the Division's second requests in the last six months have been issued for transactions involving or relating to the marijuana industry?

Response:

Department policy limits my ability to comment on specific investigations.

17. For each of the transactions relating to the marijuana industry in which the Antitrust Division has issued a second request, please identify:

a. Whether the transaction fell above the HSR threshold;

b. The pre-merger market share and predicted post-merger market share for the companies involved in the transaction; and

c. The attorneys reviewing the transaction and which section or office they work in.

Response:

Department policy limits my ability to comment on specific investigations.

Digital Markets

18. According to Columbia Law School Professor Tim Wu, dominant technology platforms have completed more than 350 mergers and acquisitions to date. Many of these involved Facebook and Google acquiring actual and nascent competitors. Professor Wu observed, "As with a basketball referee who never calls a foul, the question is whether the players have really been faultless—or whether the referee is missing something."[4] How do you respond to the Professor Wu's criticism that the

[4] Tim Wu & Stuart A. Thomson, *The Roots of Big Tech Run Disturbingly Deep*, N.Y. TIMES (June 7, 2019), https://www.nytimes.com/interactive/2019/06/07/opinion/google-facebook-mergers-acquisitions-antitrust.html.

antitrust agencies have been missing something when it comes to merger enforcement in digital markets?

Response:

Section 7 of the Clayton Act prohibits mergers and acquisitions "where the effect . . . may be substantially to lessen competition, or to tend to create a monopoly." Acquisitions of nascent competitors can be procompetitive in certain instances and anticompetitive in others. They can be beneficial to the extent they combine complementary technologies or bring products and services to market that would not have been made available to consumers otherwise. There is a myriad of ways in which such a transaction may harm competition in a digital market, particularly the potential for mischief if the purpose and effect of an acquisition is to block potential competitors, protect a monopoly, or otherwise harm competition by reducing consumer choice, increasing prices, diminishing or slowing innovation, or reducing quality. Such circumstances may raise the Antitrust Division's suspicions. The Division will not shrink from the critical work of investigating and challenging anticompetitive conduct and transactions where justified.

19. **In June 2019, Google announced its $2.6 billion acquisition of Looker Data Sciences, a leading startup in data analytics and business intelligence. The American Antitrust Institute and other experts observed that the deal risked eliminating an important competitor to Google and urged the DOJ to scrutinize several aspects of the proposed transaction. In November, the DOJ approved the transaction without pursuing a second request. The UK's Competition Markets Authority, by contrast, has initiated a full investigation into the transaction.**

    a. **How many attorneys at the Antitrust Division worked on reviewing the Google- Looker transaction?**

    b. **How many outside parties did the Antitrust Division interview as part of its review of this transaction?**

    c. **What factors led the Antitrust Division to conclude that this acquisition did not warrant a more in-depth investigation?**

    d. **The American Antitrust Institute identified three issues for the Antitrust Division to examine: (1) whether the acquisition would eliminate Looker as an independent competitor in data analytics and business intelligence tools; (2) whether the acquisition would harm competition in the broader cloud infrastructure market; and (3) whether the acquisition would enhance Google's incentive to withhold Looker's services to rivals. Does the Antitrust Division believe the acquisition will not have any of these effects? If so, please describe the evidence in support of this belief.**

Response:

Department policy limits my ability to comment on specific investigations; however, in typical merger investigations, the Division endeavors to speak with a wide array of market participants. In general, staffing on particular investigations can vary significantly based on, among other factors, the stage of the investigation, the scope of the investigation, and the complexity of the investigation.

20. Do yon believe that antitrnst enforcers' past relnctance to view concentrated control over data as an entry barrier was a mistake? If yes, what are yon doing to make sure the Division does not repeat this error?

Response:

In November 2019, I gave a speech focusing on how we might think about data, arguably the most transformative input in the digital marketplace. That speech can be found here: https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-harvard-law-school-competition. It provides more significant detail on my views on this topic.

21. How many full-time technologists are on the staff of the Antitrust Division?

Response:

The Division employs a large and diverse workforce from a wide array of backgrounds. Among our many employees with relevant experience, the Division has an entire section devoted to the Technology and Financial Services sectors of the economy, and this section has extensive experience pursuing potential anticompetitive mergers and conduct in the industry. Moreover, our San Francisco Office employs attorneys with extensive experience pursuing potential anticompetitive conduct in the technology industry.

Qualcomm

22. In 2016, the FTC filed suit to challenge illegal monopolization by Qualcomm. This year DOJ took the remarkable step of intervening in the case—to file briefs in defense of Qualcomm. Please explain why it is a good or proper use of agency resources to intervene to defend an alleged monopolist in a monopolization case brought by auother federal ageucy.

Response:

I am recused from that matter and so cannot comment on this topic.

23. As has been publicly reported, Qualcomm was your former client. You did not sign the Antitrust Division's amicus brief in favor of Qualcomm in *Federal Trade Commission v. Qualcomm* but you did sign the Antitrust Division's amicus brief in favor of Qualcomm in *Karen Stromberg, et al. v. Qualcomm*. What accounts for this discrepancy?

Response:

In determining when to recuse myself from matters, I consult with Department of Justice and Antitrust Division career ethics officials and follow their guidance.

24. What involvement did you have with the Division's decision to file its statement of interest and subsequent brief in *FTC v. Qualcomm*?

Response:

None. I am recused from that matter.

25. Since 1948, the Antitrust Division and the Federal Trade Commission have relied on a formal clearance process to allocate primary areas of enforcement responsibility and to avoid overlap and duplicative activity. In light of the Division's recent filing in *FTC v. Qualcomm*, what is the current status and scope of the clearance process? If certain types of activity or certain types of cases are not governed by the clearance process, please identify those instances, the reasons why, and whether this is a departure from past Division process.

Response:

I am recused from the Qualcomm case, so cannot comment on any specifics regarding that case.

The Division and the FTC share authority for civil antitrust enforcement. Over the years, the two agencies have developed a process for determining which agency will handle a particular matter generally on the basis of which agency has the most relevant experience in the particular markets involved. This process, although imperfect, enables both agencies to make the most effective use of enforcement resources and avoids duplicative investigatory requests to private parties.

