Union Calendar No. 453

115th CONGRESS *2nd Session*	**HOUSE OF REPRESENTATIVES**	**REPORT** **115-**596

THE 2018 JOINT ECONOMIC REPORT

R E P O R T

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ON THE

2018 ECONOMIC REPORT
OF THE PRESIDENT

TOGETHER WITH
MINORITY VIEWS

MARCH 13, 2018. — Committed to the Committee of the Whole House on the state of the Union and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 2018

28-917

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LETTER OF TRANSMITTAL

March 13, 2018

HON. PAUL RYAN
Speaker, U.S. House of Representatives
Washington, DC

DEAR MR. SPEAKER:

Pursuant to the requirements of the *Employment Act of 1946,* as amended, I hereby transmit the 2018 Joint Economic Report. The analyses and conclusions of this Report are to assist the several Committees of the Congress and its Members as they deal with economic issues and legislation pertaining thereto.

Sincerely,

Erik Paulsen
Chairman

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MARCH 13, 2018. – Committed to the Committee of the Whole House on the state of the Union and ordered to be printed

MR. PAULSEN, from the Joint Economic Committee, submitted the following

REPORT

together with

MINORITY VIEWS

Report of the Joint Economic Committee on the 2018 Economic Report of the President

CHAIRMAN'S VIEWS

Introduction

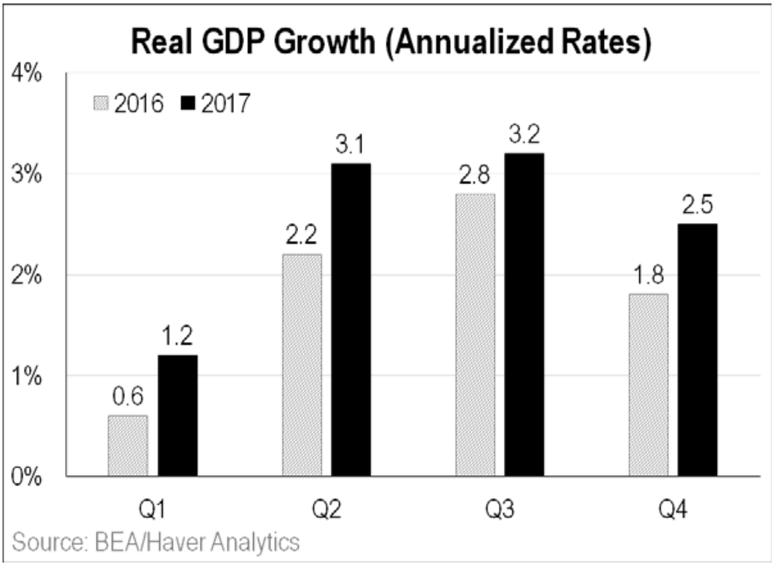
America has always had great economic potential because of her greatest resource: Americans. When Government steps back and allows Americans to work hard and produce goods, the entire world thrives. Just look at the U.S. economy today, which is off to a strong start in 2018. It has added 550,000 new jobs during the first two months. In 2017, the economy already grew much faster than the year before (Figure 1), as it generated 2.2 million new jobs. What could account for such a sea change? The answer is simple: Government is once again allowing Americans to do what they do best.

It is rare that improvements in policy show results so quickly, and this validates the direction that the 115th Congress and the new Administration have taken with the economy. The *Tax Cuts and Jobs Act* (TCJA) and ongoing efforts to eliminate senseless and wasteful job-choking regulations have gained traction and demonstrated the robust benefits of pro-growth economic policies.

Our nation faces two challenges ahead. The first, on which we are making progress, is to accelerate the lackluster recovery from the 2008 recession. The second is to make the economy's potential for growth stronger and longer lasting in the face of long-term trends that tend to slow growth, particularly the aging of the population.

In addition to implementing better tax and regulatory policies generally, the Government can play a constructive role in key sectors of the economy, such as health care, education, infrastructure, cybersecurity, and international trade, by removing obstacles to better market performance. To each of these areas, the *Economic Report of the President and the Annual Report of the Council of Economic Advisers* (*Report*) devotes a chapter, and the Joint Economic Committee Majority Response (*Response*) offers recommendations in the chapters that follow.

Figure 1

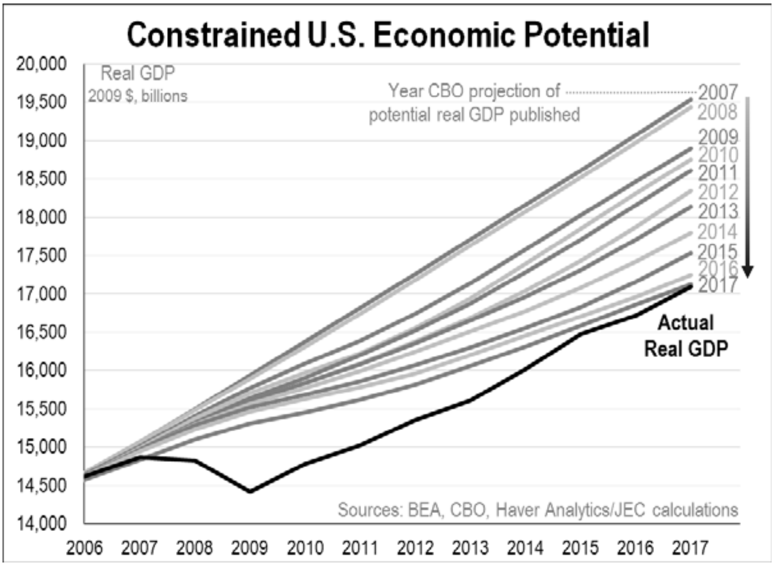


Accelerating Growth in the Near Term

Job growth is booming even as the unemployment rate has declined to 4.1 percent—the lowest since the year 2000—and the output gap from the last recession has closed relative to recent Congressional Budget Office (CBO) estimates of what the economy is capable of producing. The Committee Majority has long held that the American people could have achieved greater economic growth were it not for the constraints of the prior Administration's policy.

The *Response* of February 2017 to the outgoing Obama Administration *Report* showed how slowly the United States recovered from the last recession. It fell far short of past recoveries and even of the Obama Administration's own expectations. It also showed that the Congressional Budget Office (CBO) downgraded the economy's potential output in each of the eight years that President Obama was in office, as shown in Figure 2.[1]

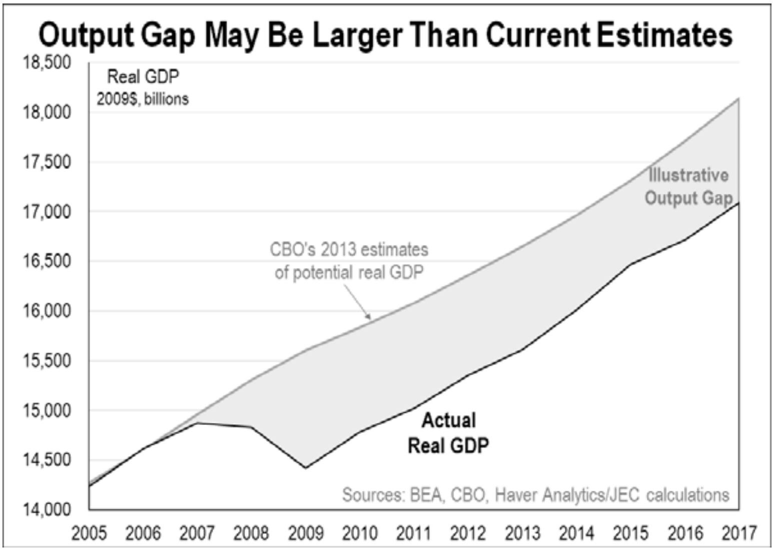
Figure 2



Since then, the JEC has investigated the particulars of what has restrained the economy. Our hearing witnesses and research have provided keen insights to how the current state of the economy compares with its potential.

If the economy were inescapably stuck in low gear, then policy actions that increase Federal deficits, as well as accommodative monetary policy, would be inappropriate. However, if the economy's potential were raised again – for example, to where CBO's 2013 projection predicted it would be in 2018 (Figure 3) – then there would be an appreciable output gap between actual and potential GDP that would allow faster growth without "overheating" the economy. Expansionary policies would be less likely to lead to unwanted inflation, and the size of the deficit would be of less immediate concern if economic growth accelerates toward potential. A growing economy with a good chance of rising potential means we are returning to normalcy, and all efforts should go towards reinforcing this trend. Instead of focusing efforts on needless precautionary measures that could hamper this growth, lawmakers ought to embrace the change for what it is: A restoration of America's prosperity.

Figure 3



Impaired Market Function and Constrained Potential

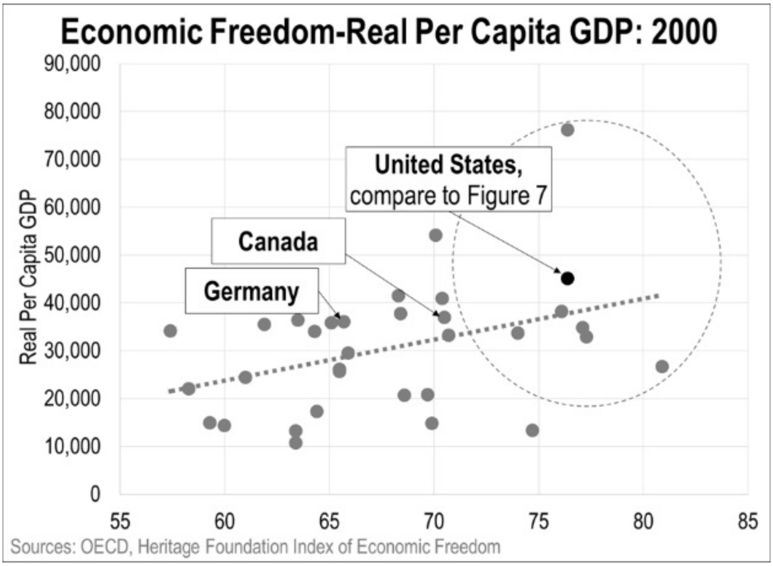
America needs headroom for faster economic growth, as illustrated by Figure 3. While the aging of the population and other factors may pose inevitable constraints, smarter policy choices can improve the functionality of America's entrepreneurial market economy. Americans can do better if Government gets out of the way.

This approach stands in contrast to the Obama Administration. It reflexively resorted to Government interventions as it continually emphasized market imperfections, externalities, inequality, and "selfish" motives of businesses, while blaming challenging fundamentals as reasons for slow growth beyond its control. Yet the Obama Administration's pro-Government orientation piled on to challenges facing the market economy by attempting to increase control over it. The previous Administration claimed that its fiscal policy had averted a worse economic outcome in the short term and promoted long-term Government programs to raise economic potential. President Obama extolled the virtues of public service in commencement speeches to college graduates and encouraged them to choose Government careers.

Economists from Friedrich Hayek (1974 Nobel Prize), to Milton Friedman (1976 Nobel Prize), to George Stigler (1982 Nobel Prize) and James Buchanan (1986 Nobel Prize), among many others, presented reasons and evidence that challenge faith in Government to correct market imperfections and improve the economy. Government institutions are not wise and dispassionate; on the contrary, they lack critical knowledge (Hayek), are slow to react (Friedman), are prone to capture by special interests (Stigler), and are disposed to pursue political and bureaucratic self-interest over the public interest (Buchanan and the school of public choice). For these reasons, one must carefully focus Government market intervention so that its benefits truly exceed its costs.

The U.S. economy used to deliver much higher GDP per capita than other developed economies because the private sector had more freedom to operate and faced fewer Government mandates. Figure 4 is based on *The Index of Economic Freedom* by the Heritage Foundation and depicts the relationship between per capita GDP growth and economic freedom across the 35 countries in the Organization of Economic Cooperation and Development (OECD) for the year 2000.[2]

Figure 4



As it became clearer that an economic resurgence was not forthcoming, the Obama Administration progressively tempered its economic outlook, but it refused to concede that its policies had failed (see 2017 *Response*). Instead, it claimed that the financial origin of the recession, and its severity, had made recovery more difficult than anticipated,[3] and it emphasized the aging of the population and reduced productivity as reasons why the economy was settling into a meager annual growth rate about a third less than the postwar average of more than 3 percent.[4]

Testimony at the JEC's "Dynamism" hearing confirms that aging populations are less entrepreneurial, innovative, and adaptable to changing economic conditions. Aging shifts entrepreneurship down as measured by new business startups.

Figure 5

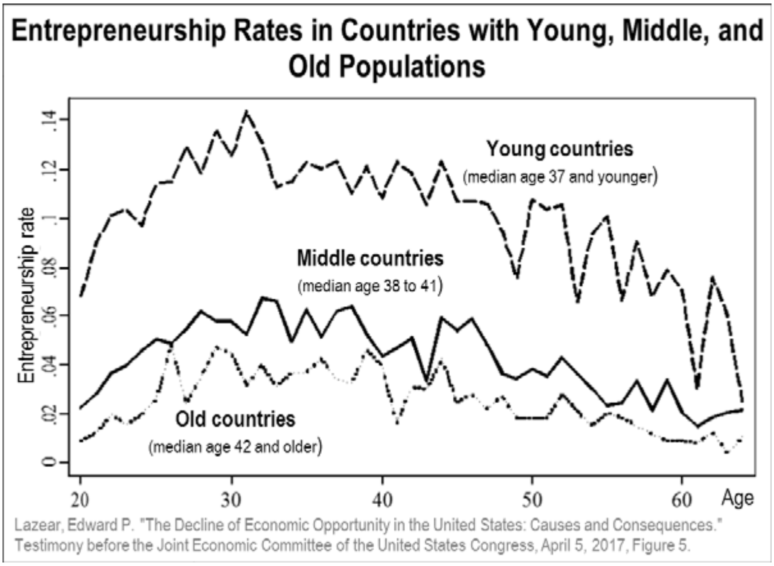
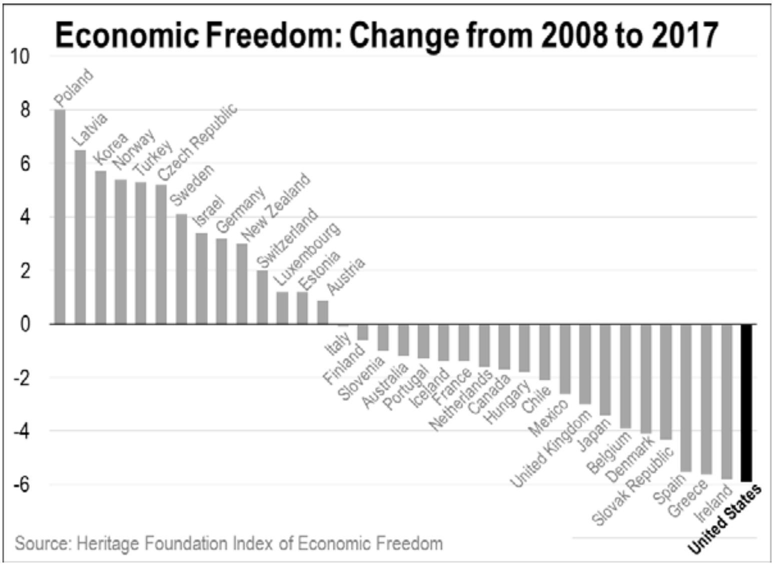


Figure 5, from a study that our witness, Stanford University economics professor and former CEA chairman Edward Lazear coauthored, shows that entrepreneurial activity shifts down across all age groups when the population's median age increases. To counteract such a shift, an economy should be moving to the *right* in Figure 4, which is precisely what many countries have done.

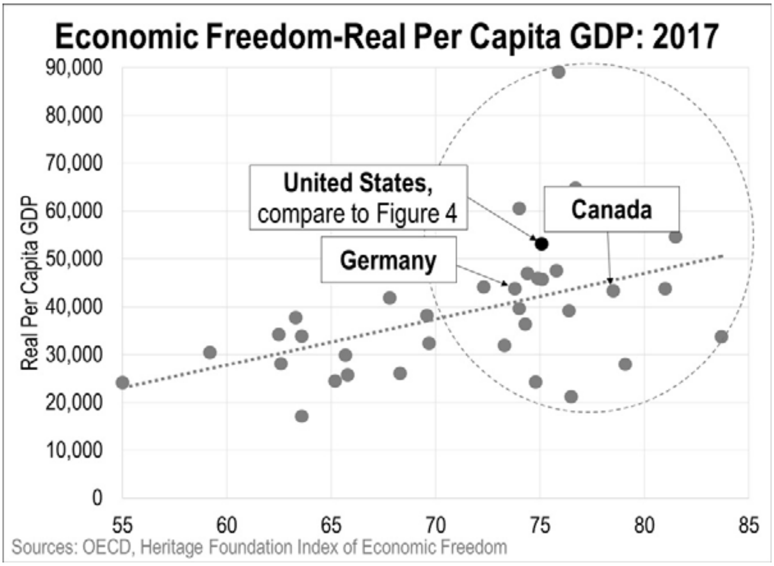
According to the Heritage Foundation, economic freedom increased in 14 OECD countries since 2008 and declined in 19, but in none as much as the United States (Figure 6). Figure 7 shows that by 2017 many countries had moved up and to the right in per capita GDP and economic freedom, while the United States moved to the *left*.

Figure 6



We have lost ground relative to other countries that have made their economies more business friendly in terms of taxation and regulation.

Figure 7



<u>*Improvements in other countries*</u>. America's postwar international economic policy succeeded in substantially lowering barriers to foreign trade and investment around the world. Technical advances reduced shipping and communications costs, making it easier to relocate production facilities and sell from abroad, including back to the home country.

Recognizing the global scope of markets and the international mobility of capital, other countries reduced both the tax rates of companies doing business in their jurisdictions (Figure 8), and the regulation of domestic product markets (Figure 9). The U.S. Government, on the other hand, took the relative strength of the American market economy for granted at a time when competition was growing fierce. The Government failed to improve domestic business conditions and, if anything, worsened them. The U.S. corporate income tax rate, once among the lowest in the world, became the highest in the OECD—that is, until TCJA became law.

Figure 8

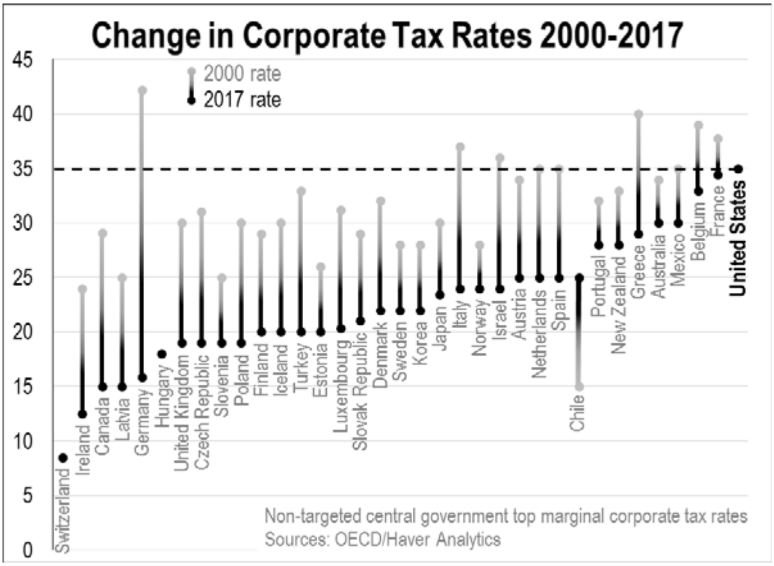
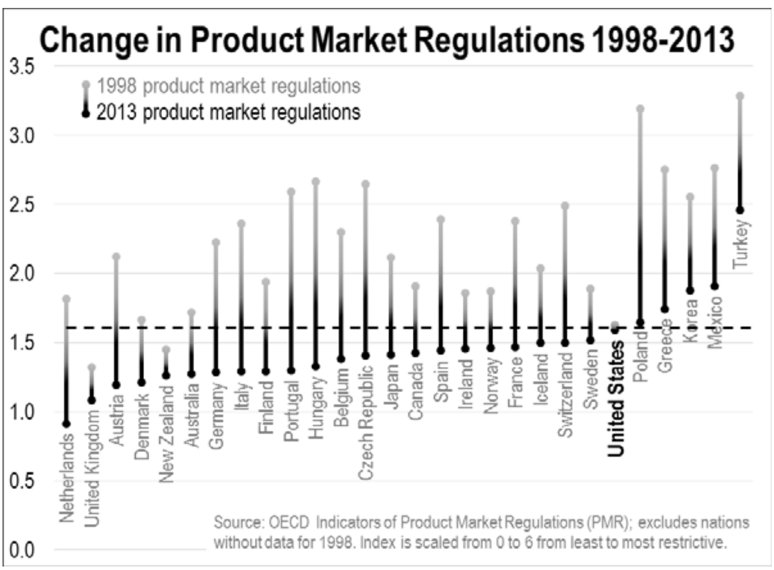
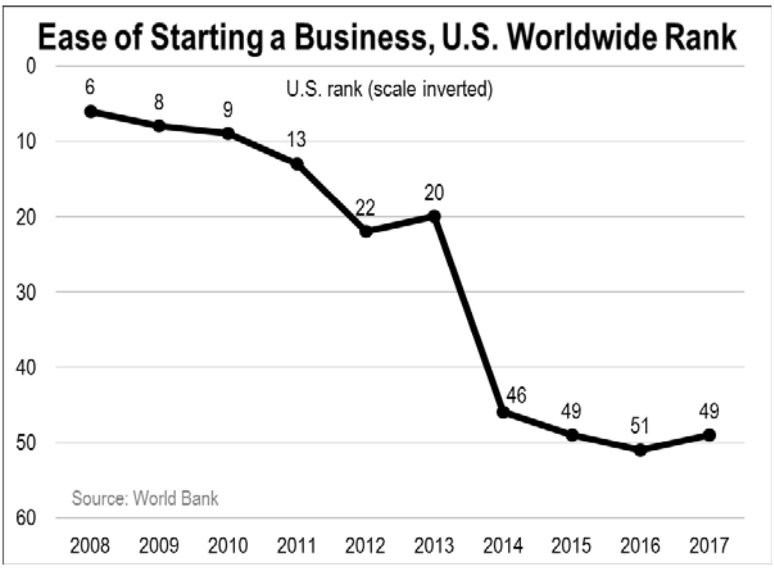


Figure 9



Project delays in the United States have become notorious to the point that it can take many times longer to refurbish a bridge, for instance, than it once took to build it.[5] The World Bank ranks the United States 36th in the world for obtaining a construction permit. Such a ranking suggests the U.S. Government, in its sluggish approach to permitting, fails to prioritize the fast pace of its job creators. This lens is useful when considering that the World Bank also dropped the U.S. from 6th place in 2008 to 49th for ease of starting a business (Figure 10).[6] In other words, the entrepreneurial market economy of the United States, teeming with job creators and innovators seeking to meet the demands of families all over the world, is busy filling out paperwork and waiting for permits.

Figure 10



Self-imposed handicaps. Multinational companies cannot operate as effectively or as profitably if they have to operate entirely in high-tax jurisdictions. Imagine finding the U.S. tax system so burdensome that a company's optimal choice is resorting to adjusting the prices at which they transfer intermediate goods among their international subsidiaries to shift cost recognition; borrowing among subsidiaries from different countries to claim tax-deductible interest expense; and practicing tax inversion by headquarter relocation through a U.S. company merging with or acquiring a foreign company and changing its incorporation to the foreign company's country. There is nothing simple, or efficient, about such a system.

Dozens of U.S. corporations have moved their headquarters overseas. When U.S. companies establish production facilities outside the country for tax reasons, they take with them productive capacity, jobs, and economic growth. The American Government should not be writing off these opportunities, given the vast number of Americans who are clamoring for a shot at prosperity.