T-Mobile/Sprint

26. Did the staff memorandum and staff attorneys reviewing the Sprint/T-Mobile transaction unanimously recommend blocking the merger?

Response:

Department policy limits my ability to comment on specific investigations; however, in all matters, the Division endeavors to foster robust internal discussion and debate in order to reach decisions that best protect competition and consumers.

27. The Department of Justice recently reached a settlement that will allow T-Mobile to acquire Sprint. As several leading economists noted in a court filing, the DOJ's proposed settlement does not address the significant anti-competitive effects that the

DOJ outlines in its complaint.[5] Why do you believe that Dish, a company with no history or experience in this market, will be a robust competitor as envisioned by the settlement?

Response:

Department policy limits my ability to comment on specific investigations; however, the Competitive Impact Statement,[6] Statement of Interest,[7] and Response to Comments[8] filed by the Division in this matter address these topics.

28. These experts also noted that Dish has "repeatedly failed to meet" prior requirements stipulated by the Federal Communications Commission.[9] As these experts note, a T- Mobile attorney previously observed that "Dish has a track record of price increases for its services, speculative warehousing of spectrum, and failing to meet FCC-imposed deadlines to construct the facilities required."[10] In light of Dish's failure to meet previous build-out requirements, why do you believe Dish will be successful in building out a 5G network, despite lacking experience and presence in the market?

Response:

See response to Question 27.

29. As noted in the economists' comments, even if Dish meets its commitments to build a 5G network covering 70 percent of the population, it would not replace Sprint, which currently reaches over 90 percent of Americans.[11] How would you justify DOJ's settlement to Americans who were covered by Sprint's network but will not be covered by Dish's network?

Response:

See response to Question 27.

30. The DOJ has repeatedly cited the fact that Dish is committing to build a 5G network as a factor in favor of approving the transaction. But the DOJ's complaint is clear

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[5] Nicholas Economides et al., Economists' Tunney Act Comments on the DOJ's Proposed Remedy in the Sprint/T- Mobile Merger Proceeding, https://www.justice.gov/atr/page/file/1214781/download.

[6] Competitive Impact Statement, United States v. Deutsche Telekom AG, No. 1:19-CV-02232-TJK (D.D.C. filed July 30, 2019), *available at* https://www.justice.gov/opa/press-release/file/1189336/download.

[7] Statement of Interest of the United States, New York v. Deutsche Telekom AG, No. 1:19-CV-5434-VM-RWL (S.D.N.Y. filed Dec. 20, 2019), *available at* https://www.justice.gov/atr/case-document/file/1230491/download.

[8] Response of Plaintiff United States to Public Comments on the Proposed Final Judgment, United States v. Deutsche Telekom AG, No. 1:19-CV-02232-TJK (D.D.C. filed Nov. 6, 2019), *available at* https://www.justice.gov/atr/case-document/file/1215706/download.

[9] Economides et al. at 9-10.

[10] *Id.* at 9-10.

[11] *Id.*

that the transaction will harm some parties. Although the complaint states that the merging parties may offer some benefits to rural subscribers, it does not address the fact that the merger will harm other consumers. Is it your view that benefits to one set of customers can justify anti-competitive harms to another set of customers? If so, please describe the circumstances in which you view this to be the case.

Response:

See response to Question 27.

31. If it is your view that benefits to one set of customers can justify anti-competitive harms to another set of customers, how do you reconcile this position with *Philadelphia National Bank*, where the Supreme Court rejected the idea that some prospective economic or social benefits could remedy anti-competitive harm resulting from an illegal transaction?[12]

Response:

The Division's mandate is to enforce the antitrust laws to prevent harm to competition. When we determine that a merger threatens competition, we will take the actions necessary to preserve that competition and protect against consumer harm. The DOJ-FTC Horizontal Merger Guidelines note that "[i]n some cases . . . the [antitrust] Agencies in their prosecutorial discretion will consider efficiencies not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s)."[13]

32. You have been deeply critical of the use of behavioral remedies, observing that they are "merely temporary fixes for an ongoing problem."[14] Yet the Division's proposed remedy includes a long list of commitments that T-Mobile must undertake for seven or more years to help Dish. These include offering operational support, handling billing support, and meeting specific traffic management requirements. The success of the remedy is contingent on the merging firms adhering to these behavioral conditions, yet this requires the merging firms to act against their economic interest by helping Dish

a. As a law enforcement agency, how is the Justice Department equipped to oversee and evaluate the relationship between T-Mobile and Dish in the years ahead?

b. How is this settlement warranted in light of your criticisms of behavioral remedies and commitment to structural remedies?

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[12] United States v. Philadelphia Nat. Bank, 374 U.S. 321, 370 (1963).

[13] Horizontal Merger Guidelines, n. 14.

[14] Makan Delrahim, Assistant Att'y Gen., U.S. Dep't of Justice, Remarks at the Federal Telecommunications Institute's Conference in Mexico City (Nov. 7, 2018), https://www.justice.gov/opa/speech/assistant-attorney- general-makan-delrahim-delivers-remarks-federal-institute.

Response:

The Competitive Impact Statement notes that "[t]he proposed Final Judgment requires structural relief in the form of divestitures designed to ensure the development of a new national facilities-based mobile wireless carrier competitor to ultimately remedy the anticompetitive harms that flow from the change in the market structure that otherwise would have occurred as a result of the merger."[15] In enforcement actions resulting in a structural remedy, it is common for there to be a transition period, including often a transition services agreement, to best effectuate the structural remedy.

33. Nine states and the District of Columbia are suing to block the Sprint/T-Mobile merger. Has the Antitrust Division, at any time, made any formal or informal commitment to support T-Mobile/Sprint in their litigation against the state attorneys general? If so, please describe this commitment.

Response:

The Division reached an independent conclusion and filed a Statement of Interest jointly with the Federal Communications Commission in the states' lawsuit against Sprint and T-Mobile. The Division's views vis-a-vis the states' litigation are reflected in the filing.[16]

34. Based on comity and respect for the states challenging the deal, would you be willing to ask the court to delay approving your settlement until the trial court in New York has issued a decision regarding the state's challenge to the Sprint/T-Mobile transaction?