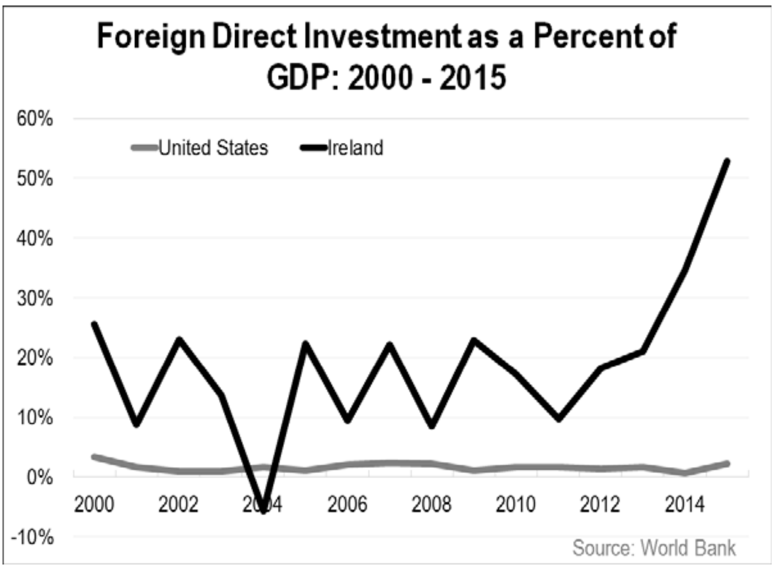
Additionally, corporate maneuvers to minimize U.S. tax liability expend resources for little or no gain in output; they are wasteful, and so too are the government's efforts in response to plug loopholes in the tax code, many of which result in unintended consequences. Why would we stick with a system where we demand that companies spend a significant portion of their time jumping through regulatory hoops instead of creating value for customers in our nation and throughout the world?

Before enactment of TCJA, U.S. multinationals held $2.6 trillion overseas.[7] This is because the United States imposed its corporate rate of 35 percent when American companies brought overseas earnings back to the United States—turning our country into a special kind of vault that is resistant to the deposit of money.

Only a handful of OECD countries impose a home-country tax on active overseas business income, and none of them do so at such a high tax rate. In this circumstance, the U.S. Government's "can-do" spirit has been unfortunate. The Federal Government essentially created a penalty for U.S. multinational companies to invest overseas profits back in the United States; meanwhile, foreign companies face no U.S. tax simply for bringing their overseas profits here. Additionally, at least part of the $2.6 trillion offshore represents value that U.S. corporations would have created entirely within the United States had the high U.S. tax rate not driven them away.

Additionally, the previous U.S. rate of 35 percent likely discouraged foreign companies from investing and creating jobs in the United States. Figure 11 contrasts foreign direct investment since 2000 in Ireland, which has a 12.5 percent corporate tax rate, with that of the United States before reform. Surely, foreign companies would rather market American-made goods to Americans, but they were discouraged from doing so by misguided tax policy.

Figure 11



Because of the new, lower corporate tax rate of 21% and the shift to a territorial tax system on the international level, the U.S. economy will benefit from inflows of corporate cash. However this cash is used in the U.S. – whether to hire and raise the pay of workers, reduce corporate debt, pay dividends, boost stock values with buybacks,[8] or finances domestic capital investment directly – it will have the immediate benefit of boosting labor productivity, employment, and wages. According to one survey, 35 percent of foreign-earned income would go toward U.S. direct investment by the companies repatriating foreign earnings, but investors receiving cash from dividends or stock sales also can use it to invest in other companies that want to expand. This is what a win-win policy looks like.

The Obama Administration imposed higher taxes as well on businesses that are organized as pass-throughs (e.g., S-Corporations) and therefore pay individual tax rates rather than the corporate rate. The top pass-through rate went from 35 percent when President Obama took office to effectively 44.6 percent in 2013.[9] While this is only a small part of the overall picture of Government interference in the marketplace, it is telling that the Obama Administration pursued tax hikes on job creators at a time when Americans were clamoring for jobs.

The 2008-2009 recession was a watershed event, during which the U.S. business startup rate dropped precipitously and remained depressed thereafter (Chapter 1, Figure 1-1). As each startup creates an average of six jobs, and firms less than a year old are responsible for nearly all net new job creation, fewer new jobs were created.

The reasons for lower rates of entrepreneurship involve some combination of population aging, taxes, and regulation. Government officials can't do much about the former, try as we might, but the latter two fall well within our purview. While Benjamin Franklin was correct in saying that the two certainties in life are death and taxes, he wasn't urging that we embrace more of either.

Given that an aging population may be less inclined to start new businesses, the Government should ease the burdens of doing so. JEC's October 2017 hearing on tax reform[10] revealed that the complexity of the tax code could be as great a deterrent to business formation as the amount of taxes owed. The effort needed to interpret and comply with complex tax provisions inhibits and distracts entrepreneurs and imposes administrative costs on new firms that delay the point at which they can break even. High individual and corporate tax rates also send a signal to potential entrepreneurs that may discourage them from starting or continuing a business. We forget the ultimate purpose of taxation is to provide revenue to the Government, not to cannibalize the sources of that revenue.

Tax and Regulatory Reform

The lower marginal tax rates in TCJA on corporations and pass-throughs, combined with a territorial system of international taxation, will make American companies more globally competitive, encourage companies to bring offshore profits back to the United States, and make America a more attractive place to invest. This will increase productivity and the demand for labor. Lower marginal tax rates on individual income will allow American families to keep more of what they earn, increase the incentives to work, and increase labor force participation. The CEA estimates that a reduction of the U.S. corporate rate from 35 percent to 21 percent will boost average annual household income by about $4,000 annually over the long run.[11] Together, lower marginal tax rates on business and labor will boost the economy's potential output.

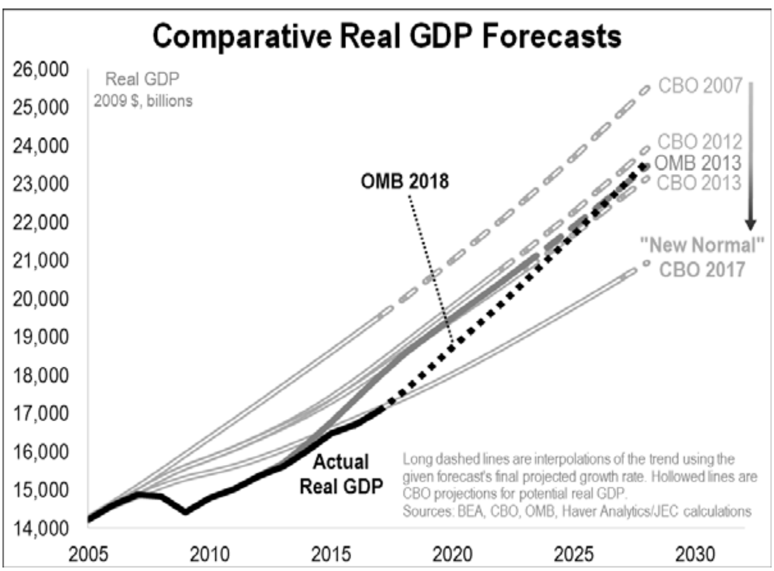
Further, during the Obama Administration, a surge of regulation occurred at the absolute worst time—when the economy was recovering from a steep recession. As the economy struggled to grow, regulatory costs mounted. The supposed justification for the ever-increasing cumulative regulatory burden was that the benefits are even larger. In the Office of Information and Regulatory Affairs (OIRA) annual reports to Congress on Federal regulation, the benefits were always characterized as much larger than the costs.[12] Regulatory debates tend to focus on the validity and completeness of the tallies and ways to improve them, but they omit a crucial consideration, namely whether the claimed benefits raise GDP.

All regulatory benefits do not equally boost GDP; some may do so at more or less distant points in the future; some may do so partially; and some not at all, whereas most costs of regulation precede the benefits and are tangible. Benefits should materialize at a sufficient pace to justify the rate of cost accumulation, and during weak economic conditions, adding more costs should be avoided.

So-called social regulation (environmental, workplace, consumer) has dominated for decades, and is credited with benefits that often are neither tangible nor tradable (although economists assign dollar values to them for cost-benefit analyses) and do not raise GDP appreciably. Regulatory costs face no budget constraint and have been accumulating much faster than the economy has grown. Congress and the current Administration are rolling back the surge of regulation from the last Administration, but to prevent a repeat in the future, regulatory cost increases should be limited to the rate of economic growth, as recommended in Chapter 4.

Based on improved tax and regulatory policy, OMB projects that over the next decade, the economy will reach a level consistent with the Obama OMB's 2013 forecast, which would be a substantial improvement over what has been called the "new normal" (Figure 12).

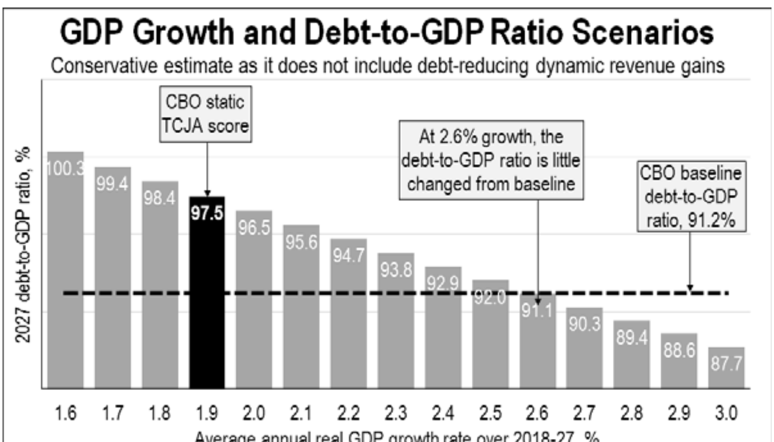
Figure 12



A central problem with the debt buildup under the previous Administration is that it nearly doubled public debt in relation to the size of the economy, the debt-to-GDP ratio, *and* it slowed economic growth. Tax reform, together with less burdensome regulations, can accelerate economic growth and eventually help to lower the debt-to-GDP ratio.

CBO's most recent baseline forecast, which was made before TCJA was enacted, projected the real economy would average a meager 1.9 percent growth per year. From that baseline, which projected a 2027 debt-to-GDP ratio of 91.2 percent, CBO estimated that TCJA would increase the debt-to-GDP ratio to 97.5 percent by 2027, assuming no positive growth effects relative to its 2027 baseline projection of 91.2 percent. However, if the economy grows at an average annual rate of just 2.6 percent instead, then the debt-to-GDP ratio would be unchanged from the baseline (Figure 13), not even counting the dynamic effects of more tax revenue from faster growth.

Figure 13



Debt-to-GDP ratios are debt held by the public ($27,291 billion for FY2027) from CBO (2018)'s static scoring of TCJA as a percent of various FY2027 nominal GDP (NGDP) levels. The latter are calculated by compounding CBO (2017)'s baseline FY2017 NGDP ($19,120 billion) at varied average annual growth rates. Corresponding real GDP growth rates are various NGDP growth rates less CBO (2017)'s assumed average GDP price index growth of 2%.
Sources: **CBO (2017).** "*An Update to the Budget and Economic Outlook: 2017 to 2027,*" June 29, 2017; **CBO (2018).** "*Estimated Deficits and Debt Under the Conference Agreement of H.R. 1.*" December 15, 2017; JEC calculations

Last June, CBO projected that Federal revenues will be above their historical average over the next decade, while spending will accelerate at a much faster rate. The only two viable methods for getting the debt under control are to (1) increase the size of the economy, and (2) reform entitlement programs, which are currently projected to grow unsustainably as the population ages.

With TCJA and an improving regulatory environment, the prospects have improved for increased business investment, the return of U.S. corporate headquarters that left for foreign locations, and repatriation of U.S. multinationals' foreign earnings held overseas for tax reasons. Yet more work lies ahead to continue advancing from 49th place in the World Bank's country rankings for ease of starting a new business, among other things.[13]

Long-term Potential

For most of the postwar period, the U.S. economy was by far the largest and freest in the world, but that has changed. The European Union and Chinese economies are comparable in size to the U.S. and many countries around the world have taken steps to increase the international competitiveness of their businesses as the charts above illustrate. Removing the major growth-inhibiting features of the U.S. tax code and the Code of Federal Regulations became pressing due to America's changing position in the global economy. Other governments may not necessarily liberalize their internal markets fully but many realize that free international trade and investment put their countries at risk of becoming economic laggards if they do not free industry to compete internationally. (In this regard, some countries also try to give their businesses a competitive leg up.)

Trade. The needed response is not to resurrect barriers to trade and investment in the United States. We are all deeply concerned about unfair trade practices by bad actors in other countries. American workers want to compete fairly, but it is wrong for the Administration to move forward with new tariffs. Even with temporary exemptions for Canada and Mexico, the tariffs put allies on other continents in limbo and jeopardize international supply chains.

International trade is our strength, especially given advancing technology, as Chapter 7 explains. The United States has a comparative advantage in bringing innovations to market, and digital trade allows even small firms to do business internationally. America has a substantial trade surplus in digital trade that promises to increase as digitization spreads. What we still call "digital" trade will encompass virtually all trade in the future if the United States successfully leads the cause for seamless commerce across borders, subject to harmonized national regulatory regimes and without national market access requirements.

Energy. Technological developments in oil and gas production provide an important perspective on U.S. ingenuity and openness to the global economy. The United States pioneered the technology that combines fracking with horizontal drilling to upend the global order in oil and natural gas markets, as the 2016 *Response* explained. Not only are U.S. producers able to meet a substantially increased portion of domestic oil and gas demand (the country remains self-sufficient in natural gas on the strength of fracking), but the end of the self-imposed crude oil export ban enabled the United States to export increasing volumes of both oil and natural gas overseas.[14] A few years ago, no one would have thought that the U.S. government would be in a position to sanction Venezuela by refusing to import its oil.

Blockchain. In response to the *Report's* study of cybersecurity, Chapter 9 discusses blockchain technology at some length and shows that the technology may develop to help secure transactions and information transmissions. The technology has many possible applications in addition to managing digital currencies, for which it is most widely known. Blockchain technology has the potential to help the economy function more efficiently and securely. However, the new technology and the possibilities it creates—including structural changes to and extensions of markets—

present regulatory and legislative challenges for the Federal Government, including disparate treatment by the States. It is important to proceed with prudence and provide proper guidance to the market, as discussed in Chapter 4 on regulation, and not prejudge and hinder technological developments. The new technology also may be attractive for Government to use, improving efficiency in its own operations.

Infrastructure. The fracking revolution was enabled by the fact that most States respect private rights to develop natural resources and regulation did not thwart expansion of supply. We must apply this lesson to the rest of the economy and remove obstacles to efficient domestic market function. Nowhere is this more obvious than with infrastructure projects. Chapter 6 addresses how the country has tied itself in knots with a permitting and regulatory process that can cause renovations of existing structures to take far longer than their original construction and can frustrate new projects, even when a given administration favors them.

Education. Education is another case where Government policies have created counterproductive incentives by enabling students to overextend themselves with student loans and predisposing them to choose college over possibly more rewarding alternative career preparation. The July 2017 JEC hearing on the large number of unfilled job openings documented the experience of many high school and college graduates, namely an inability to market their skills. College graduates are returning to community colleges in order to acquire skills employers will pay for. Some other countries prepare their students much better for the job market, and for the sake of an internationally competitive workforce, a rising standard of living, and reducing social problems, we should do the same.

Health care. Through a number of releases in the course of last year, the JEC documented the failure of the *Affordable Care Act* (ACA)—also known Obamacare—to deliver the quality of care, health service prices, and insurance enrollment promised. Others, notably Casey Mulligan of the University of Chicago, have analyzed the economic loss from burdens and distorting incentives created by the ACA. His analysis and his testimony before the JEC in June 2015[15] provide evidence that Obamacare contributed to slow economic growth and reduced employment. Even CBO acknowledged that the ACA will reduce employment by the equivalent of two million full-time workers by 2025.[16] The *American Health Care Act* would have improved the system Congress should continue pursuing replacement reforms.

In keeping with much of the theme of this *Response*, Congress and the Administration should remove unnecessary regulatory barriers to innovation. The JEC Majority looks forward to receiving more details on the Administration's plans to reduce prescription drug costs. Medical technology is useful in saving and improving lives, reducing long-term costs, and treating chronic conditions, which among other considerations, are reasons not to apply burdensome taxes such as the medical device tax. The medical device tax operates as a tax on innovation and is particularly harmful to small companies that are not yet profitable but are striving to launch lifesaving devices. The JEC Majority recommends full repeal to spur greater innovation, maintain the U.S. competitive edge in medical technology,[17] and preserve patients' access to devices that save and improve lives. Greater coordination and portability of health records could also assist by reducing paperwork burdens and preventing medical errors (one of the possible application of blockchain technology).

Chapter 8 on health care also addresses the Nation's opioid crisis, an unprecedented epidemic of drug addiction so severe that it may be registering in national labor force participation and productivity data. The chapter discusses possible approaches, though solutions are complex and may require multi-pronged and community-based efforts. However, the Nation has coped with waves of alcoholism, drug abuse, crime, drunk driving fatalities, and other social challenges by raising public awareness and addressing them from multiple sides. From an economic perspective, geographic and occupational labor mobility and increased labor demand could help deter people from turning to addiction. Faster economic growth, better training and education, and removing hindrances to working-age people moving to where employment opportunities exist are important parts of the solution.

CONCLUSION

The JEC Majority is convinced that the U.S. economy has room to grow faster and, belatedly, experience some of the normal bounce-back from the recession (described in Chapter 2). Market-oriented policies can release faster growth in the near term and better position the economy to counteract adverse long-term trends—particularly the aging population—so that it can reach a steady growth rate, closer to the historical average of somewhat over 3 percent. We have taken the first major step in that direction with tax reform, and we will continue to press on with other pro-growth policies.

[1] Figure 4 of the Chairman's Views of last year.

[2] Measuring economic freedom is an imprecise undertaking. A country's ranking in a given year may be a matter of index design, but Heritage has been doing this for 23 years, and changes in a county's ranking over time thus give a meaningful quantification of policy. Similar indices by other organizations, such as the Cato and Fraser Institutes, show similar declines for the United States.

[3] Other explanations included economic weakness in other countries.

[4] The Obama administration initially predicted a swift recovery based on the Keynesian belief that its stimulus package would accelerate consumption and thereby private investment and hiring. Since the 1970s, academia had largely abandoned Keynesianism, still teaching it (IS-LM) to undergraduate but not graduate students. Additional explanations for slow growth included economic weakness in other countries.

[5] Larry Summers, former National Economic Council director in the Obama White House, complained about the repair of a bridge connecting Boston and Harvard Square that began in 2012 and took five times longer than to build it a century ago. Lipson, Rachel and Lawrence H. Summers, "A Lesson on Infrastructure from the Anderson Bridge Fiasco," *The Boston Globe*, May 25,

2016.
See Also: Howard, Phillip K., "The Rule of Nobody," *Norton*, 2014.
[6] "Doing Business 2018," The World Bank, October 31, 2017. http://www.doingbusiness.org/reports/global-reports/doing-business-2018
[7] Rubin, Richard, "Talking Taxes: How to Bring Offshore Profits Home," *Wall Street Journal*, August 10, 2017. https://www.wsj.com/articles/talking-taxes-how-to-bring-offshore-profits-home-1502359201
[8] Cox, Jeff, "Companies have big plans for trillions in overseas cash – if tax reform ever happens," CNBC, July 13, 2017. https://www.cnbc.com/2017/07/13/companies-have-big-plans-foroverseas-cash--if-tax-reform-ever-happens.html
[9] Due to an increase in the top rate to 39.6 percent combined with the Affordable Care Act's 3.8 percent tax on investment income and an additional 1.2 percent from the effect of limiting itemized deductions.
[10] "The Startup Slump: Can Tax Reform Help Revive American Entrepreneurship?" Hearing before the Joint Economic Committee, October 3, 2017. https://www.jec.senate.gov/public/index.cfm/hearings-calendar?ID=D47F4892-7AAF-47CA-AC0E-6ECFB04A5B96
[11] "Economic Report of the President (ERP) 2018," Council of Economic Advisers, p. 33, February 2018. https://www.whitehouse.gov/wp-content/uploads/2018/02/ERP_2018_Final-FINAL.pdf
[12] The Obama Administration's last report remained a draft, "2016 Draft Report to Congress on the Benefits and Costs of Federal Regulations and Agency Compliance with the Unfunded Mandates Reform Act," December 23, 2016.
[13] "Tracking Tax Runaways," Bloomberg, September 18, 2014. https://www.bloomberg.com/graphics/tax-inversion-tracker/
See Also: "Doing Business 2018," The World Bank, October 31, 2017. http://www.doingbusiness.org/reports/global-reports/doing-business-2018
[14] Oil exported is of lighter grades while imported oil s of heavier grades.
[15] "Examining the Employment Effects of the Affordable Care Act," Hearing before the Joint Economic Committee, June 3, 2015. https://www.jec.senate.gov/public/index.cfm/hearings-calendar?ID=DA8245C3-8B5C-4DEE-BD89-C4C7F187C43B
[16] Harris, Edward and Shannon Mok, "How CBO Estimates the Effects of the Affordable Care Act on the Labor Market: Working Paper 2015-09," Congressional Budget Office, December 7, 2015. https://www.cbo.gov/publication/51065
[17] For discussion of medical technology export opportunities, see "2016 Top Markets Report, Medical Devices," International Trade Administration, Department of Commerce, May 2016. https://www.trade.gov/topmarkets/pdf/Medical_Devices_Top_Markets_Report.pdf

Chapter 1: Causes of the Weak Economic Recovery

- Economic dynamism—including business formation and labor market "churn" (job turnover and relocations)—declined sharply after the recession.
- Many U.S. multinational corporations moved their headquarters and earnings to more favorable overseas tax jurisdictions.
- Weak domestic wage growth and government policies discouraged labor force participation.
- The aging of the population naturally slowed economic growth, which previous polices failed to counteract.

Introduction

The 2008-2009 recession was followed by the weakest economic recovery since World War II. In 2017, the Committee held a series of hearings to better understand the causes behind the anemic recovery. It obtained government experts including Federal Reserve Chair, Janet Yellen and Council of Economic Advisers (CEA) Chairman, Kevin Hassett, as well as, academicians Nobel laureate and Princeton University Professor, Sir Angus Deaton and Stanford University Professor, the Honorable Edward Lazear, and many others. The Committee concluded that in addition to exogenous factors—such as an aging population—more consequential factors were at play, such as poorly designed tax and regulatory policies, which have been contributing to the decline in America's business formation and relative international competitiveness, stifling market efficiency and hindering economic growth. While some issues predate the Obama Administration, the dramatic decline in business startups and subdued economic activity from 2009-2016 suggests that post-crisis policies constrained the economy, preventing a typical robust American recovery.

For decades, dynamism—the rate and scale of reallocating an economy's resources to their most productive use—has been declining.[1] John Lettieri, of the Economic Innovation Group, explained the implications of declining dynamism for America at the Committee's April 2017 hearing, *The Decline of Economic Opportunity in the United States: Causes and Consequences*:

> *…[A] less dynamic economy is one likely to offer fewer pathways to achieving the American Dream. For workers, declining dynamism means fewer labor market opportunities and less upward mobility. For markets, it has corresponded with an era of diminished competition and greater rewards to entrenched incumbents. For regions, it means shrinking industrial bases and more profound geographic disparities.*[2]

Princeton University's Angus Deaton testified at the Committee's June 2017 hearing, *Economic Aspects of the Opioid Crisis*, about the long-term changing labor market for workers without a college degree:

> *Workers who entered the labor market before the early 70s, even without a college degree, could find good jobs in manufacturing, jobs that came with benefits and on the job training, and could be expected to last, and that brought annual increases in earnings, and a road to middle class prosperity. Such jobs have become steadily less prevalent over time*"[3]

Internationally, America's high corporate tax rate weakened our competitive stance, driving capital abroad. Additionally, scores of recent corporate inversions have occurred as firms seek a friendlier tax environment.[4] Dr. Kevin Hassett noted at the October 2017 hearing, *The Economic Outlook with CEA Chairman Kevin Hassett*, that many nations recognized the presence of international tax competition and addressed the issue with lower tax rates:

> *Countries around the world...have responded to the international outflow of capital by cutting their corporate tax rates to attract capital back.*[5]

Further, Chairman Hassett testified that the cost of corporate taxes falls partly on workers. Referencing international studies, he succinctly stated, "…high corporate tax countries have low wage growth; low corporate tax countries have high wage growth."[6]

During the Obama Administration, what was a long-term slowing of America's economic engine abruptly decelerated to the weakest economic recovery in generations. Low wages and expanded Government benefits that disappear as income rises drove many Americans out of the labor force. From 2008-2016, Americans age 15-64 left the labor force at a greater rate than all other Organization for Economic Cooperation and Development (OECD) countries.[7] Further, annual real GDP growth failed to reach even three percent during the entirety of the Obama Administration—a threshold met by every previous Administration dating back to at least Franklin D. Roosevelt.[8] The JEC Majority believes that had pro-growth policies been implemented during the previous Administration, America would have bounced back, as it did in the 1980s when annual real GDP growth averaged 4.4 percent (1983-1989), even topping 7 percent in 1984.

During the Obama Administration, America experienced a decline in both economic freedom and ease of business formation. In 2008, the Heritage Foundation and the Fraser Institute, among others, ranked the United States 5th in the world in economic freedom.[9] However, according to the most recent Fraser Institute ranking in 2015, the United States had slipped to 11th.[10] The Heritage Foundation's 2017 ranking placed the United States even further behind at 17th.[11] The relative decline is due to a lower American score and a rise in other countries' scores.

Figures 8 and 9 of the Chairman's Views illustrate the relative change in the corporate tax rate and the regulatory burden of businesses through product market regulations, two impediments to a free economy. Countries around the world have been increasing their economic freedom—becoming more competitive and attractive to business—while America has stood still until recently or, in some aspects, has moved in the opposite direction. As U.S. regulation and taxes expanded, and the relative business climate abroad improved, domestic business formation plummeted, contributing to the weak recovery. In 2008, the World Bank placed the United States 6th out of 181 countries in its ranking of ease in starting a business,[12] but by 2016—the Obama Administration's final year—it had fallen to 51st place out of 190 countries.[13] This decline helps explain the recent record low in business formation and the historically weak recovery.

The decline in business formation is a major reason for the weak economic recovery. Outside of a few geographic regions, startup rates have fallen,[14] and with declining migration rates within the United States, fewer Americans seek prosperous locations. When entrepreneurial activity is stifled, it initiates a chain reaction beginning with fewer new businesses and ending in constrained economic growth that holds living standards below their potential. Additionally, startups represent competition to established firms, introduce more innovation, and account for most incremental hiring.[15]

For years the Obama Administration argued that the weak economic recovery was due to the severity of the recession. However, this is inconsistent with the American experience. In fact, it is well documented that the greater the severity of economic contraction, the stronger the recovery.[16] In July 2017, economists John F. Cogan, Glenn Hubbard, John B. Taylor, and Kevin Warsh wrote the following:

> *We do not share the view that the recent period of weak economic growth was simply an inevitable result of the financial crisis. Economic recoveries tend to be stronger after deep recessions, and any residual headwinds from the crisis should have long been remedied had pro-growth policies been adopted. Historically, some post-crisis periods are marked by lower economic growth, but we believe that the poor conduct of economic policy bears much of that burden.*[17]

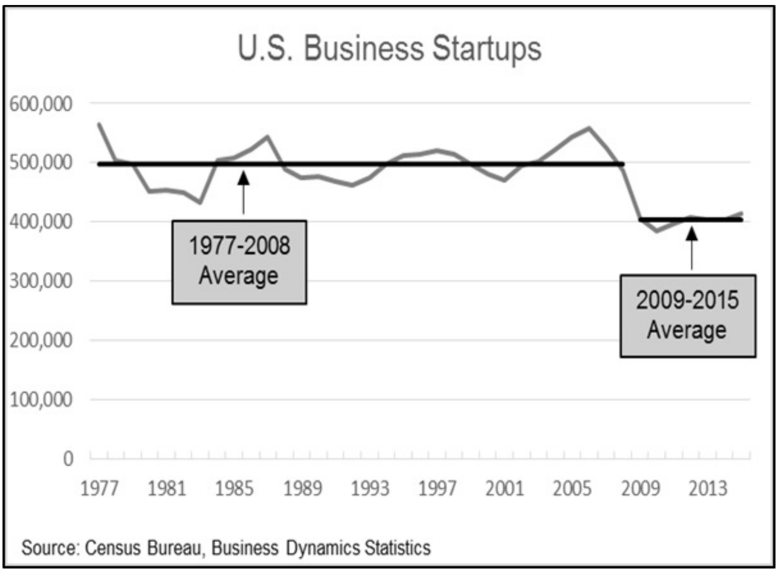
The Recovery

America's recent decline in economic freedom and ease of business formation corresponds with other troubling economic trends since the onset of the Great Recession, most notably (and alluded to earlier), a nearly 20 percent reduction in the number of newly created firms. Fewer annual business startups result in lower wages and labor force participation rates, which in turn reduces productivity and output growth, and ultimately suppress living standards. While briefly addressed in the *Report*, the Committee's Majority believes additional attention should be brought to the issue.[18]

Business Startups

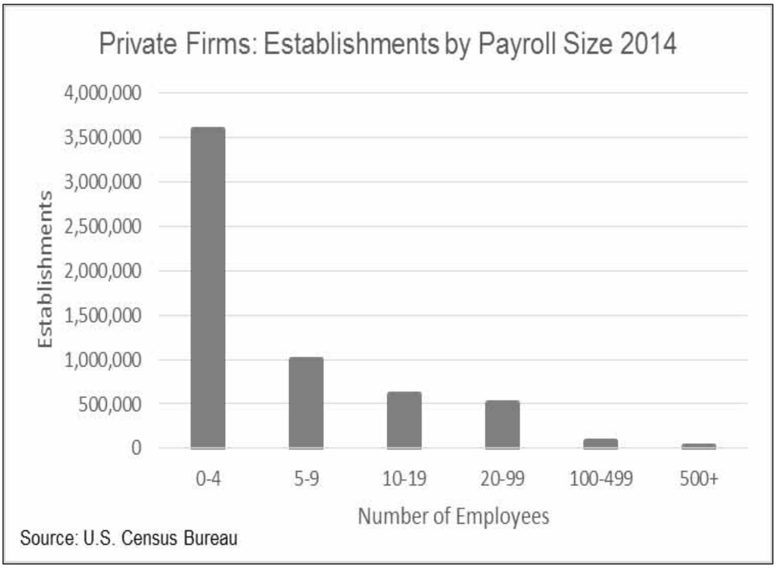
The number of annual startups dropped substantially from an average of 498,000 (1977-2008) to 403,000 (2009-2015), which greatly reduced job creation and worsened labor-market slack (Figure 1-1). During the first six years of the Obama Administration—covering the most updated data—startups never reached the previous three-decade average. In fact, the Administration's best year—2015 with 414,000 startups—was lower than the preceding three decades' worst year—1983 with 434,000 startups.

Figure 1-1



Some startups grow to employ hundreds of workers; however, the majority will remain small. In 2014, nearly 90 percent of employers had four or fewer employees, and only 1.8 percent of employers had 100 or more workers (Figure 1-2). Thus, small business formation and easy access to labor and product markets is essential to foster a strong economy.

Figure 1-2



The declining number of startups led to a weakening of the labor market, resulting in low wages and low labor force participation.

Wages and Labor Force Participation

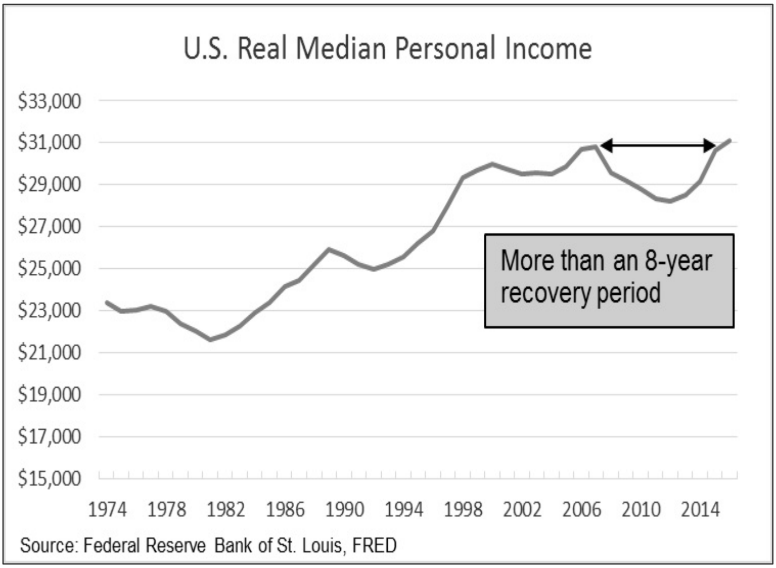
Firm formation tends to create more jobs, which increases labor scarcity and bids up wages. New firms less than a year old, on average, create six new jobs their first year, while existing firms represent net job losses.[19] A tighter labor market increases labor market churn—the rates of hires and separations—ultimately increasing productivity. High churn—from a tight labor market and a strong economy—increases labor productivity by relocating workers from less productive positions to more productive higher-paying positions. Conversely, low churn during hard times—from firms not replacing workers who left their job and employed workers reluctant to quit—prevent labor productivity and wage growth.[20]

Higher labor productivity from startups further increases the demand for workers, fueling additional wage growth and economic expansion. Highly productive workers produce more goods and services, generating higher sales revenue for their employer. Consequently, employees' value to firms rise; employers therefore expand employment and are willing to pay higher wages. Federal Reserve Chair Janet Yellen testified at the Committee's November 2017 hearing on the economic outlook that the "dismally slow" recent productivity growth has weakened the labor market, slowing real wage growth.[21]

The post-recession decline in job creation from the dramatic drop in startups has been exacerbated by the gradual increase in older firms' share of employment. In 2015, a record number of jobs were housed in firms at least 16 years old.[22] These firms experience little employment variation through business cycles. Thus, due to their growing presence, job growth during the current recovery has been somewhat muted compared to past recoveries. However, while changing firm demographics contributed to the slow labor market recovery, jobs foregone from fewer startups is quantitatively the larger component.[23]

The recovery's weak labor market caused an extended period of low wages. Following the onset of the Great Recession, real median personal income fell five consecutive years, the longest period of decline since the dataset began in 1974. Additionally, it took more than eight years for income to return to the pre-recession high—the slowest income recovery since at least 1974 (Figure 1-3).

Figure 1-3

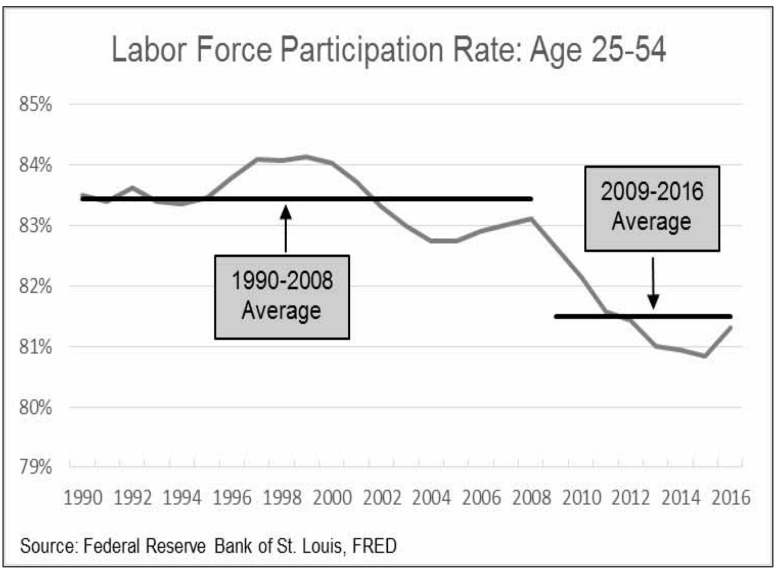


Similarly, household income plummeted. CEA Chairman Hassett testified, "Over the past 8 years, the real median household income in the United States rose by an average of only six-tenths of a percent per year."[24] In fact, real 2012 household income was so low it matched the 1995 level.[25] Chairman Hassett explained that America's uncompetitive corporate tax rate drove multinationals to locate plants abroad, while a lower rate would incentivize capital inflows, increasing labor demand and consequently wages. The *Report* presents further evidence of low wage from 2009-2016.[26]

The weak recovery also saw the total labor force participation rate decline; and while partly due to the aging population, the decline accelerated in recent years. From the Great Recession's December 2007 business-cycle peak to the June 2009 trough, labor force participation rate fell only slightly, from 66 to 65.7 percent.[27] However, once the recovery began, the rate fell an additional 3 full percentage points, to 62.7 percent, in May 2017. This was far lower than predicted in the immediate aftermath of the recession.[28]

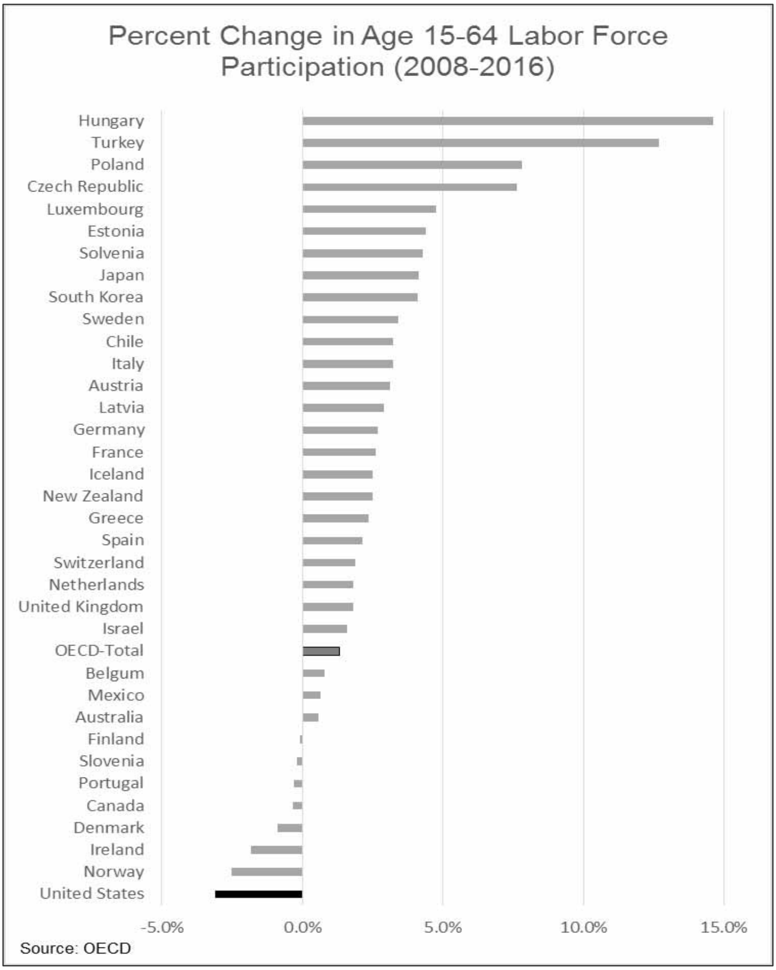
The prime-age labor force participation rate—a measurement that is little affected by the aging of the population—also dropped. It averaged 83.4 percent from 1990-2008 yet only 81.5 percent from 2009-2016. Not until 2016—the year that real median personal income returned to the pre-recession level—were workers drawn back into the labor force, causing the participation rate for ages 25-54 to grow for the first time since 2009 (Figure 1-4).[29] However, despite the uptick, the rate remains near a 30-year low.

Figure 1-4



While America's working-age labor force participation rate collapsed, most other developed countries saw growing participation rates. The OECD compiles international data on labor force participation rates for workers age 15-64. The aggregate participation rates of OECD countries increased 1.3 percent from 2008-2016. Over that same period, only eight of the thirty-five countries saw their rates fall. Of those, America fell the most with a -3.1 percent change (Figure 1-5).

Figure 1-5

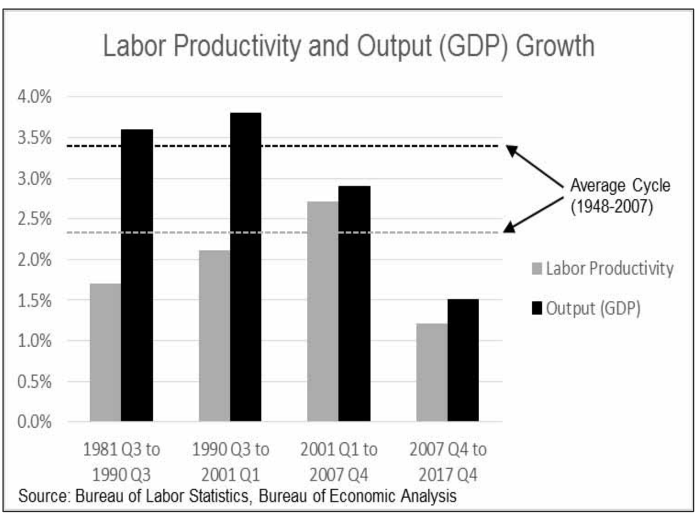


America's weak labor market drove many workers out of the labor force. In addition to low wages and labor force participation, the weak labor market harms the economy through low productivity and output growth.

Productivity and Output Growth

An economy abundant with business startups and a strong labor market is more dynamic, tends to raise labor productivity—output per hour worked—and consequently output (GDP) growth. High economic growth translates into more goods and services, lower prices, and more and varied job opportunities for all Americans. Alternatively, a less dynamic and low-growth economy trends toward stagnation, offering fewer choices to consumers and fewer prospects for workers.[30] Diminished business startups and a weak labor market during the Obama Administration have contributed to low labor productivity growth and an anemic economic recovery. The current cycle's level of labor productivity and GDP growth falls far short of past business cycles (Figure 1-6).[31] Not only is the recovery the slowest since World War II, but America "…is experiencing the worst five years of productivity ever measured outside of a recession."[32] In fact, 2016 saw negative annual productivity growth for the first time in more than three decades.[33]

Figure 1-6



Federal Reserve Chair Yellen testified about America's declining dynamism and recent low level of productivity growth:

> *We are also seeing signs of less dynamism. The process of creative destruction of new firms, innovative firms expanding at the expense of those that are less innovative, that process seems to have slowed, and I think some productivity growth is associated with that.*[34]

Similarly, Stanford University economist John Cochrane explains how new companies that displace older ones typically increase productivity:

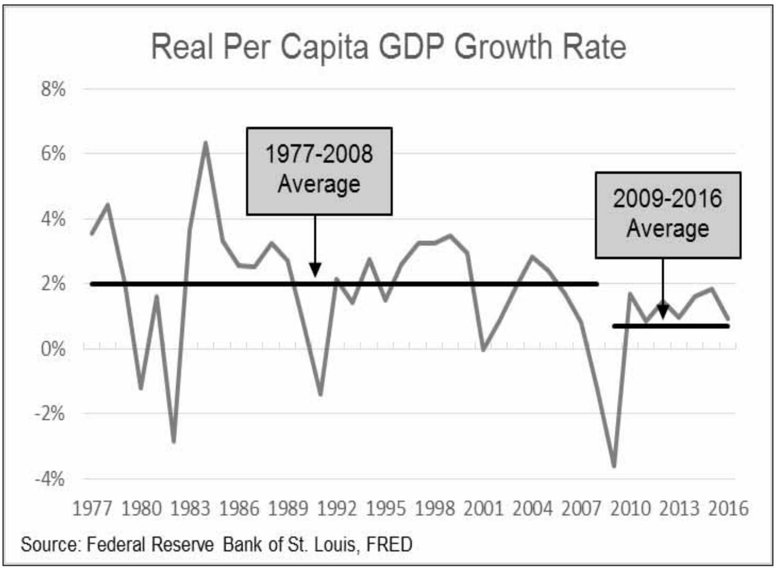
> *…[P]roductivity comes from new ways of doing things: New ideas, at heart; new inventions, new products, new processes, new technologies; new ways of organizing companies; new and better skills among workers.*[35]

By the end of the Obama Administration, GDP growth projections were far below traditional American levels. In mid-2017, both the Congressional Budget Office (CBO) and the Federal Reserve (Fed) projected that GDP growth will remain significantly below the post-World War II average of 3.4 percent in the coming years. Following small fluctuations around two percent through 2021, CBO and the Fed projected annual growth to level off at 1.9 percent.[36] The effect of lower GDP growth on American households is lower living standards.

Living Standards

Higher productivity growth, wages, and GDP growth from more business startups improve Americans' material well-being through financially stronger consumers and the availability of more goods and services. Since 2009, material well-being—as measured by real per capita GDP—has been growing at a meager 0.7 percent, which is less than half the two percent rate of the preceding three decades. Additionally, during the entirety of the Obama Administration, real per capita GDP growth failed to reach the three-decade average growth rate of two percent (Figure 1-7).

Figure 1-7



Business dynamism has been gradually declining for decades[37], but a dramatic weakening began at the onset of the current recovery, from which it failed to rebound. The Obama Administration attributed this failure to the severity of the Great Recession and its origin in the financial sector—rather than Obama Administration policies, but this blame shift is unconvincing. The following excerpts from the paper cited above by Cogan, Hubbard, Taylor, and Warsh summarize the reasons:

Focused primarily on "stimulus" in the short-term, the conduct of economic policy in the post-crisis years did little to reset expectations higher for long-term growth. That policy failure restrained those expectations, adversely affecting consumption and, especially, investment spending.

Economic theory and historical experience indicate economic policies are the primary cause of both the productivity slowdown and the poorly performing labor market. High marginal tax rates, especially those on capital formation and business enterprises, costly new labor market and other regulations, high debt-financed government spending (largely to fund income transfer payments), and the lack of a clear monetary strategy have discouraged real business investment and reduced both the supply of—and the demand for—labor.[38]

INCREASED HURDLES FOR BUSINESS FORMATION

The private sector has been facing headwinds for years, which has reduced business startups and slowed the economic recovery. Several contributing factors to declining business formation and the weak recovery include: expanding regulation; high and complex taxes; fewer workers able and willing to relocate—either to start a businesses or for better job opportunities; and rising student debt. An aging population is a factor, as may be the opioid crisis, but so is the design of social safety net programs that discourage gainful employment.

Expanding Regulation

Regulations are imposed by all levels of government, creating a complex web of business rules. Most rules are formulated without cost-benefit analysis and over time have accumulated to a massive aggregate burden on the economy. The legacy of the Obama Administration is substantial new Federal regulations added to the existing behemoth of accumulated Federal, State, and local rules that discourage business formation and expansion; hinder market efficiency; and slow economic growth.