Response:

The Division's views on this topic are reflected in its Response to States' Motion to File Brief as Amici Curiae filed in the Tunney Act proceedings in the D.C. federal district court.[17] Following the trial in *New York v. Deutsche Telekom*, Judge Victor Marrero of the U.S. District Court for the Southern District of New York refused the request from a minority of state Attorneys General to block T-Mobile's proposed acquisition of Sprint. In his opinion, Judge Marrero cited the Justice Department's settlement as a key factor, noting that the Justice Department's settlement made Dish "well poised to become a fourth [Mobile Network Operator] in the market, and its extensive preparations and regulatory remedies indicate that it can sufficiently replace Sprint's competitive impact."[18]

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[15] Competitive Impact Statement, United States v. Deutsche Telekom AG, No. 1:19-CV-02232-TJK (D.D.C. filed July 30, 2019).

[16] Statement of Interest of the United States, New York v. Deutsche Telekom AG, No. 1:19-CV-5434-VM-RWL (S.D.N.Y. filed Dec. 20, 2019).

[17] Response of the United States to States' Motion to File Brief as Amici Curiae, United States v. Deutsche Telekom AG, No. 1:19-CV-02232-TJK (D.D.C. filed Oct. 23, 2019).

[18] *New York v. Deutsche Telekom AG*, No. 19 CIV. 5434 (VM), 2020 WL 635499, at *36 (S.D.N.Y. Feb. 11, 2020).

35. The states' litigation recently revealed text messages between you and executives at Dish. In one of these texts, you wrote to Dish Chairman Charlie Ergen, "Today would be a good day to have your Senator friends contact the chairman," referring to FCC Chairman Ajit Pai.[19]

a. Please identify all other transactions in which you have offered merging parties political advice on how to secure approval for their merger.

b. Do you believe it is appropriate for the Assistant Attorney General of the Antitrust Division to offer merging parties political advice on how to secure approval for their merger?

c. Why did you undertake this action?

Response:

Communications with potential divestiture buyers when negotiating a potential settlement are necessary in order to effectuate settlements that provides the maximum benefit to consumers.

36. The trial also revealed that you gave Mr. Ergen your personal email address.[20]

a. Why did you give Mr. Ergen your personal email address?

b. Did Mr. Ergen send any emails to you about the Sprint/T-Mobile transaction at your personal email address?

c. Please identify all other instances during your tenure as AAG in which you have given your personal email address to parties whose transaction or conduct is being reviewed by the Antitrust Division.

Response:

Use of email and electronic messaging by Department employees, including requirements to preserve official communications, is governed by Department of Justice policy on records and information management. This policy implements federal recordkeeping requirements from statute and regulation at the Department-level. It is my practice to abide by these regulations, such as by forwarding work-related communications from my personal email to my official device. As Mr. Ergen testified at trial, he did not email me on my personal device.

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[19] Sheila Dang, *Dish founder Ergen says he asked for senator's help on T-Mobile/Sprint*, REUTERS (Dec. 18, 2019), https://www.reuters.com/article/us-sprint-corp-m-a-t-mobile-us-dish-netw/dish-chief-ergen-says-he-asked-for- senators-help-on-t-mobile-sprint-idUSKBN1YM2D3

[20] Erik Larson, *Texts Show DOJ Effort to Enlist Senators in T-Mobile Deal*, BLOOMBERG (Dec. 19, 2019), https://www.bloomberg.com/news/articles/2019-12-18/doj-antitrust-head-told-dish-to-enlist-senators-in-t-mobile-deal.

37. Did you receive any commitment, gifts, or other benefit from Dish, Sprint, or T-Mobile in exchange for your work facilitating the Sprint/T-Mobile transaction?

Response:

No.

38. Please identify what steps you are taking to ensure that you are complying with government record-keeping requirements when you use your personal cell phone or personal email account to discuss Antitrust Division matters.

Response:

Use of email and electronic messaging by Department employees, including requirements to preserve official communications, is governed by Department of Justice policy on records and information management. This policy implements federal recordkeeping requirements from statute and regulation at the Department-level. It is my practice to abide by these regulations, such as by forwarding work-related communications from my personal email to my official device.

Vertical Integration

39. In its challenge to the AT&T/Time Warner transaction, the Justice Department argued that the merger would undermine competition despite the existence of new distribution channels available through Netflix, Amazon Prime, Sling TV, and other companies. Yet, in its recent press statement announcing that the Antitrust Division would be filing to terminate the *Paramount Pictures* consent decree, the Division cited the existence of new technology and distribution channels as a reason why the Paramount decrees were no longer necessary. Why, in your view, is the existence of new distribution channels insufficient to check the anti-competitive incentives created by the vertical merger of AT&T/Time Warner, but sufficient to check the anti-competitive incentives created by vertical integration in the film industry?

Response:

The Department's views are best reflected in the various court filings in those matters. I will note that those matters arose in very different industries, under very different circumstances. Antitrust is a very fact intensive inquiry, and the Division applies its analysis on a case-by-case basis.

40. The Writers Guild of America noted in its submitted comment to the Antitrust Division that "large theatrical distributors wield significant market power over theater owners" and that just three companies are likely to account for more than two-thirds of annual box office receipts. Given the degree of control wielded by distributors, what led the Antitrust Division to conclude that vertical integration by

dominant distributors will not result in anti-competitive practices like block-booking and circuit dealing?

Response:

The United States has moved to terminate the *Paramount* consent decrees that date from the 1940s. These decrees enjoined a number of movie studios from owning movie theaters and imposing certain types of movie licensing practices on theaters. Before moving to terminate the decrees, the Antitrust Division sought public comment. The Writers Guild of America, West, Inc. commented that it was concerned about the three largest theatrical distributors accounting for more than two-thirds of annual box office receipts. While the Guild is correct that the three largest studios may represent approximately two-thirds of box office receipts, it is important to note that they are not all *Paramount* movie studio defendants. Studio market shares have varied substantially over the course of the seventy years the decrees have been in place. For example, Disney, which was a smaller competitor in the 1940s, is the largest movie studio today, yet it is unencumbered by the *Paramount* decrees. While its actions are subject to the antitrust laws, it is not enjoined by the *Paramount* decrees from owning movie theaters or seeking to impose block-booking or circuit dealing licensing practices. Asymmetric obligations for firms similarly situated in an industry may have undesirable (and unintended) effects on competition in an industry over the long run, particularly when that industry has evolved significantly since the restrictions were first imposed.

The Division has not prejudged any potential vertical merger between a movie studio and a movie theater company. Because vertical mergers can combine complementary economic functions and eliminate contracting frictions, they have the potential to create efficiencies that benefit competition and consumers. If a movie studio seeks to acquire a movie theater chain, the Antitrust Division will have the opportunity to investigate the proposed merger. The Division will weigh the potential anticompetitive effects against the cognizable efficiencies that the vertical merger may achieve. If the Antitrust Division determines that the proposed merger will substantially lessen competition—including by increasing the incentive and ability to impose unreasonable block-booking or circuit dealing licensing practices—it can seek to enjoin the parties' transaction to protect competition and consumers. Therefore, terminating the *Paramount* decrees would not divest the Division of its critical, go-to tools for preventing antitrust harms.

Monopsony and Labor

41. Do you believe that anti-competitive restraints on workers that deliver some consumer benefits are permissible under the antitrust laws? If so, please explain why.

Response:

Anticompetitive harm in an upstream labor market does not require proof of downstream harm to be actionable under Section 7 of the Clayton Act. We typically do not credit out-of-market efficiencies in our merger review. Under Section 1 of the Sherman Act, naked restraints are condemned under the per se rule without further inquiry into the

anticompetitive effects of a naked restraint and notwithstanding purported justifications for the restraint. Accordingly, when independent firms that compete in the same labor market enter into agreements that eliminate competition between them for workers, they are considered per se unlawful. It is a fact-laden inquiry, however, whether a restraint in a labor market (or any product market) that is reasonably necessary to a separate, legitimate business transaction or collaboration is lawful. In such circumstances, Supreme Court precedent requires that courts undertake a balancing test that weighs the anticompetitive effects of a restraint in a defined antitrust market against the procompetitive justifications. A number of federal courts are currently assessing these and other kinds of labor market restraints, which were also an important part of our Public Workshop on Competition in Labor Markets in September 2019.

42. In its recent amicus filing in *William Morris Endeavor Entertainment, LLC v. Writers Guild of America, West, Inc.*, the Antitrust Division argued that—contrary to the view of the Writers Guild of America—certain individuals participating in the alleged group boycott are not covered by the labor exemption. The Division's argument seems to rest on the proposition that producers (or some producers) who are Guild members do not fall within the labor exemption either because they are not employees or because they operate in product rather than labor markets, or some combination of the two. How is this position consistent with the Supreme Court's holding in *American Federation of Musicians v. Carroll*?[21]

Response:

The Division did not take a position on the question of whether the statutory labor exemption applied, nor did it take a position on the question of whether the alleged boycott included non-labor groups for purposes of the labor exemption. Instead, we argued that further facts would need to be developed before determining whether showrunners constitute a labor group for purposes of the statutory exemption. We acknowledged the Writers Guild's argument that showrunners should be treated as a labor group as a matter of law because they were similar to the orchestra leaders in *Carroll*, but nonetheless concluded that it would be premature to make a factual comparison between showrunners and orchestra leaders at the pleading stage without further factual development. Having never taken a position on whether showrunners were a labor group, our argument was not inconsistent with *Carroll*.

43. Do you believe that the Court's holding in *Carroll* does not apply to coordination at issue here—a boycott called by the WGA involving its own members—and that producers operate in product markets and do not fall within the labor exemption? If so, how does this position reflect the business model of talent agencies, which involves aggregating bargaining power across multiple producers?

[21] Am. Fed'n of Musicians of U. S. & Canada v. Carroll, 391 U.S. 99, 115 (1968).

Response:

The Division took no position on the application of *Carroll* to the facts in *Writers Guild of America*. Further factual development in discovery is required before determining the extent to which *Carroll* applies.

40 U.S.C. § 559

44. 40 U.S.C. § 559 states: "An executive agency shall not dispose of property to a private interest until the agency has received the advice of the Attorney General on whether the disposal to a private interest would tend to create or maintain a situation inconsistent with antitrust law." Please provide a full list of matters on which executive agencies have consulted with the Attorney General on antitrust matters pursuant to this statutory provision.

Response:

The Division regularly reviews disposals of surplus property under 40 U.S.C. § 559. When a request for review comes to the Division, the matter is assigned to an attorney, who reviews the transaction for potential competition issues. After their review, the attorney prepares a memo for the Section Chief that analyzes whether there are antitrust concerns under the facts. In 2019, the Division reviewed 5 disposal requests – 4 from GSA and one from the Defense Logistics Agency. This number is consistent with prior years.

Amicus Program

45. Please identify, to the nearest 10 hours, the number of attorney hours that the Antitrust Division has devoted since January 2017 to statements of interest and amicus briefs in cases where the United States is not a party and where its participation has not been requested by a court.

Response:

At this time, we are not able to provide exact statistics regarding personnel devoted specifically to these particular ongoing matters. Employees of the Division are salaried government employees whose duties often include handling multiple matters simultaneously.

46. What effect has the Division's amicus program had on its ability to fulfill its obligation to enforce the antitrust laws?

Response:

The Amicus Program (along with the Competition Advocacy Program) is a vital, low-cost, high-impact complement to our enforcement work, and it is long-standing. The amicus program aims to promote precedent that helps clarify, strengthen, or advance sound interpretations of the antitrust laws – which apply in both private and government cases – enabling effective and appropriate enforcement. Without an amicus program, we would have

fewer low-cost, high-impact opportunities to make arguments in court that can shape antitrust jurisprudence. Making greater use of our amicus program is good stewardship of our limited resources.

Expert Costs

47. Please describe each step of the process by which the Antitrust Division selects an economic expert or consulting firm to retain, including any processing for setting up competitive bidding, for negotiating fees, and for determining fees.