At the State and local level, anti-business policies deter business startups and expansions. Local land-use regulations such as storm-water management, parking requirements, and mandatory setbacks, among others, add costs and delays to new business development projects and are known to reduce startups.[39] Similarly, Stanford University Economics Professor Edward Lazear's testimony submitted for the Committee's April 2017 hearing, *The Decline of Economic Opportunity in the United States: Causes and Consequences*, explained the importance of business-friendly State labor policies on economic wellbeing.[40] The former CEA chairman's testimony pointed out that from 2000-2015, States with the most positive business climate grew fastest, specifically those with low minimum wages and right-to-work laws; further, employment grows twice as fast in States with market-oriented labor policies. Also, occupational licensing requirements, which have grown from 5 percent of American workers in 1950 to about 29 percent in 2008, act as an entry barrier to many industries.[41] For some occupations, States without license requirements experience a 20 percent faster employment growth than in states requiring licenses.[42]

White Castle System's Jamie Richardson testified in 2016 that restaurants throughout the country have experienced

"…unchecked growth of regulatory barriers and burdens while facing unprecedented economic challenges." He also cited several Federal regulations including the *Affordable Care Act*, overtime regulations, *American with Disabilities Act* liability, Occupational Safety and Health Administration rules, and Environmental Protection Agency restrictions as specific examples of recent regulatory overreach.[43]

The Council of Economic Advisers pointed to an example of deregulation's effectiveness on the level of business formation in Europe.[44] In 2005, Portugal implemented its "On-the-Spot-Firm" program that reduced incorporation fees and the incorporation time delay from months to as little as one hour. The program saw business startups and new-firm job formation increase by 17 and 22 percent—a "…statistically significant, economically meaningful…" increase; the affected firms were typically small, owned by less-educated entrepreneurs, and in low-tech sectors (agriculture, construction, retail trade).[45] Municipalities that opened On-the-Spot-Firm shops saw an annual average increase of 4.3 more firms created within each industry.[46]

Through Executive Orders and legislation, the Trump Administration and Congress have reduced the Federal regulatory burden. The JEC Majority believes that these reductions revive economic activity, benefitting all Americans. U.S. States wishing to encourage entrepreneurship may similarly benefit from streamlining and shortening their firm formation process. See Chapter 4 of the *Response* for more on regulation.

High and Complex Tax Burden

High tax rates and compliance costs reduce after tax-profits, which discourages entrepreneurship. During the Obama Administration, some States had marginal individual tax rates in excess of 50 percent.[47] Further, Americans spent 8.9 billion hours filling out tax forms in 2016, costing the economy $409 billion in lost productivity.[48] Tax Foundation President, Scott A. Hodge's testimony at the Committee's October 2017 hearing, *The Startup Slump: Can Tax Reform Help Revive American Entrepreneurship*, included the following recommendation:

> *…[Y]ou should aim to get the tax code out of the way of entrepreneurs by making it simpler, less burdensome, and eliminating its anti-growth biases. Get rid of the success taxes and fix the quirks in the code that punish firms as they grow, and then tax them in a normal fashion when they succeed.*"[49]

Prior to the *Tax Cuts and Jobs Act*, America's Federal tax system deterred business formation in several ways. Many small firms that were structured as pass-through businesses paid the individual income tax rate. That is, their business activity was reported on their 1040 tax form as individual income. In 2013, the top marginal income tax rate rose from 35 percent to 39.6 percent. The *Affordable Care Act* added a 3.8 percent investment income tax that affects owners who are not active in the business, and another penalty for high earners added an effective 1.2 percent, bringing the top effective marginal rate of small businesses to 44.6 percent.[50] Additionally, business owners must pay the employer's portion of payroll taxes to fund Social Security and Medicare, as well as pay any State income tax, which ranges by State from zero to 13.3 percent.

Internationally, over the past few decades, U.S. businesses have lost some competitive advantage. While America's corporate tax rate remained relatively constant, other countries lowered theirs. Entrepreneurs from around the world must choose a country to locate their business. The decision is based on a number of factors, including the corporate tax rate. The United States had the highest corporate tax rate of all industrialized countries in the world at 39 percent (including the 35 percent Federal rate and average State taxes), and was an outlier among competing countries in that it heavily taxes income earned outside its borders.[51] Multinational firms often preferred to headquarter or earn profits in a country such as Ireland instead of the United States because it has one of the lowest corporate tax rates in the world at 12.5 percent; this was previously roughly a third of the U.S. rate.[52] CEA Chairman Hassett testified:

> *…[I]t was not our actions on tax policy that necessarily harmed us, it is our inaction…the rest of the world cut their corporate taxes, and that made their countries more attractive for the location of multinational plants than our country, and we saw the activity move overseas…*[53]

Fortunately, the *Tax Cut and Jobs Act* lowers both individual and corporate tax rates. Harvard University economist Robert J. Barro wrote the following in a January 5, 2018, *Wall Street Journal* op-ed following the Act's passage:

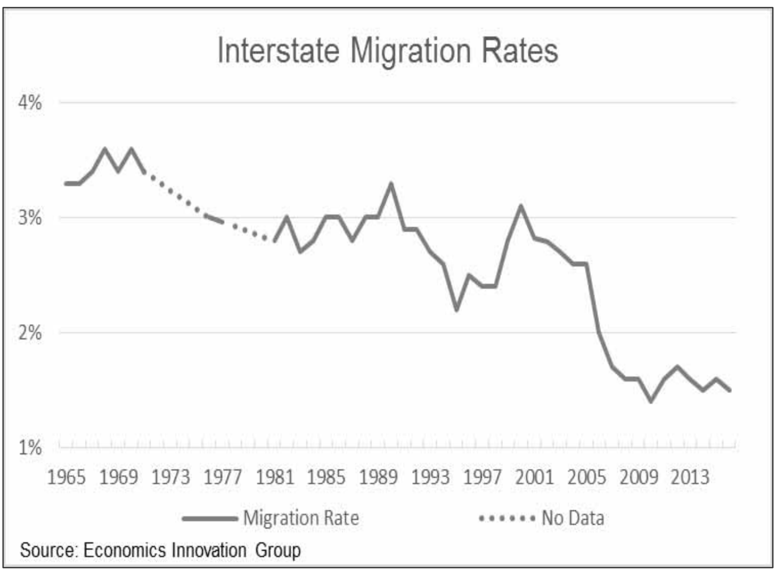
> *…[C]utting income taxes on individuals will power economic growth in the short run, and reforming them for businesses will do the same over the long haul. Together they add up to more investment, increased output and higher wages for millions of Americans.*[54]

While more work needs to be done, the JEC Majority sees the *Tax Cut and Jobs Act* as an important step toward improving the business environment for entrepreneurs. U.S. States should also consider lowering and simplifying income taxes. See Chapter 3 of the *Response* for more on taxes.

Fewer Workers Relocating

Americans have historically relocated for better opportunities by moving to high labor-productivity and high nominal-wage locations. However, in recent years, Americans have been relocating at the lowest rate on record. From 1965-1971, an average of 3.4 percent of the population annually migrated across state lines; from 2010-2016, average interstate relocations fell to 1.6 percent (Figure 1-8).

Figure 1-8



Scholars have identified several contributing factors to the decline in interstate migration:

- Some cities have adopted land-use regulations that limit housing supply, preventing in-migrants.[55]

- Today, regional differences in income are to a greater degree reflected in housing prices—due largely to tight land-use regulation—reducing net-of-housing income and relocation benefits.[56]
- Since most occupational licenses do not transfer across states lines, the relicensing cost of time and money acts as a deterrent to those seeking to start businesses in other states.[57]
- Some homeowners have experienced so-called “house lock” from underwater mortgages—mortgages that exceed home market value—making it financially difficult to sell their home to relocate.[58]
- Interstate migration is inversely related to age; thus, as Americans age, migration falls.[59]

There are many reasons Americans are unable to relocate at past rates, including the unintended consequence of government policies—also discussed in the *Report*.[60] Yet whatever the reason, immobility is a barrier to better employment opportunities for workers and better markets for producers, which decreases labor market churn and dynamism, constrains entrepreneurship, and therefore reduces productivity and GDP growth. The JEC Majority believes that Federal, State, and local government policies that hinder relocation should be removed or reformed in order to help America reach its full potential.

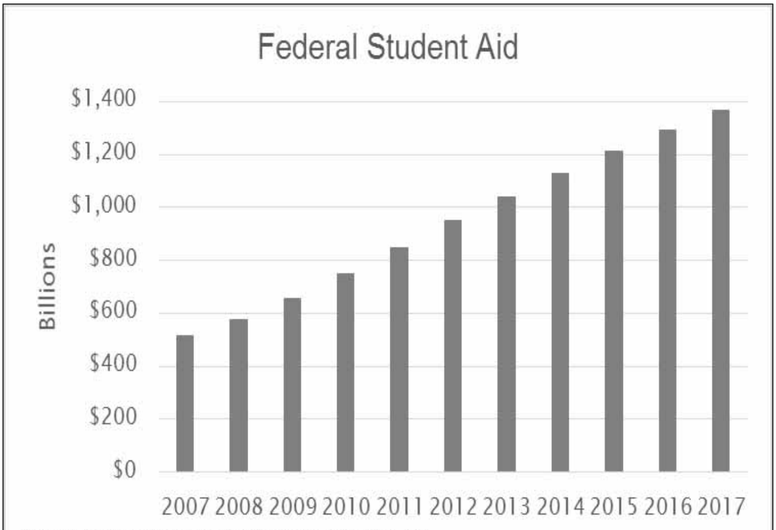
Higher Education and Rising Student Debt

Since the end of World War II, the government has promoted and supported higher education. So-called white-collar work often could benefit from a higher level of general education beyond high school. A college degree also signaled desirable employee characteristics to employers. Now that about one-third of

American adults have a bachelor's degree, there are signs that investment in a college education may be encountering diminishing returns, as college graduates face difficulty finding jobs in their field of study.[61] Inducing even more students to attend college may mean that fewer are well-suited or motivated to perform and fewer will find careers whose earnings provide an adequate return on a college investment. According to Dr. Harrison, President of Columbus State Community College in Columbus, Ohio, the demand for associate degree graduates grew three times the rate of that for college graduates, and an overwhelming majority of jobs will require technical skills or associate degree level preparation, while only 33 percent of jobs will require a bachelor's degree.[62] He testified at the JEC July 2017 hearing, *A Record Six Million U.S. Job Vacancies: Reasons and Remedies* that some college graduates return to community college to earn certifications in marketable skills.

For decades, college and university tuition has been rapidly rising, and from 2007-2017 Federal student aid has increased 165 percent (Figure 1-9). Purdue University President, Mitchell E. Daniels testified in 2015 that tuition prices have increased by "…225 percent over the past 30 years, after inflation."[63] The 2017 *Response* explains that easy access of subsidized credit to nearly all college students allows colleges and universities to easily raise tuition.[64] This phenomenon was famously presented in a 1987 *New York Times* op-ed titled, "Our Greedy Colleges," by William Bennett, then-Secretary of Education.[65] In the article he stated, "If anything, increases in financial aid in recent years have enabled colleges and universities blithely to raise their tuitions, confident that Federal loan subsidies would help cushion the increase."

Figure 1-9



Source: Department of Education Federal Student Aid

Additionally, some Federal student loans are structured such that a substantial portion need not be repaid, incentivizing student debt accumulation. Examples from the 2017 *Response* show that Obama Administration loan policies cap monthly loan payments at 10 or 15 percent of discretionary income; following 20 years of payments, the borrowers outstanding debt is forgiven and the balance due is transferred to taxpayers.[66] These Obama Administrations policies incentivize students to maximize debt—borrowing irresponsibly and exacerbating the problem of high student debt—leaving taxpayers responsible for a significant portion of the debt.

The implication of a high student debt level at the time of graduation is a decline in business formation. Research shows that there is a "…significant and economically meaningful negative correlation between changes in student loan debt and net business formation…" The correlation is strongest for small firms—those with one to four employees.[67]

The JEC Majority believes that higher education financing reform will benefit students, taxpayers, and strengthen America's economy. See Chapter 5 of the *Response* for a more detailed discussion of education policies.

Other Contributing Factors

The rapid expansion of drug abuse is also keeping some people out of the labor force. Deteriorating labor market opportunities that lead to worsening working and personal outcomes, as well as the easy access to opioids, fuels drug abuse.[68] More than a year ago, the *New York Times* published "Hiring Hurdle: Finding Workers Who Can Pass a Drug Test." Employers across the country are having difficulty finding applicants who can pass a drug test.[69] See Chapter 8 of the *Response* for a more detailed discussion of the opioid crisis.

Artificial trade barriers also dampen growth. Digital trade has been growing rapidly in recent years and America is leading the way. See Chapter 9 of the *Response* for more on blockchain. However, challenges to the smooth international flow of goods and funds may prevent trade from reaching its most efficient level. George Mason University's Daniel Griswold stated at the Committee's September 2017 hearing, *The Dynamic Gains from Free Digital Trade*:

> *Now despite the dynamic growth and benefits of digital trade, significant barriers remain to prevent Americans from reaping its full advantages.*[70]

America's generous social safety net may also be keeping some people out of the workforce. University of Chicago economist

Casey Mulligan writes in *The Redistribution Recession* that subsidies to low-income households almost tripled after 2007, reducing the reward to work by about $5,600 from 2007-2009.[71] Manhattan Institute's, Diana Furchtgott-Roth testified at the Committee's July 2017 hearing, *A Record Six Million U.S. Job Vacancies: Reasons and Remedies* that America's labor force participation rate has been falling in part due to the expansion of Government benefits, including expanded eligibility for disability insurance and food stamps.[72] Hoover Institute's Timothy Kane testified at the Committee's April 2017 hearing, *The Decline of Economic Opportunity in the United States: Causes and Consequences* that "…maybe the safety net is a little bit too safe, the paternalism is too comfortable."[73]

Dr. Lazear's submitted testimony refers to research showing that an aging population decreases the employment rate and business formation across countries.[74] Obama Administration economists invoke the retirement of the Baby Boom generation as a major reason for the weak economic recovery, but policies of the Obama Administration did nothing to counteract the economic growth effects of less favorable demographics. That challenge should be an impetus to tax and regulate less rather than more.

CONCLUSION

Established entrepreneurs like Bill Gates (Microsoft) or Jeff Bezos (Amazon) may not be deterred by Government regulations and taxes, but many who would like to open a restaurant, barbershop, or lawn care company are. Similarly, professionals such as doctors, dentists, and lawyers may opt to work for hospitals or corporations rather than start their own practice if government policies makes doing so too onerous. These are the types of firms that employ four or fewer people, and for them, regulation, taxes, relocation costs, high student debt, and other mundane obstacles matter very much. When their owners give up, the economy forgoes value and job creation.

Efforts by the Trump Administration and Congress to reduce burdensome regulation and reform the Federal tax code are important steps toward reviving business startups, fueling economic growth, and lifting living standards for hard-working Americans.

Recommendations

The Committee's Majority encourages the Trump Administration and the Congress to continue working together to expand the economic liberty that fuels America's growth engine at the Federal level, and encourages State and local governments to follow suit:

- Reestablish America as the premier place for private investment and entrepreneurship;
- Raise the labor force participation rate of the prime working-age population;
- Focus the education system on developing marketable skills and reform the financing higher education; and
- Recognize the aging population as a challenge to economic growth and remove unnecessary hindrances to labor force growth and business expansion

CHAPTER 2: MACROECONOMIC OUTLOOK

- The *Report* provides a thorough assessment of the state of the economy and an analysis of the Administration's projected growth effects.
- The Administration anticipates three percent average annual growth for the next ten years with its agenda implemented, compared to a much more subdued 2.2 without its reforms.
- This *Response* chapter reviews alternative explanations to the common narratives about the slow economic recovery, and provides an encouraging assessment of America's short- and long-terms economic growth prospects.

OVERVIEW

From 2008-2016, inflation adjusted (real) GDP growth averaged only 1.3 percent compared to 2.9 percent from 1990-2007. The inflation rate slowed to a 1.5 percent average from 2008-2016, down from 2.3 percent from 1990-2007.[75] Slow growth and unusually low inflation have been described as the "new normal."

Supporters of this view argue that lower productivity growth and labor force participation rates are inevitable, and they believe tax and regulatory policies cannot improve the slump. Further, many of them point to a low headline unemployment rate and an output gap some estimate has closed to assert that the recently enacted *Tax Cut and Jobs Act* (TCJA) could cause the economy to "overheat" by overstimulating demand.

Conversely, the Majority members of the Committee contend that government policies artificially constrained economic potential after the 2008-2009 recession, and concur with CEA's endorsement of "an agenda for returning the American economy to its full growth potential."[76]

The first section of this chapter explores factors that constrained the demand side of the economy, and the second section examines factors that constrained the supply side. The former discusses unusually low inflation rates and the latter below-average economic growth rates—suggesting that the U.S. economy has room to grow faster. The next section assesses recent economic developments, and the outlook for 2018 and beyond. The final section contains a summary, conclusions, and recommendations for policymakers going forward.

Because monetary policy plays an important role in affecting the economic outlook, the Committee holds an annual hearing with the Federal Reserve Chair. Therefore, the *Response* discusses monetary policy issues at greater length than the *Report.* The *Response* does not opine on the efficacy of the Fed's two percent inflation target but offers some alternative views for why inflation has chronically fallen short of the target and how this might affect the economic outlook.

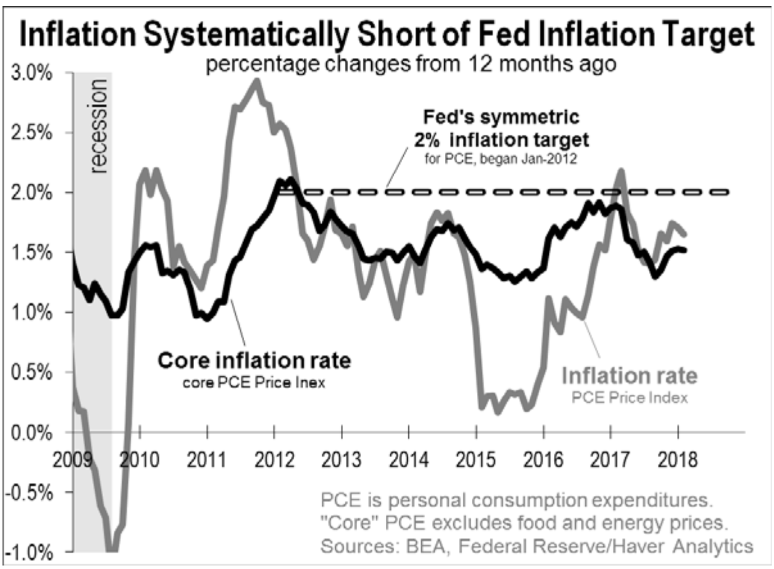
DEMAND-SIDE CONSTRAINTS

Since 2008, inflation has consistently undershot the Fed's two percent symmetric inflation target as Figure 2-1 shows. "Symmetric" signifies that two percent is an average and not a ceiling; thus the Fed will tolerate inflation above and below its two percent target. In what follows, it is important to distinguish between the Fed's inflation target and its Federal (fed) funds rate target. Changing the latter (an instrument) is a means to achieving the former (an objective).

As the *Report* notes, "Inflation is below or barely at target levels in most advanced economies, despite a decade's worth of accommodative, unconventional monetary policy measures."[77]

The *Report*[78] and Federal Reserve officials[79] find low inflation rates "puzzling," especially given the low unemployment rates. The "Phillips Curve" theory of price inflation posits that low unemployment rates drive up wages, which leads firms to raise prices to offset rising costs. The Committee Majority explores alternative explanations for below-target inflation. Notably, monetary policy may not have been as "accommodative" as commonly perceived.

Figure 2-1



Credit Policy, Not Monetary Policy

"Monetary policy easing" is conventionally characterized by Fed reductions in its interest rate target implemented by the purchase of short-term Treasury securities with newly-created bank reserves, colloquially known as "printing money." If banks lend more funds to consumers and businesses as a result, this will stimulate nominal spending (i.e., "aggregate demand"),[80] which can increase employment, output, and inflation in the short run, but only drives inflation higher in the long run.

While such an operation leaves the market and entities such as Government-sponsored entities (GSEs) (e.g., Fannie Mae and Freddie Mac) to determine where credit should be allocated, unconventional "credit easing policies" channel credit toward particular market segments and place financial assets other than the traditional short-term Treasury bills on the Fed's balance sheet.

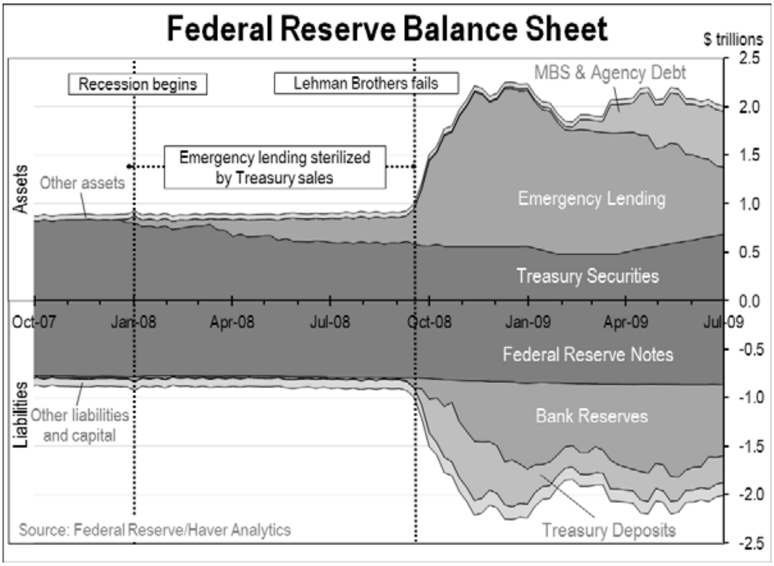
In September 2007, subprime mortgage market stress and concern over its implications for the economy compelled the Fed to lower its target for the fed funds rate—the short-term interest rate at which banks and a few other financial institutions lend funds overnight—from 5.25 percent to 4.75 percent.[81] The Fed further lowered its fed funds rate target at varying intervals and degrees until settling at two percent on April 30, 2008, where it remained until October 8, 2008. The Fed also embarked on "credit easing policy" when it introduced an emergency lending facility[82] designed to support private financial intermediation (i.e., borrowing and lending). Federal Reserve Bank of Richmond senior economist Robert Hetzel succinctly described the unusual credit policy:

> *Policies to stimulate aggregate demand by augmenting financial intermediation provided an extraordinary experiment with credit policy as opposed to monetary policy.*[83]

The Fed bought financial instruments from particular credit markets segments to direct liquidity toward them, which had the effect of injecting reserves into the banking system. This action alone would incidentally ease monetary conditions, but the Fed then sold Treasury securities from its portfolio to withdraw those reserves from the banking system (called "sterilization"), thereby restricting nominal spending growth. Figure 2-2 shows that before 2008, the Fed's balance sheet consisted predominantly of Treasury securities (generally of shorter maturities) and Federal Reserve

Notes (i.e., paper money), and that bank reserves were a miniscule part of the Fed's liabilities.

Figure 2-2



As Figure 2-2 shows, during the first three quarters of 2008 the composition of Fed assets changed such that emergency lending grew, while holdings of Treasury securities shrank, leaving the size of the Fed's balance sheet nearly unchanged.

Furthermore, despite the low level of the Fed's fed funds rate target, monetary policy arguably remained relatively tight, as monetary economist Scott Sumner notes in the context of a 2003 Ben Bernanke speech:

> *Bernanke (2003) was also skeptical of the claim that low interest rates represent easy money:*
>
> > *[Bernanke:] As emphasized by [Milton] Friedman… nominal interest rates are not good indicators of the stance of monetary policy…The real short-term interest rate…*

> *is also imperfect…Ultimately, it appears, one can check to see if an economy has a stable monetary background only by looking at macroeconomic indicators such as nominal GDP growth and inflation.*
>
> *Ironically, by this criterion, monetary policy during the 2008-13 was the tightest since Herbert Hoover was President.*[84]

A Subtle Change to Fed Policy Implementation

During the week of September 15, 2008, investment bank Lehman Brothers failed, followed by a subsequent run on money market mutual funds.[85] The Fed's emergency lending spiked with a corresponding injection of reserves (Figure 2-3), for which the Fed was unwilling to sell more of its Treasury security portfolio to sterilize.