Response:

As described in the Division Manual, the selection of prospective expert witnesses in Division investigations involves collaboration between the legal component, the Economics Analysis Group (EAG), the Deputy Assistant Attorney General (DAAG) for Economic Analysis, and the DAAG overseeing the matter. For economic expertise, EAG typically provides an initial list of candidates, which may include internal and external candidates. The EAG manager, often with staff attorneys, contacts potential candidates, discusses the candidates' interest, qualifications, and availability, and, if the candidate is a non-EAG economist, negotiates the scope of work and fees of the contract. The manager or staff point of contact prepares a package including a completed OBD-47 Form that estimates fees and costs for specific services and expenses, and supporting memo that is processed by the Division's Executive Office. All such packages for economist experts must be approved by the Assigned DAAG and the DAAG for Economic Analysis.

48. Please describe how contracts for outside experts and consulting firms are structured.

Response:

Contracts often are structured in two phases: evaluation of the case and preparation of testimony. The scope of work will be defined clearly for each phase. This provides a natural point at which to determine whether or not to continue with the expert. The Division also often incrementally funds the contract, so that performance can be evaluated at multiple times. In order to get a contract approved, the Division staff must provide a detailed estimate of fees, including the hours expected for various tasks and travel expenses, where relevant. In addition, the level of staffing (e.g., how many people can attend a meeting or deposition) typically is addressed, and limited to the minimum number of people needed for effective consultation. The contract defines specific people that are approved to work on the matter along with their rates and includes guidelines for travel and reimbursement. A statement of work with clear deliverables is included as part of the OBD-47 Form, and a requirement for regular invoicing (usually monthly). It is typical for outside experts to provide the Division with a discount from their regular consulting rates.

49. Please identify any features of the current contract structure that might incentivize outside experts and consulting firms to complete their work in a more or less cost-effective manner.

Response:

When the Division determines that an outside expert is needed, there are a number of terms that generally are included in the contract to keep costs down. For example, the level of staffing is addressed in the contract, with approval needed for any support staff the expert uses. In addition, the Division retains the services of less expensive staff from consulting firms to take on delegated tasks at an hourly rate that is less than the expert's rate. The Division also looks to substitute internal staff for external staff even if the expert is external. Contracts also often are incrementally funded. Moreover, in almost all cases, experts would like to be retained by the Division again in the future. This provides the consultant with an incentive to avoid problems being found in the above review (and to resolve any problems that are found).

50. Please identify what processes the Antitrust Division has in place to monitor and review the work performed by outside economic experts and consulting firms.

Response:

Staff works very closely with outside experts, and thus has significant visibility into the work they are performing. In addition, contracts with outside experts require that regular invoices describing their work and the amount of time on specific tasks be provided to the staff point of contact. For economic experts, EAG managers review these invoices in detail and look for any unauthorized tasks or excessive spending relative to tasks.

51. In its November 2019 report, the Justice Department's Office of Inspector General identified several instances where the Federal Trade Commission (FTC) failed to fully document the process by which it selects experts.[22] Please identify what steps the Division has taken to ensure this process is fully documented.

Response:

The Division Manual documents the process by which it selects experts. As described in the Division Manual, the selection of prospective expert witnesses in Division investigations involves collaboration between the legal component, the Economics Analysis Group (EAG), the DAAG for Economic Analysis, and the DAAG overseeing the matter. For economic expertise, EAG typically provides an initial list of candidates, which may include internal and external candidates. The EAG manager, often with staff attorneys, contacts potential candidates, discusses the candidates' interest, qualifications, and availability, and ultimately makes a written recommendation to the Front Office that addresses the selection. Through this recommendation, the process is further documented.

[22] Federal Trade Commission Office of Inspector General, Audit of Federal Trade Commission Expert Witness Services, OIG Report No. A-20-03 (Nov. 14, 2019), https://www.ftc.gov/system/files/documents/reports/final- report-audit-expert-witness-services/final_ftc_oig_report_on_expert_witnesses-redacted_11-14-19.pdf.

Political Influence

52. Earlier this year, the FTC opened an antitrust investigation of Facebook.[23] Reports suggest DOJ has also recently opened its own separate probe of Facebook.[24] What role, if any, did Attorney General William Barr play in deciding that the Antitrust Division would conduct an antitrust investigation into Facebook?

Response:

Department of Justice policy limits my ability to comment on specific investigations. However, Attorney General William Barr, in his role as Attorney General and head of the Department of Justice, oversees the various departmental components, including the Antitrust Division.

53. Has Attorney General William Barr attended or otherwise been involved in any of the reviews of mergers involving the marijuana industry?

Response:

Department of Justice policy limits my ability to comment on specific investigations. However, Attorney General William Barr, in his role as Attorney General and head of the Department of Justice, oversees the Antitrust Division.

54. If the Antitrust Division suspects anti-competitive conduct in a particular industry, what is the standard process for opening and conducting an investigation?

Response:

The Division's investigations may arise from a number of sources, including complaints from citizens or businesses, press reports of various practices, and Hart-Scott-Rodino filings, among other things. Investigations are opened and conducted in a manner appropriate to the particular facts and circumstances in light of overall work across the Division.

55. If the Antitrust Division suspects anti-competitive conduct in the agriculture industry, is it standard process for attorneys from the Transportation, Energy, and Agriculture Section to write the preliminary investigation memo?

Response:

While the Division's civil sections are organized by industry, there is flexibility regarding which section reviews a matter. This flexibility assists the Division in addressing resource constraints, and identifying staff that can most effectively handle a matter. Staff also

[23] Lucas Matney, *Facebook says it's under antitrust investigation by the FTC*, TECHCRUNCH (July 24, 2019), https://techcrunch.com/2019/07/24/facebook-says-its-under-antitrust-investigation-by-the-ftc.

[24] David McLaughlin, *Attorney General Barr Seeks DOJ Facebook Antitrust Probe*, BLOOMBERG (Sept. 25, 2019), https://www.bloomberg.com/news/articles/2019-09-25/attorney-general-barr-sought-doj-facebook-antitrust-probe.

may be detailed to matters outside of their section to lend their specific expertise. The recent Dow/Dupont merger is a good example. Despite having a number of agricultural products at issue, this transaction was investigated and negotiated by the Defense, Industrials, and Aerospace section.