At the Fed's behest, the Treasury Department sold "special treasury bills" to the public and deposited the proceeds with the Fed.[86] As purchase of the treasury bills would require buyers to transfer funds from their banks to the Treasury Department, this drained reserves from the banking system. The Treasury Department, by depositing the proceeds with the Fed, was effectively removing dollars from circulation, sterilizing the Fed's burgeoning emergency lending programs and helping to keep the fed funds rate from trading below the Fed's target. The Fed was attempting to keep interest rates from falling out of greater concern for inflation rising than for the deteriorating economic outlook.[87]

Despite these efforts the fed funds rate still fell below the Fed's target. The Treasury Department, approaching the debt ceiling, grew reluctant to increase its deposits with the Fed. This prompted the Fed to ask Congress for authority[88] to pay interest on excess reserves (IOER)[89] to incentivize banks to deposit reserves at the Fed and prevent the fed funds rate from falling below the Fed's target (see Appendix 2-1 for the original impetus behind IOER).

As then Federal Reserve Chairman Ben Bernanke wrote in his memoirs:

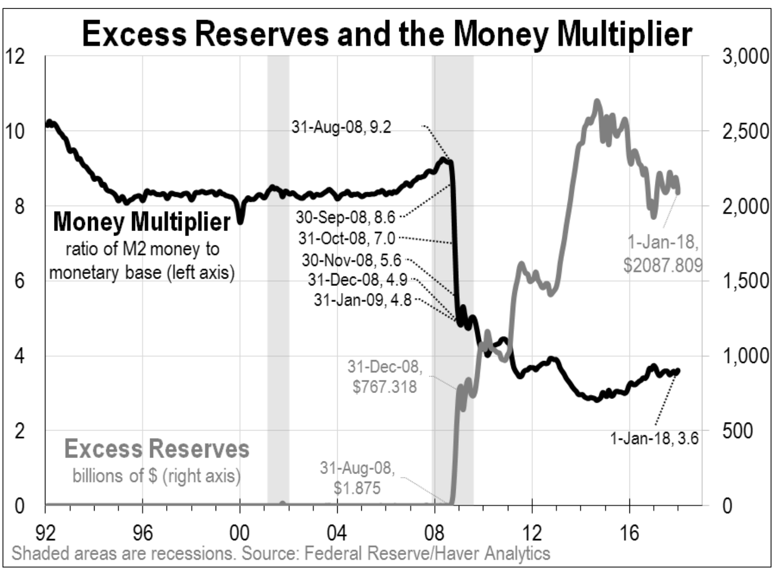
> *When banks have lots of reserves, they have less need to borrow from each other, which pushes down the interest rate on that borrowing—the federal funds rate.*
>
> *Until this point we had been selling Treasury securities we owned to offset the effect of our [emergency] lending on reserves (the process called sterilization). But as our lending increased, that stopgap response would at some point no longer be possible because we would run out of Treasuries to sell. At that point, without legislative action, we would be forced to either limit the size of our interventions… or lose the ability to control the federal funds rate, the main instrument of monetary policy… [By] setting the interest rate we paid on reserves high enough, we could prevent the federal funds rate from falling too low, no matter how much [emergency] lending we did.*[90]

Thus, by paying IOER at rates above the fed funds rate, the Federal Reserve could expand its balance sheet size to ease credit conditions for selected market segments. At the same time, it could keep broader monetary conditions from easing by encouraging banks to hold newly created funds as excess reserves through the payment of IOER.

Why Emergency Lending Programs and "Quantitative Easing" Were Not Inflationary

To help overcome the recession and the ensuing weak recovery, the Fed undertook three large-scale asset purchase (LSAP) programs, more commonly known as "quantitative easing" or "QE," between November 2008 and October 2014, which involved the Fed purchasing longer-term Treasury securities and GSE-issued mortgage-backed securities (MBS) rather than its normal purchases of short-term Treasury securities.[91] This led to a substantial increases in bank reserves, which is shown in Figure 2-3, along with the "money multiplier." The latter measures how increases in reserves and currency by the Fed multiply into broader forms of money (e.g., checking and savings accounts), which propel nominal spending.

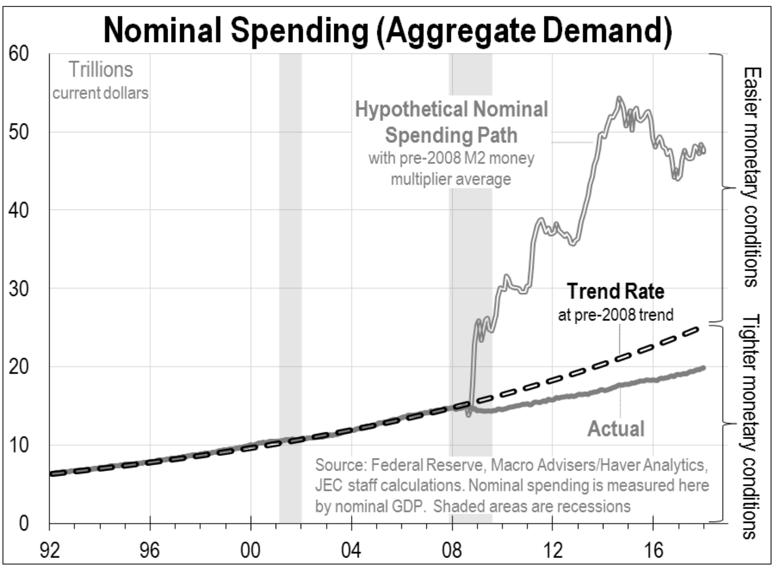
Figure 2-3



Had the money multiplier remained equal to its pre-recession level, then given the Fed's increases in reserves from its LSAPs, nominal spending would have been nearly $50 trillion at the end of 2017 instead of just under $20 trillion, and most certainly would have been inflationary. However, LSAPs did not even result in nominal spending returning to its pre-2008 trend, as shown in Figure 2-4.

Given that inflation remained below the Fed's two percent inflation target, monetary conditions have been relatively tight compared to the period preceding the 2008-2009 recession when measured by outcomes rather than instruments (the low fed funds rate target and an enlarged balance sheet).

Figure 2-4



The Fed was clear from the outset that it would undo its LSAPs eventually[92] (i.e., remove from circulation the money it created in the future). The temporary nature of the policy discouraged banks from issuing more long-term loans. Alternatively, as economist Tim Duy pointed out during the inception of the Fed's first LSAP program:

> *Pay close attention to Bernanke's insistence that the Fed's liquidity programs are intended to be unwound. If policymakers truly intend a policy of quantitative easing to boost inflation expectations, these are exactly the wrong words to say. Any successful policy of quantitative easing would depend upon a credible commitment to a permanent increase in the money supply. Bernanke is making the opposite commitment—a commitment to contract the money supply in the future.*[93]

Sumner (2010),[94] Beckworth (2017),[95] and Krugman (2018)[96] observe similar issues.

Furthermore as Sumner (2010),[97] Feldstein (2013),[98] Beckworth (2017),[99] Selgin (2017),[100] and Ireland (2018)[101] note, payment of IOER at rates competitive with market rates led banks to hoard the reserve, which contributed at least partially to the collapse of the money multiplier (Figure 2-3).

Regarding IOER, former Federal Reserve Vice Chairman Alan Blinder advised in 2012:

> *I've been urging on the Fed for more than two years: Lower the interest rate paid on excess reserves. The basic idea is simple. If the Fed reduces the reward for holding excess reserves, banks will hold less of them—which means they will have to find something else to do with the money, such as lending it out or putting it in the capital markets.*[102]

He later observed in 2013:

> *If the Fed charged banks rather than paid them, wouldn't bankers shun excess reserves? Yes, and that's precisely the point. Excess reserves sitting idle in banks' accounts at the Fed do nothing to boost the economy. We want banks to use the money.*[103]

In the same article, he elaborated:

> *The financial crisis short-circuited this process. As greed gave way to fear, bankers decided to store trillions of dollars safely at the Fed rather than lend them out. High-powered money [reserves and currency] became powerless money.*
>
> *The Fed compounded the problem in October 2008 by starting to pay interest on reserves. And these days, the 25-basis-point IOER looks pretty good compared with most short-term money rates. If banks were charged rather than paid 25 basis points, they would find holding excess reserves a lot less attractive. As some of this excess central-bank money became 'high-powered' [i.e., propelled nominal spending growth through the money multiplier] again, the Fed would want less of it. So its balance sheet could shrink.*

The payment of IOER and the transitory nature of LSAPs acting to neutralize the monetary policy transmission mechanism explains, at least partially, the consistent undershooting of the Fed's two percent inflation target. The Fed was effectively pushing the gas pedal and the brake pedal at the same time.

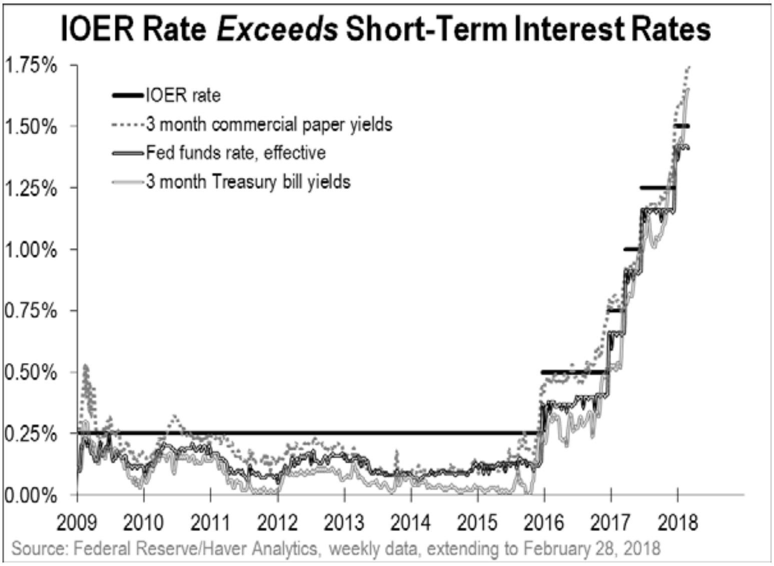
Legislative Issues Related to IOER

The law specifies that IOER be paid at "rates *not* to exceed the general level of short-term interest rates."[104] However, from 2009-2017, the IOER rate exceeded the effective fed funds rate 100 percent of the time, the yield on the 3-month Treasury bills 97.2 percent of the time, and the yield on 3-month nonfinancial commercial paper 82.1 percent of the time (Figure 2-5). The Fed is including its own discount rate (the primary credit rate) in the general level of short-term interest rates to demonstrate compliance with the law.[105]

In connection to IOER, Representative Jeb Hensarling, Chairman of the House Financial Services Committee, stated:

> *[It] is critical that the Fed stays in their lane. Interest on reserves – especially excess reserves – is not only fueling a much more improvisational monetary policy, but it has fueled a distortionary balance sheet that has clearly allowed the Fed into credit allocation policy where it does not have business.*
>
> *Credit policies are the purview of Congress, not the Fed. When Congress granted the Fed the power to pay interest on reserves, it was never contemplated or articulated that IOER might be used to supplant FOMC. If the Fed continues to do so, I fear its independence could be eroded.*[106]

Figure 2-5



Views Cautioning on Use of Unconventional Monetary Tools

Noting that the large quantity of reserves produced by the Fed contributed to the fed funds rate trading at or below the IOER rate, John Taylor of Stanford University's Hoover Institution said:

> *[W]e would be better off with a corridor or band with a lower interest rate on deposits [IOER] at the bottom of the band, a higher interest rate on borrowing from the Fed [the discount rate] at the top of the band, and most important, a market-determined interest rate above the floor and below the ceiling… We want to create a connect, not a disconnect, between the interest rate that the Fed sets and the amount of reserves or the amount of money that's in the system. Because the Fed is responsible for the reserves and money, that connection is important. Without that connection,*

> *you raise the chances of the Fed being a multipurpose institution.*[107]

The preceding observations and alternative views merit consideration. In particular, Hetzel (2009) states:

> *Restrictive monetary policy rather than the deleveraging in financial markets that had begun in August 2007 offers a more direct explanation of the intensification of the recession that began in the summer of 2008.*[108]

Furthermore, the Fed's new operating procedures (a large balance sheet and IOER) may not be conducive to maintaining full employment and price stability, as Taylor (2009) noted:

> *[P]aying interest on excess reserves gives the Fed an additional tool. However, this tool enables the Fed to be more like a discretionary multipurpose institution rather than the rule-like limited purpose institution that has delivered good policy in the past and that can deliver good policy in the future.*[109]

Also, future Fed policy may be constrained in some ways by past policy actions, which may not be conducive toward maintaining full employment and price stability. As Bill Nelson, former deputy director of the Federal Reserve Board's Division of Monetary Affairs and an attendee of FOMC meetings, noted of the Fed's internal debate over its third LSAP program:

> *It is worth keeping in mind that the Fed didn't make an explicit decision to keep its balance sheet so large for so long because doing so would support efficient monetary policy [e.g., the one that maintains full employment and price stability].*

> *Instead, the Fed fell into its current situation because the original plan to drain excess reserves and sell assets became untenable once people realised selling such a large portfolio so quickly would generate large losses.*[110]

SUPPLY-SIDE CONSTRAINTS

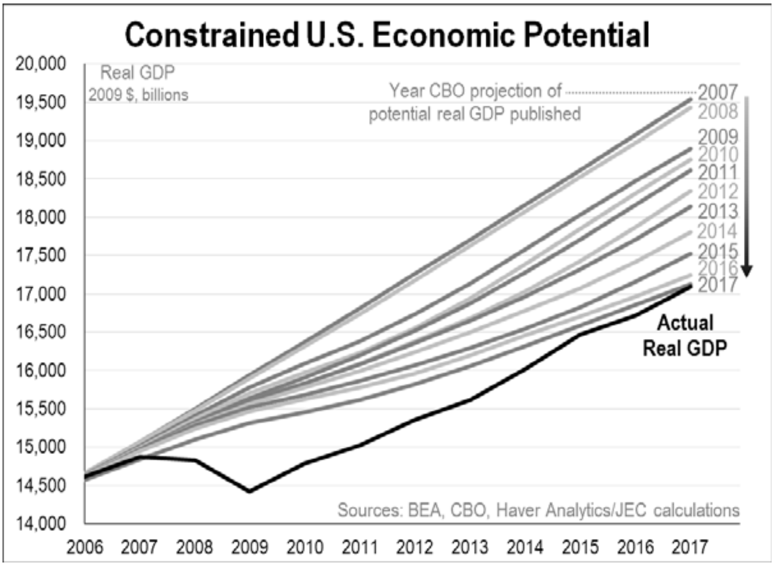
Reasons for the U.S. Economy's Sluggish Growth

Larry Summers, former National Economic Council Chairman during the Obama Administration, succinctly described the economy's performance since the 2008-2009 recession:

> *[E]ssentially all of the convergence between the economy's level of output and its potential has been achieved not through the economy's growth, but through downward revisions in its potential.*[111]

Figure 2-6 shows how real GDP has performed relative to projections of potential real GDP over time. In August 2007, CBO projected that potential real GDP—the maximum sustainable level of output an economy can produce—would be nearly $2.6 trillion more than it actually was by 2017's end.

Figure 2-6



The severity of the 2008-2009 recession has been offered as an excuse for the U.S. economy's failure to recover. However, as Chapter 1 of this *Response* and the *Report* points out, this claim does not square with experience.[112]

Research by Nobel laureate economist Milton Friedman concluded that the more severe an economic contraction was, the sharper the recovery would be (Friedman 1988).[113] Economists Robert Barro and Tao Jin examined 185 distinct macroeconomic crises (including ones associated with severe financial crises, such as during the Great Depression).[114] Barro succinctly summarized their findings in a 2016 *Wall Street Journal* op-ed:

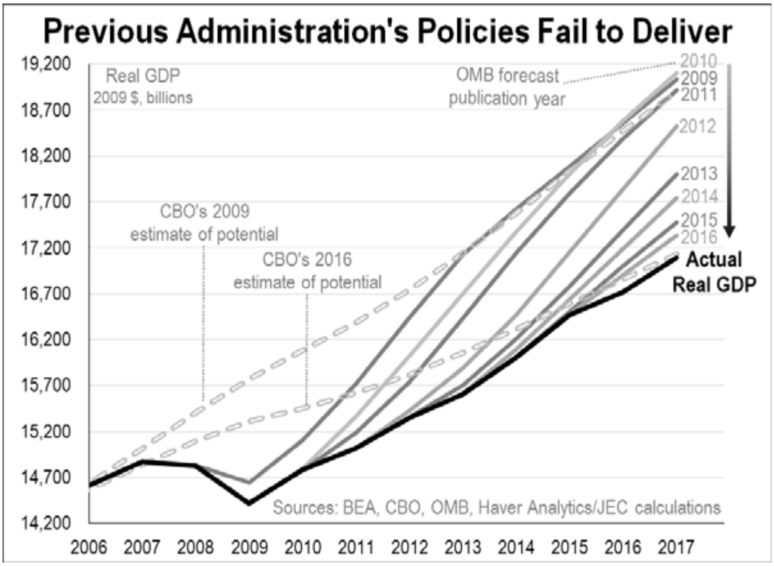
> *On average, during a recovery, an economy recoups about half the GDP lost during the downturn. The recovery is typically quick, with an average duration around two years. For example, a 4% decline in per capita GDP during a contraction predicts subsequent recovery of 2%,*

> *implying 1% per year higher growth than normal during the recovery. Hence, the growth rate of U.S. per capita GDP from 2009 to 2011 should have been around 3% per year, rather than the 1.5% that materialized.*
>
> *Arguing that the recovery has been weak because the downturn was severe or coincided with a major financial crisis conflicts with the evidence, which shows that a larger decline predicts a stronger recovery. Moreover, many of the biggest downturns featured financial crises. For example, the U.S. per capita GDP growth rate from 1933-40 was 6.5% per year, the highest of any peacetime interval of several years, despite the 1937 recession. This strong recovery followed the cumulative decline in the level of per capita GDP by around 29% from 1929-33 during the Great Depression.*[115]

In the post-World War II era, the second most severe U.S. recession was the double-dip recession of 1980 and 1981-82, in which the unemployment rate reached a record high of 10.8 percent. The Reagan Administration's response was to streamline regulation, reform the tax code, and advocate sound monetary policy. In the four quarters after the recession's trough in the fourth quarter of 1982, real GDP growth registered annualized growth rates of 5.3, 9.4, 8.1, and 8.5 percent.[116]

President Obama's Office of Management and Budget (OMB) initially also expected a strong recovery from the recession (Figure 2-7), consistent with the empirical research cited above. But a robust recovery never materialized, and its expectations were gradually revised downward.

Figure 2-7

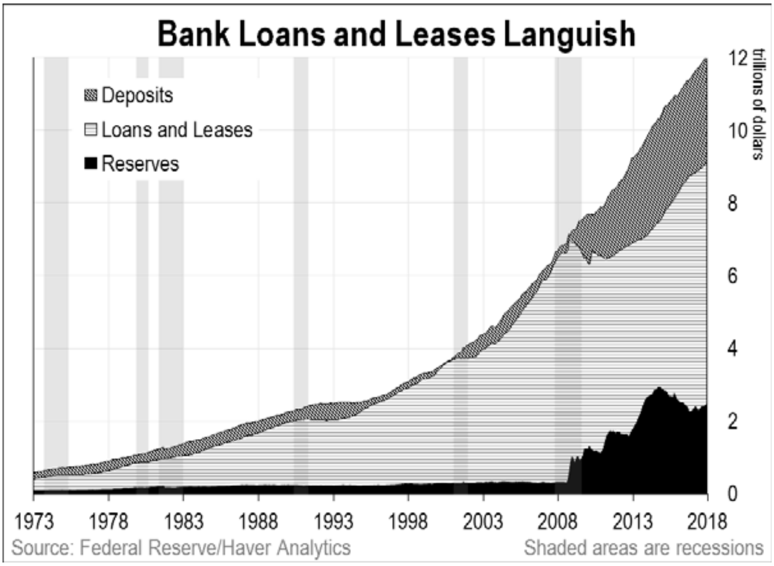


The subsequent sections show that abrupt breaks from trend occurred in key determinants of economic growth such as labor force participation rates, capital investment, and labor productivity. This suggest a failure of policy to promote recovery.

"Quantitative Easing" Increased the Government's Footprint in Capital Allocation

Prior to 2008, nearly every dollar of deposits translated into a dollar of private bank loans and leases. Although lending did rebound in 2008's aftermath, a sizeable portion of bank deposits remained in reserve at the Fed as shown in Figure 2-8. As these reserves emerged from the large-scale Fed purchases of Treasury securities and GSE-issued MBS, the Fed became responsible for allocating a more sizeable portion of private savings (as measured by deposits banks accepted from their customers). Private banks have an incentive to allocate savings to their most productive uses. The shift in responsibility for this allocation toward the less efficient Government sector may have led to reduced economic potential[117] as well as financial imbalances (i.e. asset price bubbles).[118]

Figure 2-8



Workforce Participation Adversely Affecting Employment

CBO's January 2007 projection of potential real GDP for 2007-2017 had accounted for the aging of the population. CBO reported that the average growth rate of the potential labor force would slow from its 2002-2006 average of 1.1 percent growth per year to 0.8 percent for 2007-2012 and 0.5 percent for 2013-2017.[119] Thus, an aging population does not explain CBO's continual downward adjustment of potential GDP since that was foreseeable in 2007.

Figure 2-9 illustrates that the decline in labor force participation rates was substantially more than what the Bureau of Labor Statistics (BLS) had anticipated.[120] Furthermore, a notable decline occurred among the prime working-age population (those ages 25 to 54).

Figure 2-9

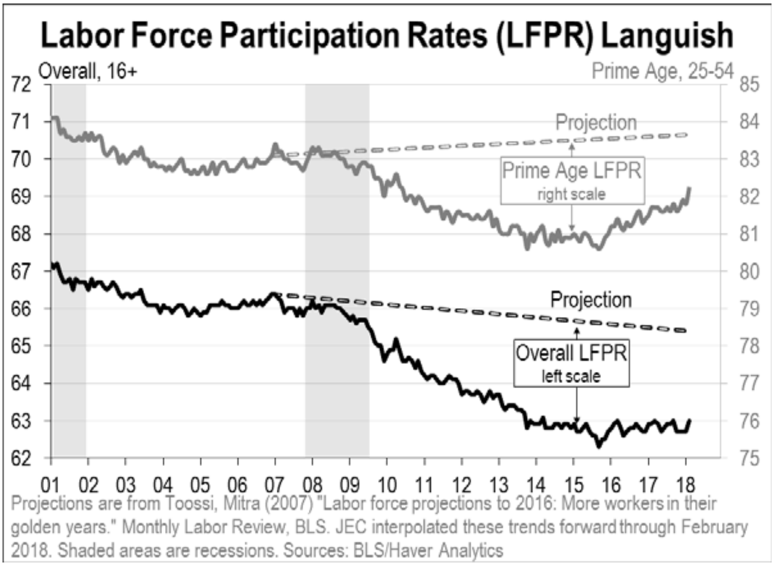
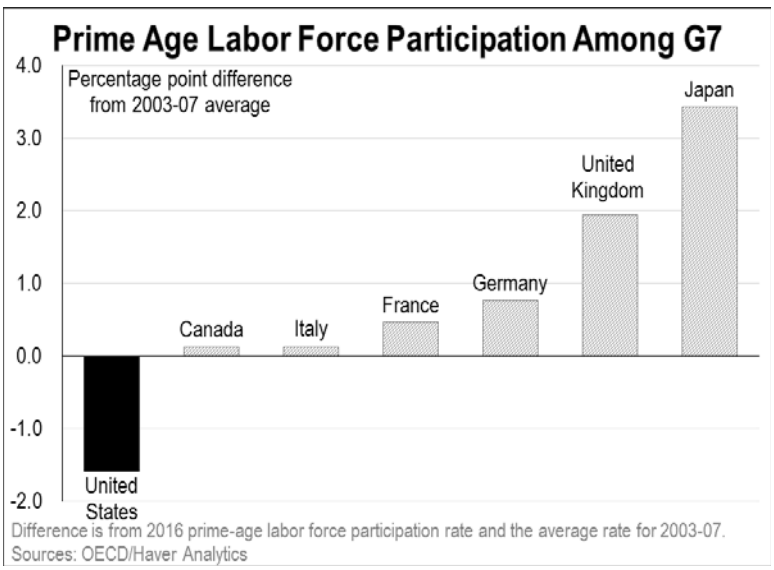


Figure 2-10

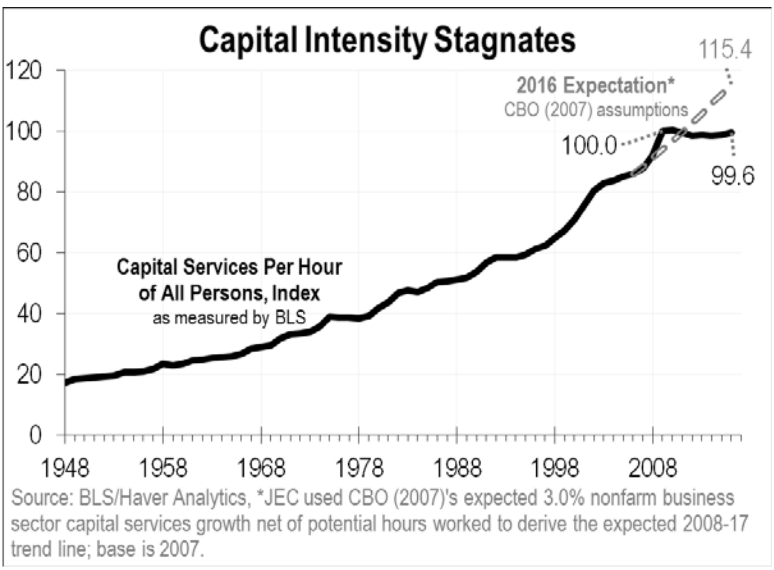


Additionally, the United States was alone in experiencing a decline in prime-age labor force participation rates among the G7 member nations, as Figure 2-10 shows.

Capital Investment Stagnation and the Decline of the Natural Rate of Interest

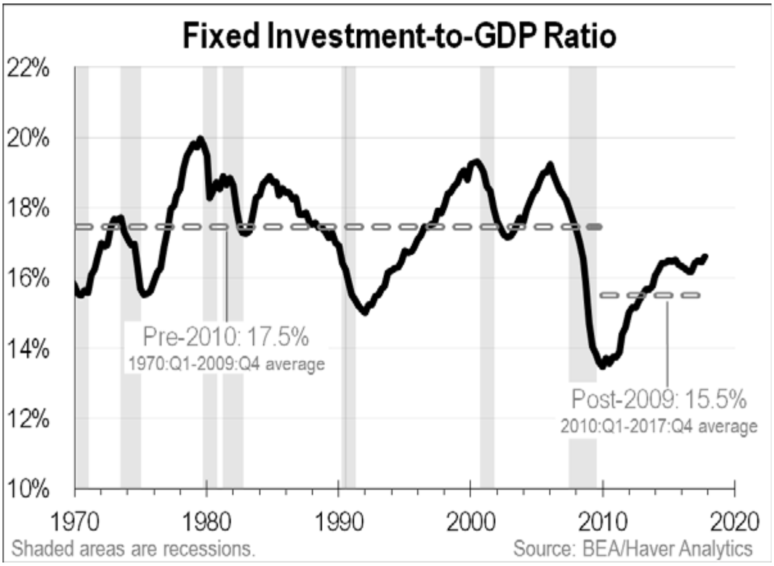
Capital intensity, also known as "capital deepening," measures the quantity of tools, equipment, and machinery available per hour of labor worked. As of 2016, it was over 15 percent lower than what CBO had projected in 2007 (Figure 2-11). It also indicates that workers have slightly less capital at their disposal in 2017 than they did in 2009. Capital deepening has been the worst in the series' history, which extends back to 1948.

Figure 2-11



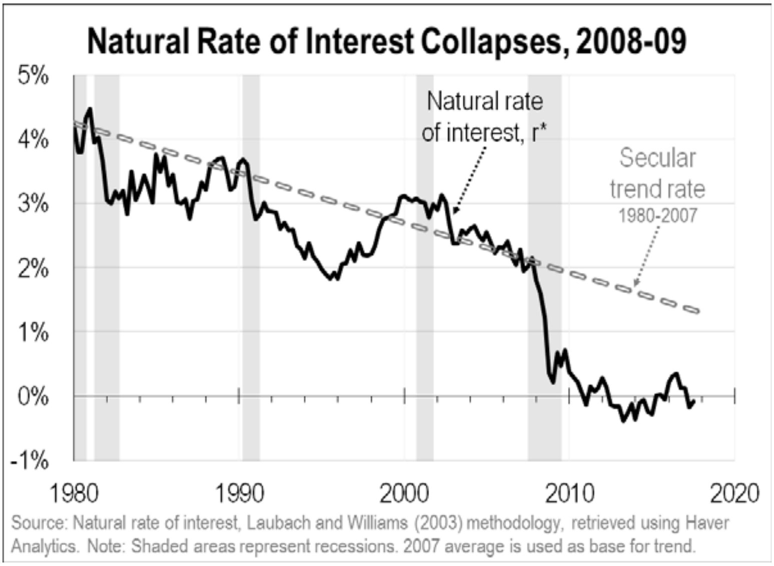
The reduction of capital intensity corresponds with a sharp decline in business capital investment in proportion to GDP after the 2008-2009 recession. Figure 2-12 shows private-sector fixed investment ("fixed" investment excludes changes in business inventories).

Figure 2-12



The reduction in business investment contributed to a reduced "demand for loanable funds" to finance capital accumulation, and a lower natural rate of interest (i.e., the rate consistent with a closed output gap, full employment, and stable prices). A frequently cited methodology for estimating the natural rate of interest by Laubach and Williams (2003)[121] shows a downward trend for some time, which has been interpreted as secular stagnation, beginning to set in well before the recession. However, a sharp break occurred during the 2008-2009 recession as Figure 2-13 illustrates, and its failure to revert to trend implies a cause other than long-developing "secular stagnation."

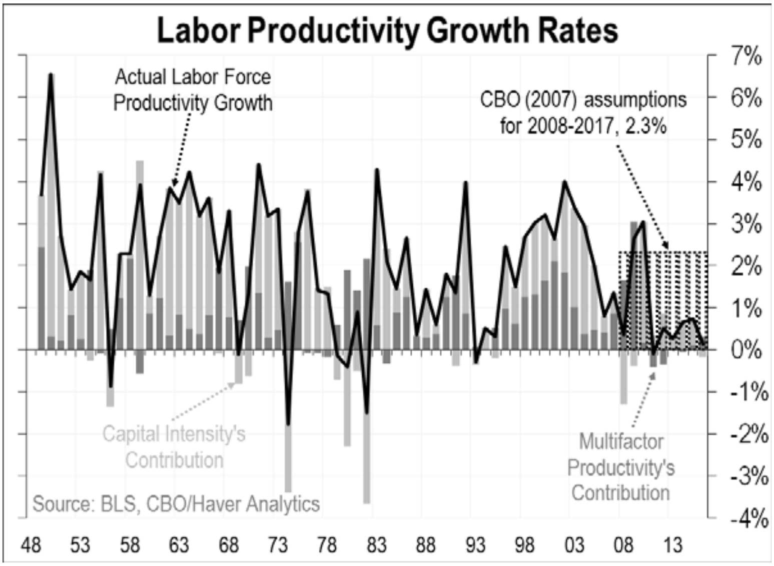
Figure 2-13



Meager Productivity Growth

Between 1994-2004 labor productivity growth averaged 2.6 percent per year. From 2005-2008 its average fell to 1.3 percent and remained low. The slowdown in labor productivity since 2004 might suggest that a "new normal" had begun years before the 2008-2009 recession (Figure 2-14).

Figure 2-14



However, research by Guvenen et al (2017)[122] finds profit shifting by firms—a consequence of the U.S. business tax system becoming increasingly less competitive internationally as discussed in Chapter 3—caused measurement issues for labor productivity growth. Adjusting for the mismeasurement, they find that labor productivity growth averaged 2.7, 1.6, and 1.3 percent in the 1994-2004, 2005-2008, and 2009-2017 periods, compared with unadjusted values of 2.6, 1.3, and 1.3 percent, respectively (top three rows of Table 2-1).

Accounting for the mismeasurement reveals a break in the average between the 2005-2008 and 2009-2017 periods. Furthermore, when the volatile values during the recession from 2008 to 2010 are excluded, an even sharper break in labor productivity growth appears, namely from an unadjusted 0.8 between 2005-2008 and 2009-2017 to an adjusted 1.1 percentage point decline (bottom three rows of Table 2-1). Such an abrupt break suggests policy choices after the 2008-2009 recession kept the U.S. economy from recovering its full potential.

Table 2-1

	A	B	C	D	E
1	Period	1994-2004	2005-2008	2009-2017	Break between C and D
2	As Reported	2.6%	1.3%	1.3%	-0.1%
3	**Adjusted**	**2.7%**	**1.6%**	**1.3%**	**-0.3%**
4	Period	1994-2004 (ex. 2001, 2002)	2005-2008 (ex. 2008)	2009-2017 (ex. 2009, 2010)	Break between C and D
5	As Reported	2.5%	1.5%	0.7%	-0.8%
6	**Adjusted**	**2.6%**	**1.8%**	**0.7%**	**-1.1%**

Figures may not sum due to rounding.

Figure 2-15

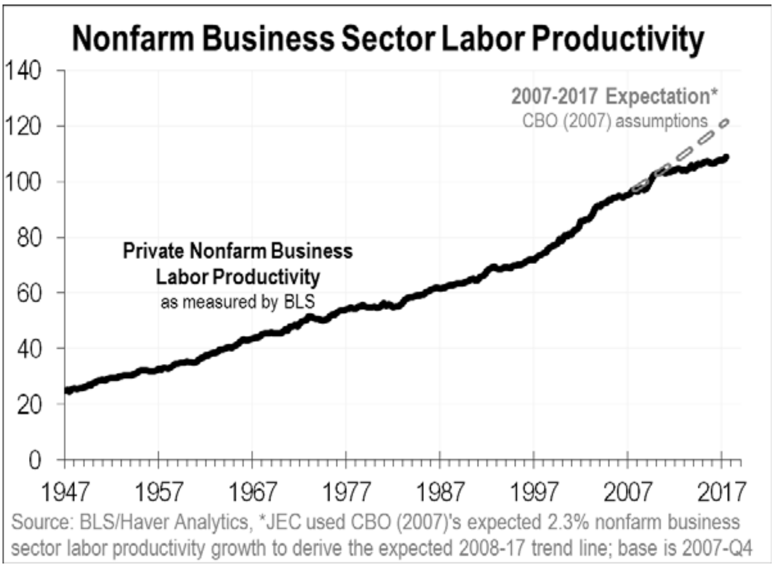


Figure 2-15 illustrates that that an abrupt break occurred in labor productivity growth after the 2008-2009 recession, leading to a nearly 15 percent shortfall below the 2007 CBO projections for 2017. As in the case of the aforementioned break in the natural rate of interest, the break in the productivity trend was not reversed.

Significance of Supply-Side Constraints

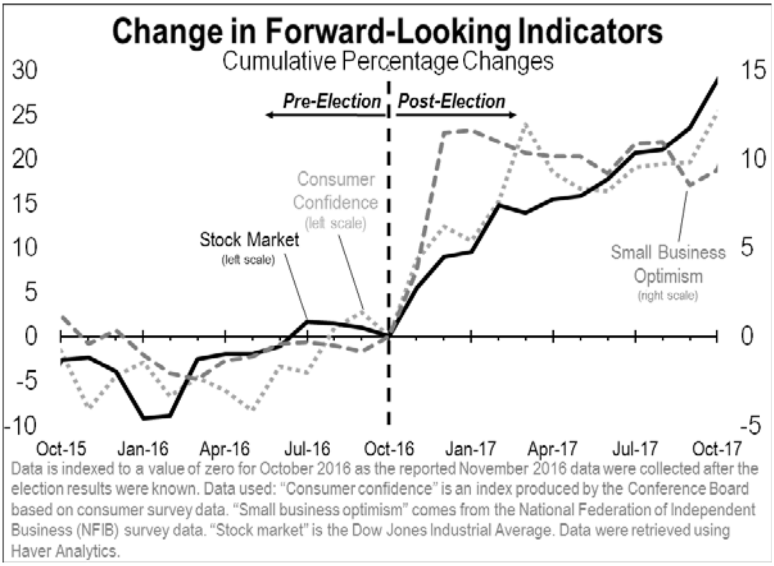
A low headline unemployment rate and closed output gap based on CBO's most recent estimate of potential GDP tell us little about the effects on economic performance of tax and regulatory reform. Subpar performance of the proximate determinants of economic growth—employment, capital, and productivity growth—suggests that the economy has substantial untapped potential. Given better policies, accelerating economic growth in the near term and a higher long-term growth rate seem entirely possible.

THE ECONOMIC OUTLOOK

Forward-Looking Indicators Improve

The economic outlook improved immediately after the last election as shown by the forward-looking indicators in Figure 2-16, which were little changed over the 12 months before the election.[123] Over the 12 months that followed the election, the stock market's value increased nearly 30 percent, consumer sentiment by 25 percent, and small business sentiment by 10 percent.

Figure 2-16



The marked upswing of forward-looking indicators reflects the expectation that removing growth-constraining policies can help recover the U.S. economy's lost potential.

Real Economic Indicators Improve

There was notable improvement in real GDP growth in 2017 compared to 2016, as growth in each quarter exceeded its corresponding quarter from the previous year (Figure 2-17). An important contributor to the acceleration in real GDP growth was private-sector non-residential fixed investment, which measures business spending on structures, equipment, and intellectual property (software, research and development, and entertainment, literary and artistic originals) (Figure 2-18).

Figure 2-17

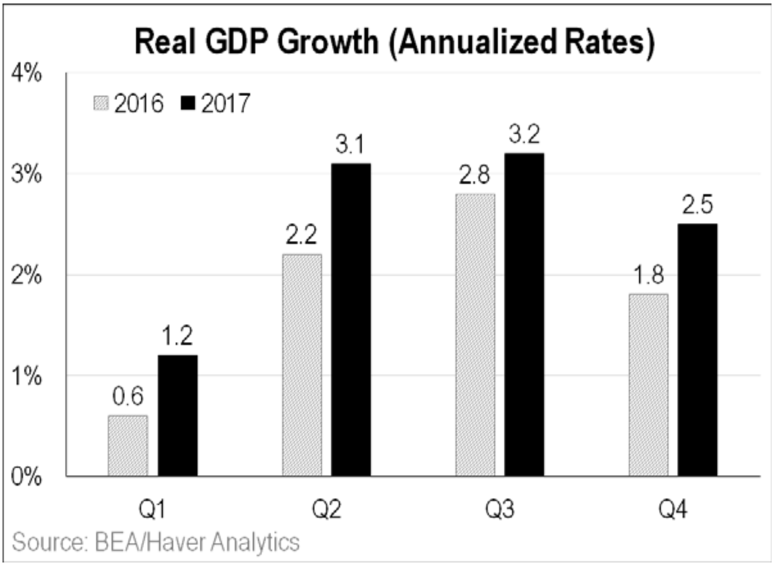
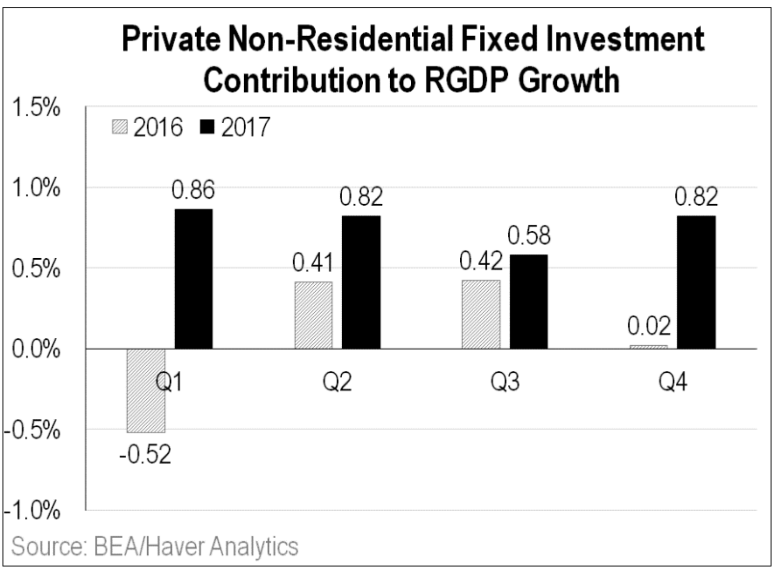


Figure 2-18



Industrial production, which is a comprehensive measure of the production of tangible goods in the United States, also expanded robustly in 2017 (Figure 2-19). In addition, the industrial capacity utilization rate has trended upward. In December 2017, it registered 77.7 percent, the highest since March 2015, yet still below the pre-recovery average of 81.4 percent—further evidence that the U.S. economy is not operating at its full potential.

Figure 2-19

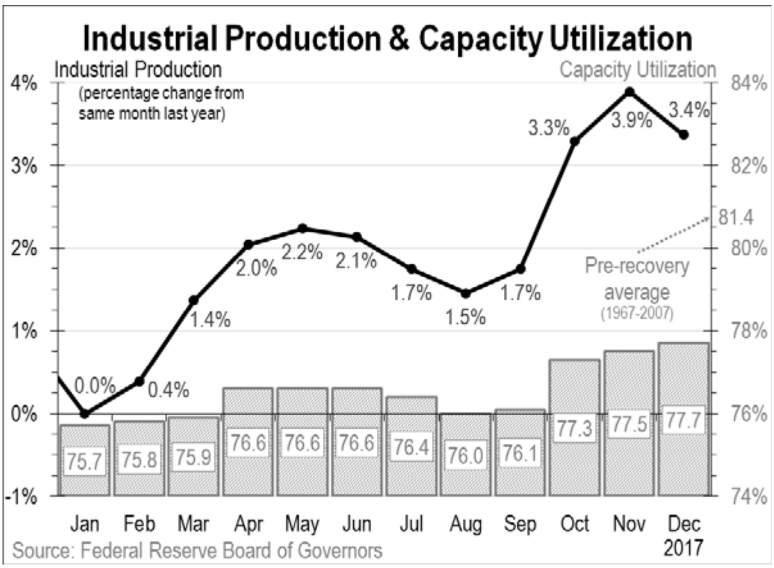
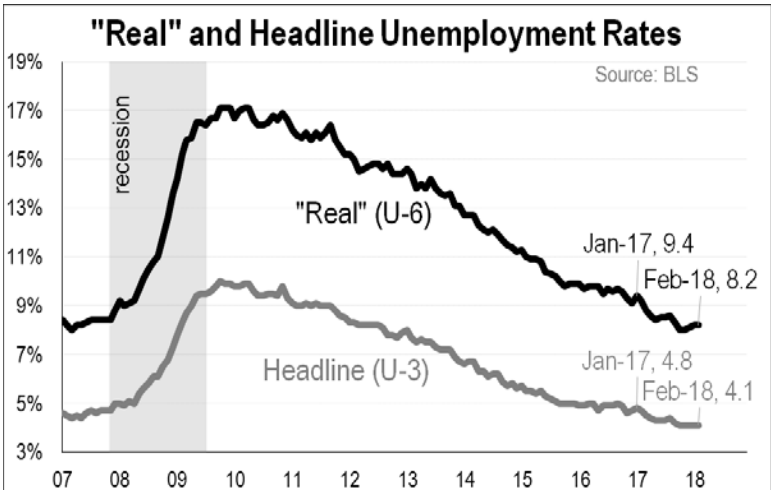


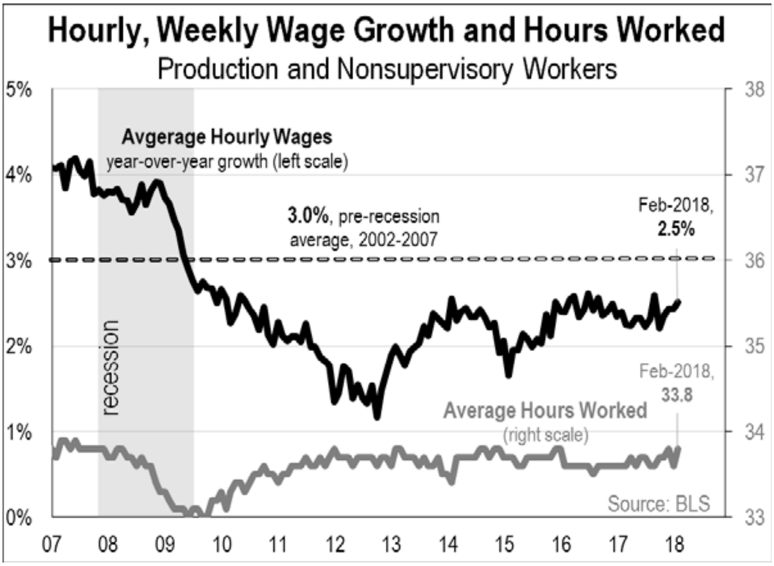
Figure 2-20



The U-3 unemployment rate measures those who searched for work in the last four weeks. The U-6 unemployment rate measures the U-3 rate plus rate of those who searched for work in the past twelve months and those who want full-time work but can only find part-time work for economic reasons.

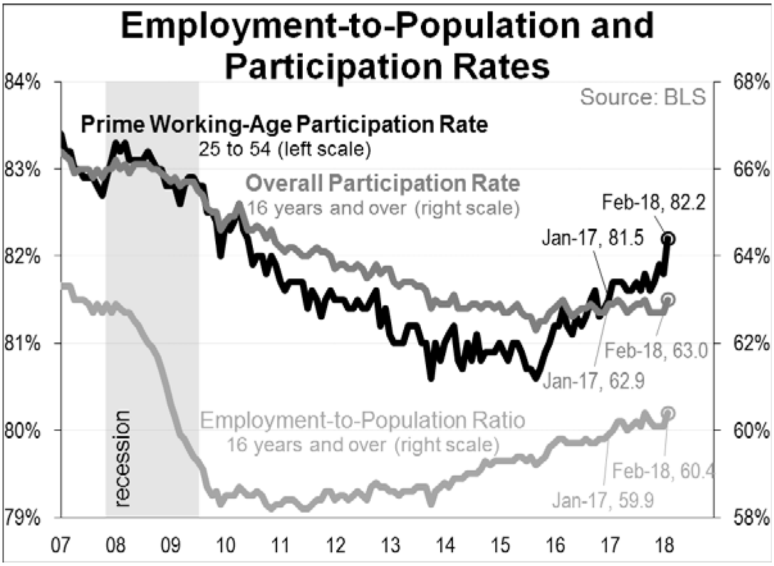
Since January 2017, the headline unemployment rate (U-3) fell 0.7 percentage point to 4.1 percent in February 2018. More notable was the faster decline in the "real" unemployment rate of 1.2 percentage points over the same period (Figure 2-20). This measure also includes those who searched for work in the past twelve months, and those among the employed who can only find part-time work for economic reasons. Its sharp decline suggests that those more adversely affected by the economy's slow growth were able to find better employment opportunities given an improved economic environment.