56. MLex has reported that the investigation memorandum in the automakers investigation was written by the policy staff at the Competition Policy and Advocacy Section at the Division.[25] Was this a departure from standard practice and, if so, what accounted for it?

Response:

The policy of the Department of Justice limits my ability to comment on specific investigations. In this matter, as in any other, when allegations of a potential antitrust violation come to the Division's attention, career staff is asked to evaluate and, if they recommend opening an investigation, to draft a recommendation to that effect; and the recommendation is reviewed and approved consistent with appropriate procedures.

57. When the Antitrust Division sends out letters to parties informing them that the Division has initiated an investigation, is it standard practice for attorneys from the relevant enforcement section to be the signatories to these letters? For example, would lawyers from the Transportation, Energy, and Agriculture Section sign a letter to agriculture companies that were the subject of an investigation?

Response:

Investigations are opened and conducted in a manner appropriate to the particular facts and circumstances in light of overall work across the Division. The recent Dow/Dupont merger, despite having a number of agricultural products, was investigated and negotiated by the Defense, Industrials, and Aerospace section, for example, and staff in that section would have been the signatories to most correspondence with the parties, not attorneys with the Transportation, Energy, and Agriculture Section.

58. Did attorneys from the Defense, Industrials, and Aerospace Section sign the letter to the automakers stating that the Antitrust Division was investigating them? If not, why not?

Response:

Department policy limits my ability to comment on specific investigations.

59. Did the Justice Department contact the California Attorney General's office or the California Air Resources Board when deciding whether to initiate the

[25] Leah Nylen, *Probe of automakers' California emissions deal took uncommon route through DOJ*, MLEX (Oct. 24, 2019), https://mlexmarketinsight.com/insights-center/editors-picks/antitrust/north-america/probe-of-automakers- california-emissions-deal-took-uncommon-route-through-doj.

investigation? Has the DOJ been in tonch with them since initiating the investigation?

Response:

Department policy limits my ability to comment on specific investigations.

60. If no, then why not? If the DOJ is investigating whether the emissions standards agreement that automakers entered into with California constitutes anti-competitive collusion, is understanding California's involvement—specifically when and how California was involved in drafting the emissions agreement—not imperative to getting the relevant facts?

Response:

Department policy limits my ability to comment on specific investigations.

61. For all cases in which the Division has filed statements of interest or amicus briefs, please identify any outside parties that the Antitrust Division consulted.

Response:

Department policy limits my ability to comment on specific investigations. However, in any matter, the Division often meets with a wide array of market participants and interested parties, including parties to the underlying litigation.

62. Please identify each official within the Antitrust Division who has attended meetings iu the White House complex since January 2017 and please describe the circumstances of each meeting.

Response:

The Department has specific policies and guidance, including a memo by then-Attorney General Holder dated May 11, 2009, that limit discussions between the White House and the Department regarding ongoing cases or investigations. The Division remains committed to following and enforcing applicable policies related to such contacts.

Travel Costs

63. Please identify the travel costs associated with each speech you have given and conference you have attended during your tenure at the Antitrust Division.

Response:

Travel in my capacity as the Assistant Attorney General fits within Departmental regulations and policy. Travel represents a very small portion of the Division's overall budget

but plays an important role in furthering the mission of the Antitrust Division. For instance, travelling to meet with leaders from foreign competition authorities helped me to organize the community of international enforcers to agree upon a first of its kind multilateral framework on due process in antitrust enforcement. I am proud that on April 3, 2019, the Steering Group of the International Competition Network (ICN) unanimously approved the Framework on Competition Agency Procedures, or CAP, and invited all antitrust agencies, whether ICN members or not, to participate in the framework to promote fundamental due process in antitrust enforcement globally. The CAP came into effect on May 15, 2019, and over seventy competition agencies have committed to the framework, a major accomplishment for the Antitrust Division.

Morale

64. The 2018 Federal employee viewpoint survey reports that the Antitrnst Division's employee engagement dropped from a score of 74% in 2015 to a score of 59% in 2018. According to the snrvey, employee engagement evalnates factors that lead to an engaged workforce, inclnding snpporting employee development and communicating agency goals. By comparison, for 2018, the government-wide average was 68% and the FTC score was 83%. What accounts for the Division's below average score? What are you doing to address this significant decline in employee engagement?

Response:

The Division employs very talented lawyers, economists, and staff, and I am proud to serve alongside them every day. Whether in our enforcement or policy efforts, I am a firm believer that key to our success is maintaining a talented and devoted staff. The Division must continue to attract and retain bright, talented, and passionate individuals—whether they be attorneys, economists, paralegals, or support staff. We have taken a number of initiatives to ensure we continue attracting and keeping a talented staff, including establishing the James F. Rill Fellowship program, the Jackson-Nash addresses, and a rotation program for Division attorneys.

Questions from Rep. Jayapal

65. Please explain whether and how the DOJ weighed the best interests of workers when choosing to file a brief in *Stigar v. Dough Dough* (WA Eastern District).

Response:

As I explained during my testimony on November 13, 2019, franchise no-poach agreements potentially maintain the incentive of franchise owners to invest in the training of their workers. More employers willing to invest in worker training would create more job opportunities for entry-level workers. The Division recognizes that courts are likely to treat restrictions on the mobility of managerial workers differently from low-skilled workers. The Division also took into account the effect that categorizing franchise no-poach agreements as

per se unlawful would have on challenges to the Division's application of the per se rule in future criminal cases.

66. Please explain whether and how the DOJ weighed the best interests of consumers when choosing to file a brief in *Stigar v. Dough Dough* (WA Eastern District).

Response:

In its Statement of Interest in *Stigar v. Dough Dough*, the Division focused on the applicable law rather than which parties benefit from a particular position the Department has taken.

67. Please explain the reasoning behind the DOJ's exercise of prosecutorial discretion to file a brief in *Stigar v. Dough Dough* (WA Eastern District), given the DOJ's wide focus and limited resources.