Figure 2-21



Despite notable improvements and a low headline unemployment rate, labor market slack remains. Private-sector job creation, averaging 180,000 per month in 2017, continues to exceed what is necessary to accommodate the population's growth rate. Annual hourly wage growth for production and nonsupervisory workers is only averaging 2.2 percent in the current expansion, compared with 3 percent in previous expansions (Figure 2-21). Furthermore, although the employment-to-population ratio, overall labor force participation rate, and the prime-age labor force participation rate have trended upward, they remain considerably lower than their pre-recession rates (Figure 2-22).

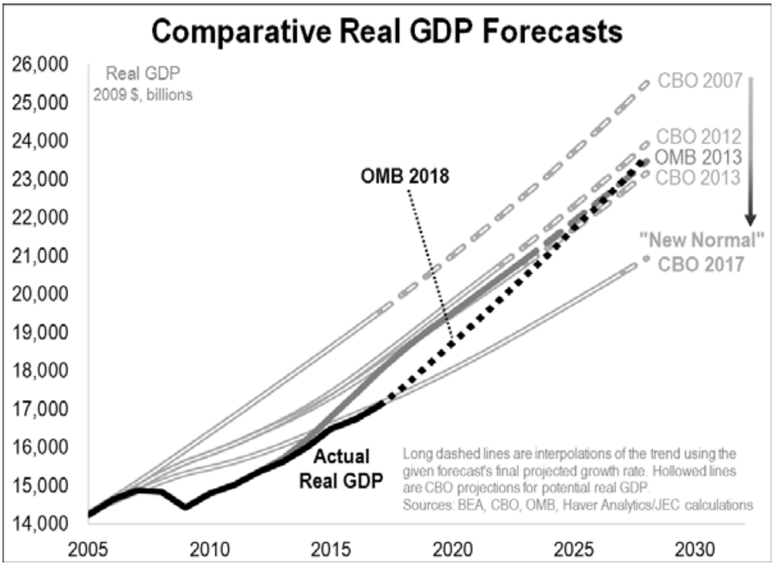
Figure 2-22



The Outlook under Ideal Conditions

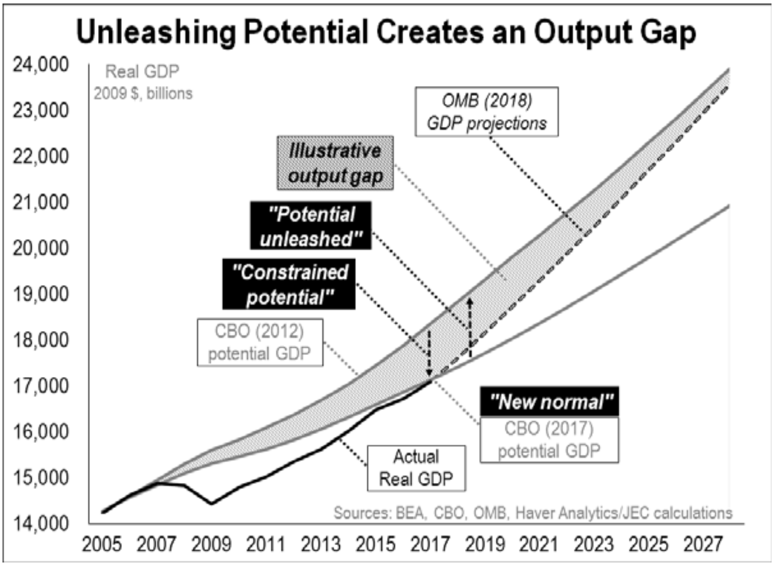
The level of real GDP, which would be realized from the Trump Administration's forecast of 3.0 percent average growth over 2018-2028, matches what the previous Administration's OMB had projected as recently as 2013. Moreover, it is very close to CBO's 2012 estimate of potential real GDP for 2028 (Figure 2-23).

Figure 2-23



Tax and regulatory reforms are intended to help unleash the U.S. economy's full potential. Figure 2-24 uses CBO's 2012 estimates for potential GDP to illustrate that an output gap would open, allowing economic growth to accelerate as policy constraints on capital and employment are lifted.

Figure 2-24



It is difficult to ascertain the U.S. economy's true potential after it was constrained for so long, Table 2-2 illustrates average annual real GDP growth rates that would be necessary to catchup to the different CBO projections for potential real GDP by a given year.[124] For example, column D, row 8 indicates the economy would need to grow at an average rate of 3.4 percent per year to catch up to CBO's 2012 projection for potential real GDP by 2025.

Table 2-2

		CBO's potential GDP estimates, by year of publication								
	Column	A	B	C	D	E	F	G	H	I
Row	**Year**	2009	**2010**	2011	**2012**	2013	**2014**	2015	**2016**	2017
1	2018	13.0%	12.2%	11.5%	10.1%	8.8%	6.5%	4.9%	2.8%	1.9%
2	2019	7.5%	7.1%	6.8%	6.3%	5.5%	4.4%	3.6%	2.4%	1.8%
3	2020	5.7%	5.5%	5.3%	5.0%	4.4%	3.7%	3.1%	2.3%	1.8%
4	2021	4.8%	4.7%	4.6%	4.4%	3.9%	3.3%	2.9%	2.2%	1.8%
5	2022	4.3%	4.2%	4.1%	4.0%	3.5%	3.1%	2.7%	2.2%	1.8%
6	2023	3.9%	3.8%	3.8%	3.7%	3.3%	2.9%	2.6%	2.2%	1.8%
7	2024	3.7%	3.6%	3.6%	3.5%	3.1%	2.8%	2.6%	2.2%	1.8%
8	2025	3.5%	3.4%	3.4%	3.4%	3.0%	2.7%	2.5%	2.1%	1.9%
9	2026	3.3%	3.3%	3.3%	3.3%	2.9%	2.6%	2.5%	2.1%	1.9%
10	2027	3.2%	3.2%	3.2%	3.2%	2.9%	2.5%	2.4%	2.1%	1.9%
11	2028	3.1%	3.1%	3.1%	3.1%	2.8%	2.5%	2.4%	2.1%	1.9%

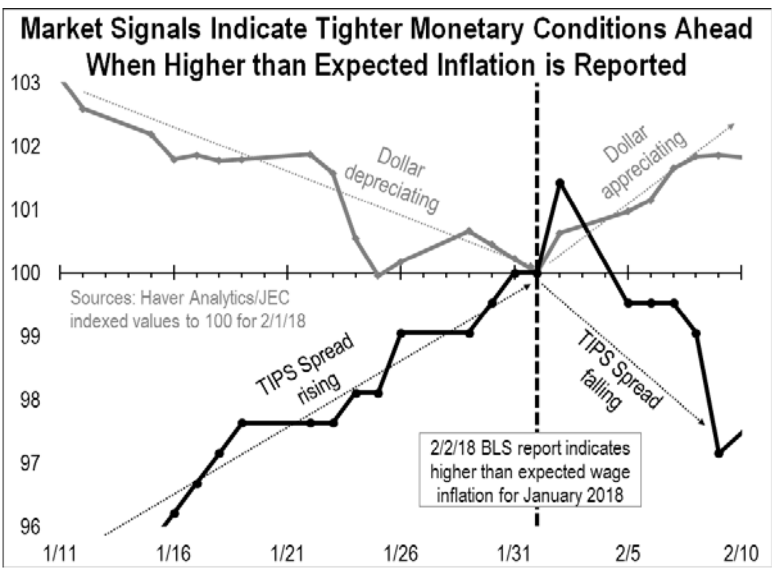
The economy's potential is partly determined by factors over which the government has little influence such as population growth and age composition. The *Report* recognizes the effect of an aging population,[125] for example, which is among the long-term factors that supporters of the previous Administration often cite as a reason for the slow recovery. As the economy returns to a higher output level, economic growth will moderate, but if policymakers continue to pursue productivity-enhancing policies with regard to taxes, regulation, education, infrastructure, trade, and health outlined in the successive chapters of this *Response*, the longer-run average annual growth can be better than CBO's most recent projection of 1.9 percent.

Potential Risks to the Outlook

MONETARY POLICY RISKS. Tax reform, such as TCJA, and an improved economic outlook, raise the value of capital and workers, which in the longer run, will lead to increases in capital and employment that then lead to increased production, which puts downward pressure on inflation rates.[126] To finance additional capital investments business must seek more credit. This puts upward pressure on interest rates, which may incidentally affect the demand side of the economy.

In particular, higher market interest rates—relative to the Fed's IOER rate (or a given expected path for the Fed's IOER rate)—encourage banks to increase lending using their abundant supply of excess reserves; this also encourages the non-banking public to spend cash balances at a faster rate. Thus, price inflation can accelerate somewhat in the near term before capital and employment attain their new, higher steady states and increased production then puts downward pressure on inflation. The risk is that the Fed misinterprets a transitory acceleration in inflation rates as the economy "overheating" and tightens monetary policy too quickly.

Figure 2-25

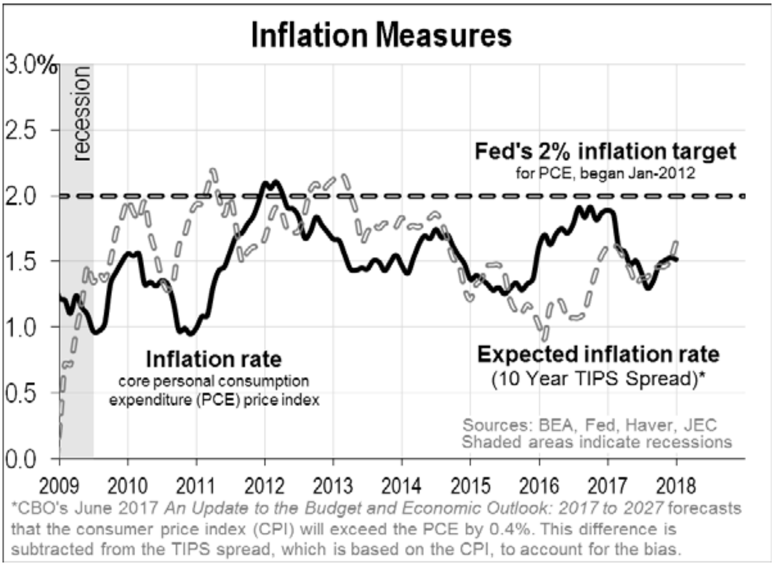


For example, on February 2, BLS reported an acceleration in wage growth, which could portend inflationary pressures.[127] Market turbulence in February followed, which does not appear to have arisen because the economy was "overheating" but out of fear the

Fed might think so and tighten monetary policy too quickly. As evidence, in the wake of the aforementioned BLS report, the TIPS spread, which is a market-based measure of the average expected inflation rate over the next ten years, fell and the U.S. dollar appreciated (Figure 2-26). (The “TIPS spread” is the difference in yields between 10-year Treasury Notes and 10-year Treasury Inflation Protected Securities; TIPS compensate holders for inflation.) Both a lower TIPS spread and appreciating dollar signal tighter monetary conditions ahead rather than an overheating economy.

The risk that the Fed will tighten too much should be low as forward-looking market-based measures of inflation expectations do not indicate inflation will rise to the Fed’s two percent target in the next 10 years. Furthermore, the Fed’s representation of the two percent inflation target as “symmetric”—an average rather than a ceiling—should afford it room to avoid tightening monetary policy prematurely. Inflation has consistently undershot the Fed’s two percent symmetric inflation target since its inception in 2012 (Figure 2-26), meaning that inflation somewhat above two percent could be tolerated for a time.

Figure 2-26



ASSET PRICE BUBBLE RISKS. Prominent economists, including Martin Feldstein,[128] have expressed concern that near-zero interest rates have inflated some asset prices, and they warn that the longer the Fed waits to normalize interest rates, the greater the risk of a price collapse. Indeed, many corporations that can issue bonds at low interest rates or obtain bank credit at low rates have taken on debt to buy back their own stock.

To the extent current assets are overpriced, pro-growth policies can help. The fundamental value of a firm is the present value of its expected future cash flows. As tax and regulatory relief improve future earnings potential, the expected return on new and existing projects rises and the present value of an enterprise increases. Given a currently underutilized workforce, accelerated economic growth to underpin or raise asset valuations seems possible. The sustained rise in stock indices since the last election suggests improving investor confidence.

International financial risks. The Committee Majority is concerned about financial vulnerabilities abroad, as is the CEA.[129] In particular, a foreign financial crisis can increase the demand for safe assets, which includes the U.S. dollar. Monetary economist Lars Christensen lays out the type of scenario that occurred in 2011 during the Fed's second QE program:

> *…[I]imagine that a sovereign default in a euro zone country shocks investors, who run for cover and starts buying 'safe assets'. Among other things that would be the U.S. dollar. [If the Fed takes no reaction to the increased demand for dollars] the Fed is effective allowing external financial shocks to become a tightening of U.S. monetary conditions [which reduces U.S. aggregate demand]. The consequence every time that this is happening is not only a negative shock to U.S. economic activity, but also increased financial distress.*[130]

In addition to the factors outlined in the section discussing demand-side constraints above, this may have further dampened the effectiveness of QE. As Hetzel (2012) noted:

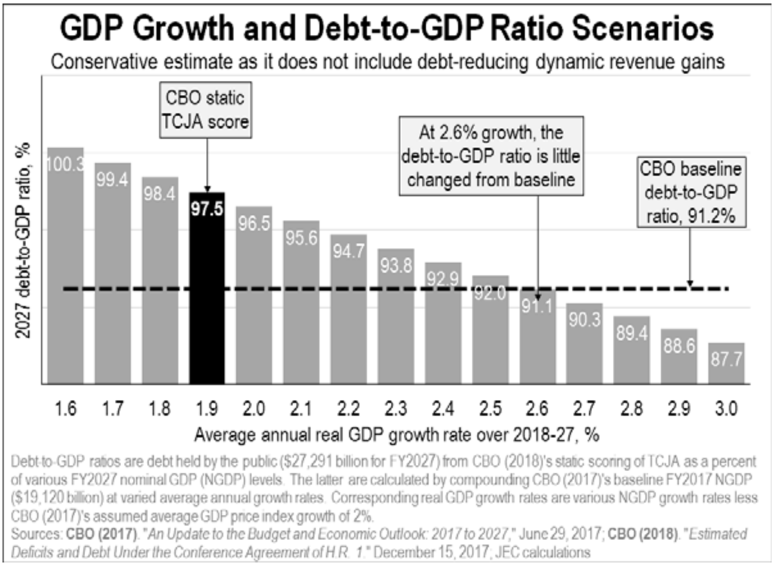
> *…QE2 had produced an increase in Fed securities holdings of $416 billion. However, European banks increased their holdings of dollar excess reserves by more than that amount. They had good reason to accumulate excess reserves in 2011. First, the possibility was real that the troubled peripheral countries in Europe like Greece would at least partially default on their external debt and impose losses on the European banks holding that debt. Second, the European Banking Authority was under pressure to make national regulatory*

> *authorities subject to their banks to rigorous 'stress tests.'*[131]

INTERNATIONAL TRADE ISSUES. Presently, the Trump Administration is renegotiating the terms of the North American Free Trade Agreement (NAFTA), and attempting to change the international terms of trade. Retaliatory trade barriers could disrupt global supply chains, leading to a downturn in economic activity. The stock market declined on the early March 2018 news that the Trump Administration would impose tariffs on imported steel and aluminum.

FEDERAL DEBT. Static scoring of TCJA—which does not allow for GDP to rise as a result of tax cuts and therefore ignoring federal revenue gains from GDP growth—suggests the debt-to-GDP ratio will increase to 97.5 percent from a baseline of 91.2 percent in 2027.[132] But TCJA makes the tax code more efficient and will enhance the economy's ability to grow. Figure 2-27 shows how the debt-to-GDP ratio might change under different real GDP growth rates. If the U.S. economy grows faster than CBO's most recent projected baseline of 1.9 percent, the debt-to-GDP ratio will decline. If it grows at a still-modest 2.6 percent, the debt-to-GDP ratio will remain unchanged without even including the additional tax revenue gained from faster GDP growth.

Figure 2-27



In addition to tax reform, the Administration is implementing other pro-growth reforms—such as reducing regulatory burdens—which OMB projects will result in 3.0 percent average annual GDP growth over the next 10 years. With 3 percent annual growth, the debt-to-GDP ratio would fall to 87.7 percent (again, not including additional Federal tax revenue from faster growth).

The risk to the economy does not derive from passage of the tax legislation as some critics claim. On the contrary, TCJA mitigates the risk with its pro-growth effects. CBO's March 2017 *Long-Term Budget Outlook*[133], which is based on the laws in effect at the time, projected that the Federal debt is on an unsustainable trajectory, wherein the debt-to-GDP ratio rises indefinitely. Tax, regulatory, and other reforms that improve the economy's productive potential will improve, not worsen the situation, but ultimately entitlement reform is necessary to reverse the unsustainable trajectory.

CONCLUSIONS

There is an alternative explanation for the slow recovery following the 2008-2009 recession, which differs from the common view that a financial crisis and adverse long-term trends—an aging population, low labor force participation, and low productivity growth—are to blame and that the Obama Administration and the Federal Reserve did all they could to lift the economy; the former with an enormous debt-financed fiscal stimulus package, and the latter with ultra-low interest rates and quantitative easing.

The alternative explanation is that the previous Administration's spending, tax, and regulatory policies progressively constrained the economy's productive potential, while the Fed held back bank lending by paying interest on excess reserves, directing capital to inefficient uses through quantitative easing.[134]

This chapter explores the economy's performance from the 2008-2009 recession to the present, in the context of both supply and demand. The Committee Majority concurs with the *Report's* findings that supply-side determinants of real economic growth—labor, capital, and productivity—were artificially constrained by government policies that hindered Americans from realizing their full potential. Thus, the Committee Majority endorses policies that will unleash the U.S. economy's full potential. Subsequent chapters in the *Response* offer further recommendations to this end.

This chapter also offers an alternative view of factors that constrained the demand side of the economy (i.e., the Federal Reserve's payment of interest on excess reserves at rates competitive with market rates), and its credit policies, which include quantitative easing. This alternative view helps to explain the "puzzle" of persistent below-target inflation. It suggests that monetary policy was not as “easy” during the 2008-2009 recession and its aftermath as commonly perceived.

Payment of IOER and the slow unwinding of quantitative easing programs raise complications for the demand side of the economy, especially as the Fed remains “puzzled” by low inflation and still does not appear to connect it to the IOER rate. There is some risk that the Fed—out of fear the economy may be “overheating” and inflation may suddenly accelerate—could tighten monetary policy at too fast a pace.

As time passes, it is important that the study of economic policies during and after the 2008 recession continue. The common narrative of events deserves greater scrutiny, and it should not simply become the “received wisdom” that automatically and unquestioningly informs future policy.

Recommendations

- The closing of the output gap from the 2008-2009 recession, relative to estimates of potential GDP under the constraints of past policies, should not be considered a truly complete recovery. With the continuation of better policies, the economy has room to grow faster.
- Unconventional monetary policy has not been fully unwound, and it bears continued scrutiny. It is important to establish clear goals with respect to the future use of interest on excess reserves and the size of the Fed’s balance sheet.
- While America’s tax regime after TCJA is now more internationally competitive, reform of the country’s regulatory regime, health care system, education system, infrastructure, and cybersecurity must remain top priorities. Positioning these systems so the economy can

grow faster again will help with many of the country's derivative social problems.

Appendix 2-1: Pre-2008 Impetus for IOER

A provision of the *Financial Regulation Relief Act of 2006* authorized the Federal Reserve to begin paying banks interest on their required reserves (IORR) and excess reserves (IOER) in 2011.[135] (Because IORR does not have as significant ramifications as IOER, this chapter focuses on the latter.) The impetus was largely technical; it would enable the Fed to modernize its antiquated required-reserve regime and reduce the magnitude of Fed interventions through open market operations (buying and selling of short-term Treasury securities to alter the supply of bank reserves) that were needed to achieve its target for the fed funds rate.

The IOER rate would create a floor for the fed funds rate,[136] as it would motivate banks to hold excess reserves, rather than lend them to other banks at a lower fed funds rate, thus helping to limit the amount of reserves the Fed has to drain through open market operations to lift the fed funds rate toward its target. The Fed's discount rate—the rate at which banks can borrow reserves directly from the Fed rather than borrow the excess reserves of other banks at the fed funds rate—would serve as a ceiling.[137]

Within this "corridor" of administratively determined rates, market forces as well as the typical (but reduced) Fed open market operations would determine the fed funds rate. By raising or lowering the fed funds rate in this "corridor system" relative to the natural rate of interest—the market rate of interest consistent with price stability and full-employment, the Fed could ease or tighten monetary policy in a way that is consistent with its more reliable and effective pre-2008 operating procedures.

Chapter 3: The Benefits of Tax Reform

- Chapter 1 of the *Report* discusses economic distortions that were present in elements of the previous tax system and the economic benefits of certain provisions in the *Tax Cuts and Jobs Act* (TCJA).
- CEA estimates that TCJA's corporate tax rate reduction and business expensing alone will significantly lower the cost of capital, resulting in a two to four percent increase in economic output and an average annual increase in household incomes of $4,000 or more in the long run.
- CEA also projects that reforms on the individual side of the tax code will boost GDP by up to 1.6 percent by 2020.
- This chapter of the JEC's *Response* discusses why the United States needed the reforms in TCJA to help unleash our economic potential and boost competitiveness, as well as how the changes will benefit American households and businesses.
- The JEC Majority also recommends additional reforms to build on the progress achieved by TCJA.

Substantial Progress Since the JEC's 2017 *Response*

Last year's *Response* to the Obama Administration's final *Report* decried the lack of focus and progress on comprehensive tax reform—despite mounting evidence that our overly complex and outdated tax code was not only a disservice to individual taxpayers but hindered economic growth and undermined America's global competitiveness.[138]

A year ago, America's corporate tax rate was the highest in the developed world. Additionally, the United States was one of only a handful of developed economies with an uncompetitive worldwide system of taxation that subjected companies to both a host country and home country tax when overseas profits of domestic companies were repatriated. Also last year, pass-through businesses—many of which are small—were subject to a high top individual tax rate that had increased dramatically under the Obama Administration. Further, tax complexity was burdening individuals, families, entrepreneurs and small businesses, and the economy as a whole.

As mentioned in Chapter 1, in October 2017 the Committee held a hearing to explore declining rates of entrepreneurship and whether tax reform might help reverse this alarming trend.[139] Startup businesses less than a year old are both responsible for spurring innovation in the economy, and are the source of nearly all net new job creation, adding urgency to the problem.[140] Witnesses cited high individual and corporate tax rates, complexity in the tax code, an uncompetitive worldwide system of taxation, and the fact that companies cannot fully expense business investments among the barriers to entrepreneurship. They urged Congress to focus tax reform on boosting economic growth because a growing economy and entrepreneurship become self-reinforcing; when employment opportunities are plentiful, more potential entrepreneurs are willing to take the risk of starting a business, which in turn creates more jobs.

Since that hearing, Congress and the Trump Administration have transformed the U.S. tax code with the passage of Public Law 115-93, known as the *Tax Cuts and Jobs Act* (TCJA). Notably, TCJA either adopted or made substantial progress toward many of the recommendations of the JEC Majority in the 2017 *Response*, which were also echoed by JEC hearing witnesses. Those recommendations included lowering both individual and corporate tax rates, moving to a competitive territorial tax system, allowing expensing of business investments, and simplifying the tax code.