Response:

While the vast majority of the Division's resources are devoted to directly enforcing the antitrust laws, the amicus program is a valued complement to enforcement. Private litigation is an important aspect of the antitrust regime that Congress created, and in particular its treble damage provision provides an additional tool to deter anticompetitive acts. The Division's involvement in these cases, however, is important in providing guidance to the courts, to ensure they reach sound interpretations of the antitrust laws – which apply in both private and government cases – enabling effective and appropriate enforcement.

Making greater use of our amicus program also is good stewardship of our limited resources. For example, from start to finish, the Division's case against Atrium Health regarding anticompetitive steering restrictions cost over seven million dollars, approximately 100 times what the Division spent in connection with its statement of interest and motion to intervene in *Seaman v. Duke University*, litigation regarding no-poach agreements. Notably, both cases reached the same result from an enforcement perspective.

68. Please detail any meetings, phone calls, emails or interactions that you or others at the DOJ had with the International Franchise Association, the U.S. Chamber of Commerce or Littler Mendelson P.C. regarding *Stigar v. Dough Dough* (WA Eastern District).

Response:

Department policy limits my ability to comment on specific investigations or matters; however, in any matter, the Division often meets with a wide array of market participants and interested parties.

69. Please respond to the American Antitrust Institute's May 2, 2019 letter regarding your department's position in *Stigar v. Dough Dough* (WA Eastern District).

(https://www.antitrustinstitute.org/wp-content/uploads/2019/05/AAI-No-Poach-Letter-w- Abstract.pdf)

Response:

I described the Division's position in *Stigar v. Dough Dough* above. The Division's position remains the same despite support or criticism from outside interest groups such as the American Antitrust Institute.

Questions from Rep. Scanlon

70. In addition to the examining how antitrust agencies might take enforcement actions to curtail abusive market practices by the large tech companies, I am interested in looking at how these same companies may be taking advantage of prior enforcement actions to unfairly benefit themselves under the auspices of the antitrust laws.

In 1941, ASCAP and BMI, two performance rights organizations representing songwriters for licensing public performances of musical works, entered into consent decrees with the Antitrust Division. These legacy decrees were necessary to protect traditional licensees - restaurants, bars, venues and a fledgling broadcast industry from anticompetitive behavior by the PROs. These protections were deemed necessary because individual licensees lacked market power and needed licenses to virtually all musical works in order to avoid significant liability for statutory damages under copyright law. When they were negotiated there was no imagining the giant tech companies of today.

Each of the largest tech companies possess significant market power as compared to songwriters/publishers and as compared to smaller radio stations and hospitality venues. This is a complex economic ecosystem that needs nuanced and comprehensive action to evaluate and modernize the decrees for a new era.

AAG Delrahim, if there are any discussions about the future of the consent decrees, will any next actions be thoughtful and comprehensive, and take into account the relative negotiating market power of songwriters/publishers, independent hospitality venues like restaurants and wineries, and large tech companies that could not have been imagined in 1941. How can we bring performance rights to a free and fair market given technological developments, while maintaining the efficiency of traditional/general licensing through ASCAP and BMI?

Response:

In June 2019, the Antitrust Division announced its intention to review the ASCAP and BMI decrees and opened up a public comment period. That comment period ended in August 2019. The Division received over 800 comments from parties, stakeholders, and citizens, and these comments are publicly posted on the Division's website at https://www.justice.gov/atr/antitrust-consent-decree-review-public-comments-ascap-and-bmi-

2019. As the Division continues to review the comments, it continues to engage actively with parties and industry stakeholders. The Division appreciates the potential ramifications of an abrupt termination of the ASCAP and BMI decrees without some form of transition. The Division intends to reach a conclusion about modifying, sunsetting, terminating, or keeping the decrees in place in the coming months.

November 13, 2019

Chairman Joseph J. Simons
Commissioner Rohit Chopra
Commissioner Noah Joshua Phillips
Commissioner Rebecca Kelly Slaughter
Commissioner Christine S. Wilson
Federal Trade Commission
600 Pennsylvania Avenue, NW
Washington, DC 20580

Dear Chairman Simons and Commissioners Chopra, Phillips, Slaughter and Wilson:

We write to urge the Federal Trade Commission to block Google's proposed acquisition of Fitbit. If this acquisition is approved, Google will further consolidate its monopoly power over Internet-based services. It will increase its already massive store of consumer data, including highly sensitive health and location information. Through its vast portfolio of internet services, Google knows more about us than any other company, and it should not be allowed to add yet another way to track our every move. This transaction should not be permitted because Google already holds a dominant position in the digital marketplace, health data is critical to the future of that marketplace, and the data protection concerns stemming from the acquisition will have far-reaching consequences including a dramatic erosion of consumer privacy.

This proposed acquisition should set off alarm bells at the FTC. It was, of course, Google that moved to consolidate user data across 60 different Internet-based services back in 2012,[1] over the objection of consumer groups, members of Congress, state attorneys general and even the Chairman of the FTC. And the outcome was predictable: competition diminished, innovation diminished, and data protection diminished.

Google's prior acquisition of Doubleclick also deserves close scrutiny before the FTC considers whether to allow this acquisition to go forward. In that case, Google failed to uphold representations that it made to the Commission regarding the personal data gathered by DoubleClick.[2] On that basis alone, the Commission should reject this proposal. Google has acquired more than 200 firms, many of which implicate personal privacy.[3] Those deals should also be reexamined.

Antitrust enforcers need to determine how the acquisition of Fitbit's data will strengthen Google's existing monopolies in search, advertising, and smartphone operating systems. It would be incorrect to define the relevant market as fitness wearables when examining anti-competitive effects of the acquisition. That analysis would miss relevant anti-competitive harms of the acquisition, a mistake made when assessing the Facebook/Instagram deal as well as the Amazon/Whole Foods deal. These regulatory reviews defined the relevant markets as photo-sharing applications and groceries. Enforcers cannot make the same mistake again by ignoring the consolidation this acquisition would cause within the health data marketplace. A review of contemporary business practices for the use of consumer data will reveal health information is broadly integrated into the range of products and services in which Google already dominates.

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[1] "Google Consolidates Privacy Policy; Will Combine User Data Across Services." January 24, 2012. <https://techcrunch.com/2012/01/24/google-consolidates-privacy-policy-will-combine-user-data-across-services/>
[2] "Google Consolidates Privacy Policy; Will Combine User Data Across Services." January 24, 2012. <https://techcrunch.com/2012/01/24/google-consolidates-privacy-policy-will-combine-user-data-across-services/>
ses/2012/08/google-will-pay-225-million-settle-ftc-charges-it-misrepresented>
[3] "List of mergers and acquisitions by Alphabet."
<https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet>

Much like Google's Android acquisition allowed it to extend its desktop search monopoly to mobile devices, so too would an acquisition of Fitbit allow Google to extend its search monopoly to wearable devices. Google's goal is to be a ubiquitous gatekeeper that forecloses competitive threats to any of the markets it monopolizes. Google has eight business lines with over a billion users each[4], and this acquisition would fortify Google's monopoly power by dominating yet another portal to the consumer.

The commission's repeated failures to address both the antitrust and privacy dimensions of Google's ever-expanding hold over the digital marketplace has placed U.S.—and global—consumers and competitors at serious risk. It should not repeat this pattern of failure again.

The hubris of the executive team to pursue an acquisition of the size, a proposed $2.1 billion, while under federal and state antitrust investigations is astonishing. During their historic antitrust probes, Microsoft and IBM stopped such acquisition activity, which should indicate that we are now in an era of unprecedented disregard for legal authority. Google Senior Vice President, Rick Osterloh announced the agreement, saying it was an "opportunity to invest even more in Wear OS as well as introduce Made by Google wearable devices into the market."[5] These words should worry customers. Google has demonstrated its unwavering plan to acquire consumer data, regardless of its source, having recently been fined $170M for collecting children's personal data through its subsidiary YouTube.[6] Google should not gain control of Fitbit's sensitive and individualized health data that can be integrated with data from its current services to entrench its monopoly power.

If the acquisition is approved, a pending FDA stamp of approval for Fitbit would give Google even more influence in healthcare data and technology. Fitbit is already on track for FDA clearance,[7] as one of nine companies chosen to pilot the FDA's Software Precertification (Pre-Cert) Program. Pre-Cert would "provide more streamlined and efficient regulatory oversight of software-based medical devices developed by manufacturers who have demonstrated a robust culture of quality and organizational excellence." Based on the FDA overview, the pre-certified status would allow companies access to "participate in a streamlined premarket review and opportunities to collect and leverage real-world post-market data, which encourages innovation, timely patient access, and safety and effectiveness over the product life cycle."[8] A Gartner analyst and Senior Director, Alan Antin, noted the dangers of the acquisition in propelling Google into new industries. "This is really more like a long term play. Fitbit has, because of tens of millions of users, quite a database of health information. It instantly gets Google a big footprint."[9]

Despite Google's promise to be transparent about the data collected from Fitbit,[10] the latest reporting of Google's 'Project Nightingale,' which revealed the company's undisclosed partnership with one of the

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[4] "Google Drive will hit a billion users this week." July 25, 2018. <https://techcrunch.com/2018/07/25/google-drive-will-hit-a-billion-users-this-week/>

[5] "Helping more people with wearables: Google to acquire Fitbit." November 1, 2019. <https://www.blog.google/products/hardware/agreement-with-fitbit/>

[6] "YouTube fined $170m for collecting children's personal data." September 14, 2019. <https://www.theguardian.com/technology/2019/sep/04/youtube-kids-fine-personal-data-collection-children->

[7] "Fitbit Selected to Participate in FDA's New Digital Health Software Precertification Pilot Program." September 26, 2017. <https://investor.fitbit.com/press/press-releases/press-release-details/2017/Fitbit-Selected-to-Participate-in-FDAs-New-Digital-Health-Software-Precertification-Pilot-Program/default.aspx>

[8] "Digital Health Software Precertification (Pre-Cert) Program." July 18, 2019. <https://www.fda.gov/medical-devices/digital-health/digital-health-software-precertification-pre-cert-program>

[9] "A Google Fitbit means new possibilities and questions for the smartwatch." November 1, 2019. <https://www.cnet.com/news/a-google-fitbit-means-new-possibilities-and-questions-for-the-smartwatch/>

[10] "Google bought Fitbit. What does that mean for your data privacy?" November 1, 2019. <https://www.pbs.org/newshour/economy/making-sense/google-bought-fitbit-what-does-that-mean-for-your-data-privacy>

largest health care systems in the United States, Ascension, indicates a different practice of secrecy. The project gave Google access to millions of patients' medical records without the knowledge or consent of the patients or their doctors.[11]

Our antitrust laws were specifically enacted to prevent monopolies in their incipiency. The Celler-Kefauver Act authorized prohibitions against anti-competitive conglomerate mergers, such as Google-Fitbit. As the Supreme Court has stated that "Congress decided ... not only to prohibit mergers between competitors, the effect of which 'may be substantially to lessen competition, or to tend to create a monopoly' but to prohibit all mergers having that effect."[12]

We have the choice to accept a future where Google is at the center of all services, or directly regulate its monopoly power. Your job is to protect American consumers from such power, and we urge you to act.

Sincerely,

Sarah Miller
Senior Vice President,
Open Markets Institute

Josh Golin
Executive Director, Campaign for a
Commercial-Free Childhood

Jeffrey Chester
Executive Director, Center for Digital
Democracy

Susan Grant
Director of Consumer Protection and Privacy,
Consumer Federation of America

Robert Weissman
President, Public Citizen

James P. Massar
Oakland Privacy

Marc Rotenberg
President, EPIC

Tracy Rosenberg
Executive Director, Media Alliance

David Rosen
Communications Officer on Regulatory Affairs,
Public Citizen

Linda Sherry
Director of National Priorities, Consumer Action

[11] Google's 'Project Nightingale' Gathers Personal Health Data on Millions of Americans." November 11, 2019. <https://www.wsj.com/articles/google-s-secret-project-nightingale-gathers-personal-health-data-on-millions-of-americans-11573496790>

[12] U.S. Supreme Court United States v. Von's Grocery Co., 384 U.S. 270 (1966). <https://supreme.justia.com/cases/federal/us/384/270/>