TAX REFORM: A NECESSITY FOR BOOSTING AMERICA'S ECONOMIC POTENTIAL

To operate at full potential, an economy needs its working-age population in the workforce (labor supply); businesses willing and able to hire and equip workers with high-quality facilities, equipment and know-how (capital investment); and technological innovation that empowers workers to produce more per hour (productivity). Tax policy can affect each of these factors either positively or negatively.

The Joint Committee on Taxation (JCT) has explained several of these economic effects. For example, lowering the tax rate paid by individuals allows them to keep more of the money they earn, thus increasing their incentive to work. Similarly, lowering tax rates paid by businesses decreases the cost of capital, which encourages more investment in their business and workers by purchasing equipment or providing skills training, both of which make employees more productive.[141] Higher productivity generally leads to higher wages for workers.[142] Higher wages, in turn, may entice more potential workers into the workforce, creating greater prosperity, opportunity, and growth.

Conversely, tax policy can also hinder economic growth. High marginal tax rates on individuals discourage them from working and increasing their earnings. High tax rates on businesses can drain resources that could otherwise be invested in their business and workers. Additionally, slow cost recovery for equipment purchases that require businesses to depreciate assets over many years discourages companies from making the kind of investments that raise productivity and wages.

In addition, tax policy can have a direct impact on the location of investments. If the domestic tax climate makes it less profitable to invest in the United States, businesses have a powerful incentive to invest in and possibly even relocate to other countries with more favorable tax systems. This diverts both capital and workforce opportunities from the United States, further lowering our Nation's growth potential. A tax code that makes America the best place in the world to work, invest, and start a business is a key ingredient for strong economic growth.

Additionally, the time and resources spent by both individual taxpayers and businesses complying with tax rules is a drain on the economy. The Tax Foundation estimated that Americans spent 8.9 billion hours filling out tax forms in 2016 alone, costing the economy $409 billion in lost productivity.[143]

As discussed earlier in this *Response*, the economy under the Obama Administration experienced subdued levels of workforce participation by people in their prime working years, depressed levels of business investment, and relatedly, low levels of productivity and wage growth. Yet, instead of pursuing pro-growth tax policy, the previous Administration imposed over $1 trillion in new taxes through the *Affordable Care Act* (ACA), many of which affected low- and middle-income taxpayers; increased taxes on pass-through businesses by raising the top individual tax rate; increased the cost of capital by raising capital gains taxes; and let the United States fall ever further behind our international competitors by leaving in place a high corporate tax rate and worldwide tax system.[144]

FEATURES OF THE *TAX CUTS AND JOBS ACT*

TCJA is a dramatic departure from the anti-growth tax policies of the previous Administration. It lowers taxes on labor and capital, incentivizes business investments that boost productivity and wages, increases America's global competitiveness, and makes taxes easier and more comprehensible for millions of taxpayers.

TCJA Provisions Affecting Individuals and Families

TCJA lowered individual tax rates (Figure 3-1) and applied the lower rates to broader swaths of income beginning in 2018. Additionally, taxpayers in the 10 percent bracket will have an effective tax rate of zero percent under TCJA due to the increased standard deduction described later.

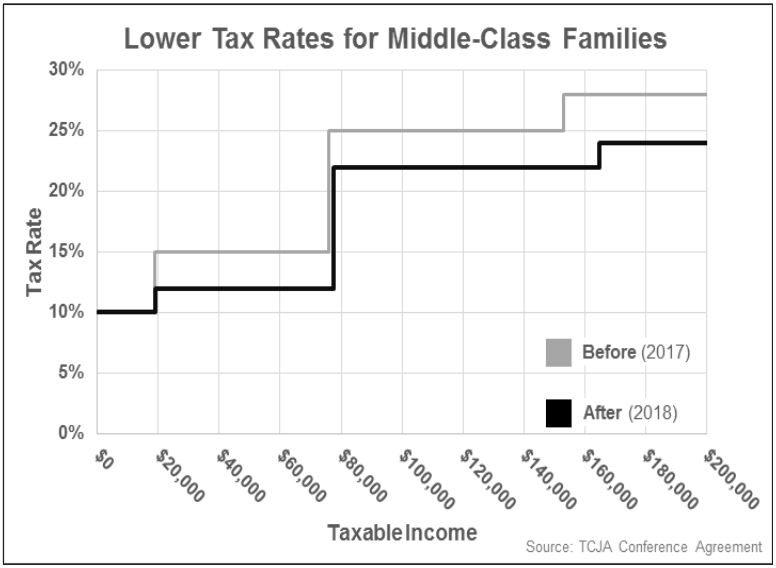
Figure 3-1

Individual Marginal Tax Rates

Before TCJA	After TCJA
10%	10/0%
15%	12%
25%	22%
28%	24%
33%	32%
35%	35%
39%	37%

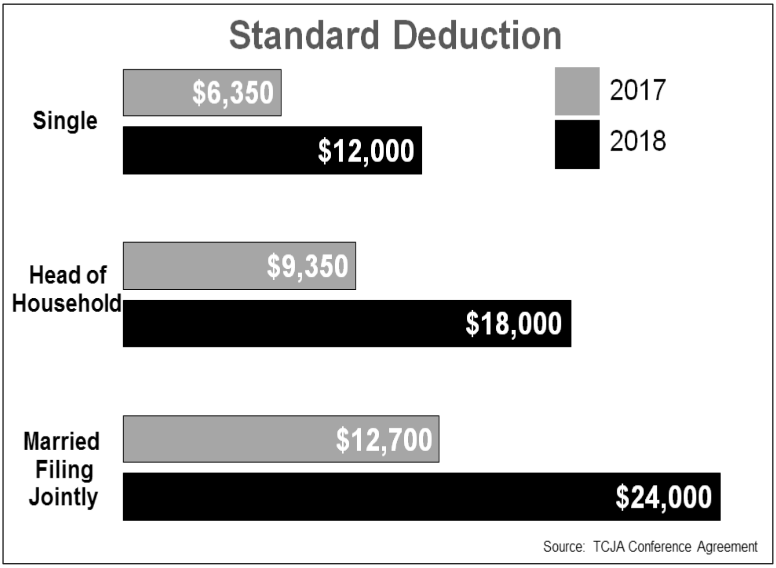
Figure 3-2 shows the tax rate reductions for low- and middle-income taxpayers who are married and file joint tax returns. The Joint Committee on Taxation estimated that in 2019 TCJA will result in an average tax cut of eight percent, with the largest percentage reductions experienced by taxpayers with incomes between $20,000 and $50,000.[145] These lower rates boost take-home pay of workers, which not only improves their standard of living but increases the incentive to work and earn more. Workers began seeing fewer taxes withheld from their paychecks in February 2018.[146]

Figure 3-2



TCJA also provided taxpayers with additional tax relief and greater simplicity through a larger standard deduction. Taxpayers have the option of taking a simple standard deduction or itemizing a series of more complex deductions. By nearly doubling the standard deduction, TCJA effectively offers a zero tax rate bracket for a larger share of taxpayers' income. As a result, an estimated nine out of 10 tax filers will choose this simpler option.[147] Even those who itemize deductions will see a more streamlined form that will not require them to track as many expenses and receipts. Itemizers will still be able to deduct interest on mortgages of up to $750,000, up to $10,000 in State and local taxes, and even more of their donations to charity through a higher annual limit on the charitable deduction. Additionally, for 2017 and 2018 itemizers with catastrophic health care costs will have relief from an ACA tax hike, described later, affecting the medical expense deduction.

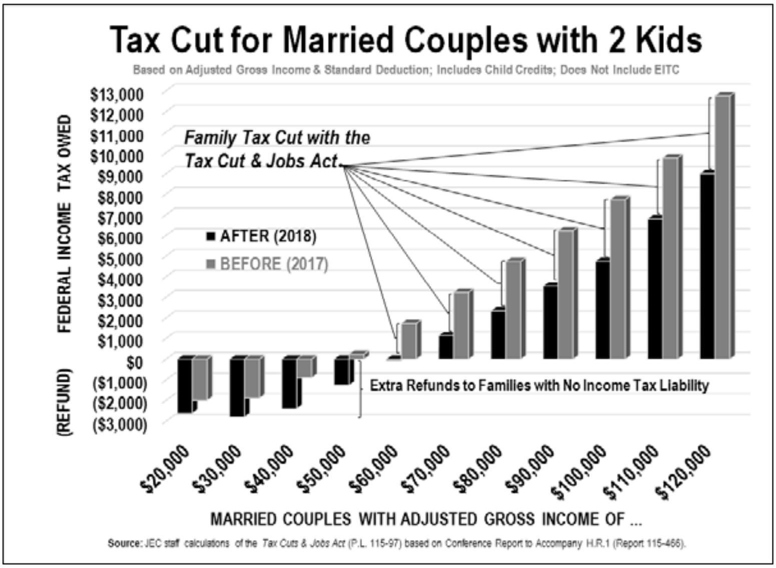
Figure 3-3



Tax reform also provided significant tax relief for families with children and other dependents. TCJA doubled the child tax credit from $1,000 to $2,000 per child and allowed up to $1,400 of each credit to be refundable, meaning that those without tax liability can still claim the credit. (The refundable portion will grow with inflation up to the full $2,000 value of the underlying credit.) TCJA also includes a nonrefundable $500 tax credit for dependents who do not qualify for the child credit. Additionally, TCJA maintained the adoption tax credit and the credit for child and dependent care expenses. The combination of lower tax rates, a larger standard deduction, and expanded tax credits for children produces substantial tax relief for a family of four, as illustrated by the following chart. Of note, the chart does not include the effects of the Earned Income Tax Credit, which was maintained in

TCJA and provides an additional refundable credit to working taxpayers with low income.

Figure 3-4



In its macroeconomic analysis of TCJA, JCT described how these tax provisions combine to encourage potential workers on the sidelines to join the workforce:

> *The significant reduction in marginal tax rates on labor (resulting primarily from the additional tax rate bracket, lower statutory rates for most brackets, and the increase in the child credit) provide strong incentives for an increase in labor supply.*[148]

A previous study found small overall effects on labor supply from high individual tax rates but significant effects on the willingness of married women to work. The same study found that high rates create other economic distortions, including causing people to engage in or refrain from certain activities to avoid taxes, which is particularly prevalent among higher-income taxpayers.[149] These tax avoidance techniques are part of the excess burden of taxation that will be discussed later in this chapter.

Harvard economist Robert Barro projects a strong short-run response from TCJA's individual tax rate reductions that will boost GDP by a total of 1.6 percent through 2019.[150] While Barro expects the growth to level off beyond 2019, the higher level of GDP that results from the market efficiency of lower rates will endure. CEA came to a similar conclusion, projecting GDP to increase by up to 1.6 percent by 2020.[151]

CEA also noted research indicating that older workers are more responsive to changes in marginal tax rates than younger ones.[152] This suggests that the tax rate reductions may encourage more of those nearing retirement age to stay in the workforce.

Due to a lack of support from the Minority party in Congress, TCJA could only be enacted under complex budget reconciliation procedures, which allow for passage in the Senate with a simple majority vote. Unfortunately, the strict rules for this process led to the expiration of TCJA provisions affecting individuals after 2025. The JEC Majority fully supports making these provisions permanent. Essentially, JCT provided an economic argument for doing so by explaining that without such an action, some of the employment gains from TCJA could otherwise be erased after 2025:

> *After the sunset of the individual tax provisions, the increase in employment is expected to decline.*[153]

Tax Fairness

The term "fair" is highly subjective, including in the context of taxation. For example, a flat tax on all types of income might be considered a fair way to raise revenue because it would treat all taxpayers equally, imposing the same tax rate on all taxpayers and all types of activity. Others may view fair taxation as imposing more than proportional taxes on higher-income taxpayers. In this vein, the Federal tax code is "progressive" with higher marginal income tax rates applied to incremental income. Notably, several elements of TCJA address both notions of fairness.

TCJA is evenhanded by lowering taxes for all income groups, but TCJA also increases the progressiveness of the tax code. During the time that TCJA provisions affecting individuals are in effect, the new and lower overall tax burden will be borne more heavily by taxpayers with incomes greater than $1 million. For example, JCT estimated that by 2019, taxpayers with incomes over $1 million will pay 19.8 percent of all Federal taxes, compared to 19.3 percent without TCJA. Conversely, under TCJA, taxpayers with less than $50,000 in income will see their share of Federal taxes in 2019 decline from 4.4 percent to 4.1 percent.[154]

If a future Congress decided not to renew or make permanent the individual tax provisions, JCT indicated that this increased progressiveness of the tax code under TCJA would disappear, providing yet another argument for extending them beyond 2025.

Further, TCJA reduces tax benefits that mainly benefit higher-income taxpayers and reduces or eliminates taxes that disproportionately burden low- and middle-income Americans. One such tax is the individual mandate penalty.

Before TCJA, Americans without health insurance not only dealt with the vulnerability of being uninsured but also faced a tax penalty under the ACA's individual mandate, which requires Americans to maintain Government-approved health insurance. TCJA reduced the individual mandate tax to zero; consequently, Americans will no longer be taxed simply for being uninsured.

This penalty was a very regressive tax. For example, during the 2015 tax filing season, nearly 85 percent of those forced to pay it had incomes less than $50,000.[155]

Figure 3-5

Low- and Middle-Income Americans Disproportionately Paid the Individual Mandate Tax

Adjusted Gross Income	Number of Returns	Percent of Total
$0	26,021	0.3%
$1- $5,000	63,082	0.8%
$5,000 - $10,000	156,588	1.9%
$10,000 - $15,000	967,939	12.0%
$15,000 - $20,000	1,307,589	16.2%
$20,000 - $25,000	1,236,222	15.3%
$25,000 - $30,000	963,174	11.9%
$30,000 - $35,000	747,937	9.3%
$35,000 - $40,000	561,121	7.0%
$40,000 - $45,000	434,909	5.4%
$45,000 - $50,000	347,501	4.3%
Over $50,000	1,249,521	15.5%
Returns under $50,000	**6,812,083**	**84.5%**
$50,000 and over	**1,249,521**	**15.5%**
Total Returns	**8,061,604**	---

Source: IRS SOI Data, 2015 tax filing season

TCJA provides temporary relief from another ACA tax increase that disproportionately affects low- and middle-income taxpayers. Before the ACA, Americans who itemize deductions could deduct out-of-pocket medical expenses that exceeded 7.5 percent of their adjusted gross income. The design of this deduction ensures that only taxpayers with very high medical costs relative to their income can obtain tax relief. The ACA made it more difficult to afford catastrophic costs by raising the income threshold to 10 percent. (Seniors received a temporary exception that expired last year.) According to the Internal Revenue Service (IRS), 83 percent of taxpayers who used this deduction in 2016 had incomes less than $100,000.[156] TCJA reinstates the 7.5 percent threshold that existed before ACA for the 2017 and 2018 tax years.

In addition, TCJA limited an itemized deduction that mainly benefits those with high incomes. TCJA placed a cap of $10,000 on the deduction for State and local taxes (SALT). As the table below illustrates, this is only slightly less than the average SALT deduction claimed in 2016. Further, the cap is larger than the average deduction taken by taxpayers with incomes lower than $200,000. CEA also noted that the benefits of an unlimited SALT deduction skew heavily to high-income taxpayers.[157]

Figure 3-6

Cap on SALT Deduction Mostly Affects Higher-Income Taxpayers

Adjusted gross income	Number of tax returns	Average deduction	
All returns, total	**33,063,383**	**$10,667.43**	
Under $5,000	74,184	$4,510.51	Under $10,000 cap
$5,000 under $10,000	98,328	$2,591.46	Under $10,000 cap
$10,000 under $15,000	192,403	$2,519.23	Under $10,000 cap
$15,000 under $20,000	313,094	$2,065.58	Under $10,000 cap
$20,000 under $25,000	406,796	$2,119.97	Under $10,000 cap
$25,000 under $30,000	557,060	$2,094.96	Under $10,000 cap
$30,000 under $35,000	693,840	$2,081.61	Under $10,000 cap
$35,000 under $40,000	899,962	$2,168.78	Under $10,000 cap
$40,000 under $45,000	955,900	$2,590.11	Under $10,000 cap
$45,000 under $50,000	1,049,616	$2,642.42	Under $10,000 cap
$50,000 under $55,000	1,103,076	$2,921.36	Under $10,000 cap
$55,000 under $60,000	1,126,872	$3,167.25	Under $10,000 cap
$60,000 under $75,000	3,290,380	$3,658.96	Under $10,000 cap
$75,000 under $100,000	5,511,568	$4,663.31	Under $10,000 cap
$100,000 under $200,000	11,533,393	$7,644.68	Under $10,000 cap
$200,000 under $500,000	4,212,361	$17,922.31	Above $10,000 cap
$500,000 under $1,000,000	696,445	$48,098.67	Above $10,000 cap
$1,000,000 under $1,500,000	152,902	$94,844.02	Above $10,000 cap
$1,500,000 under $2,000,000	62,412	$140,361.92	Above $10,000 cap
$2,000,000 under $5,000,000	93,602	$249,795.24	Above $10,000 cap
$5,000,000 under $10,000,000	23,772	$570,221.18	Above $10,000 cap
$10,000,000 or more	15,419	$2,491,170.63	Above $10,000 cap

Source: IRS SOI Data, 2016 tax filing season

Additionally, even with a full deduction under previous law, only 22 percent of tax return filers claimed the SALT deduction in 2016.[158] Fewer still will take this deduction due to the much larger standard deduction in TCJA, further shrinking the universe of taxpayers who might be affected by the cap. Another benefit of the cap is that a high SALT deduction tended to make taxpayers more likely to pay the Alternative Minimum Tax (AMT), discussed later in this chapter. In summary, relatively few taxpayers will be affected by the limit on the SALT deduction, those who do are likely to have high incomes, and even the affected taxpayers will have the side benefit of less exposure to AMT.

The cap on the SALT deduction also addresses a previous inequity in the tax code that arose from the fact that the higher a State's taxes, the less Federal income tax the IRS collected from that State. Taxpayers in States that set above-average tax rates obtain a greater tax benefit from the Federal Government than those who live in States with lower tax rates, which amounts to a cross-subsidy from low- to high-tax States.

TCJA Provisions Affecting Small Businesses and Pass-Through Companies

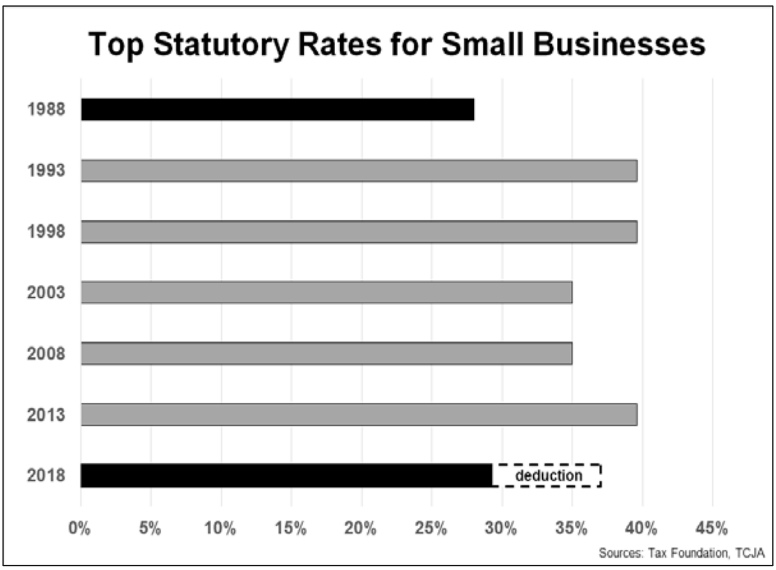
Approximately 95 percent of businesses pay taxes at the individual level rather than corporate level; these are known as pass-through businesses.[159] The vast majority of small businesses are organized as pass-throughs, and a high top individual tax rate can drain precious resources from the business.

When President Obama took office, the top Federal tax rate paid by pass-through businesses was identical to the top rate paid by large corporations at the time, 35 percent. However, the Obama Administration insisted on raising the top statutory individual rate to 39.6 percent. Other Obama-era tax increases—including a limit on itemized deductions and the ACA's 3.8 percent tax on investment income—pushed the top effective rate paid by small businesses to 44.6 percent.[160] When State taxes are included, many small businesses faced the prospect of more than 50 cents of every additional dollar earned being consumed by Federal taxes alone.

TCJA reversed part of the Obama tax increase on pass-through businesses by lowering the top individual rate from 39.6 percent to 37 percent. Additionally, TCJA provided a new deduction equal to 20 percent of pass-through business income. TCJA also contains safeguards against abuse by preventing taxpayers with incomes greater than $315,000 from disguising their personal income as business income. For example, pass-through businesses with higher income will have to demonstrate that they are paying a significant amount of wages or making large capital expenditures in order to claim the deduction.

The combination of the lower statutory rate and the pass-through deduction creates a top effective rate of 29.6 percent. This new rate is much closer to the top 28 percent rate (represented by the top bar in Figure 3-7) established by the bipartisan Tax Reform Act of 1986.[161]

Figure 3-7



Additionally TCJA doubled the amount of equipment purchases that small businesses can immediately deduct from taxes—known as small business expensing—from $500,000 to $1 million.[162]

Faster Cost Recovery to Boost Investment

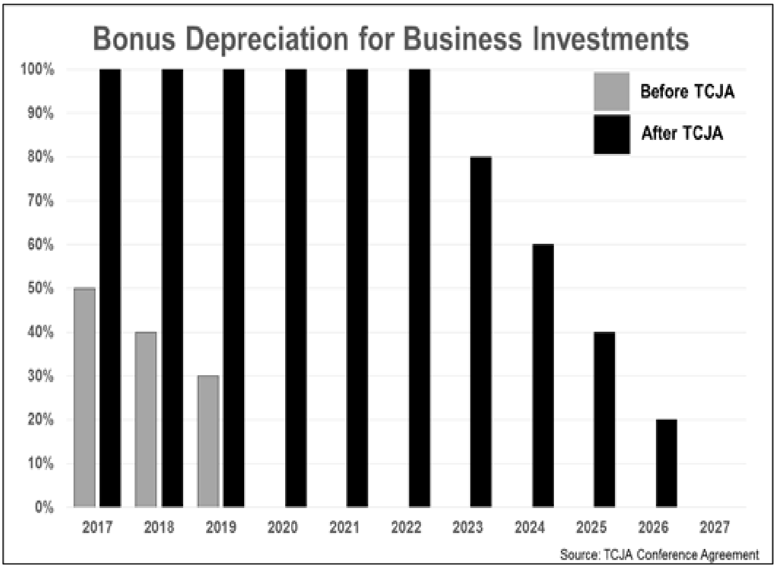
Generally, instead of allowing an immediate tax deduction for the full cost of purchasing an asset (expensing), the tax code requires businesses to use complicated depreciation schedules to deduct the cost gradually over many years.[163] As a result, a business that purchases new equipment but has not yet produced a profit will be treated by the tax code as if it had profit to be taxed because the equipment's cost is only partially deductible in the first year. As a result, it will take much longer for the business to break even and become profitable, potentially discouraging the company from making needed investments in the first place. As mentioned above, small businesses have traditionally been able to expense a certain amount of purchases, but the relief phases out once the company makes high levels of investment and it still requires complicated bookkeeping.[164]

Slow cost recovery discourages businesses—particularly those that depend on cash flow—from purchasing new equipment and upgrading facilities. These investments, in turn, allow workers to produce more per hour, and this higher productivity tends to increase wages.[165] Allowing businesses to write off all costs when they occur would recognize reality and encourage more growth-producing business investments.

In order to boost business investments and economic growth, Congress has passed temporary extensions of bonus depreciation, under which companies of all sizes can deduct a large portion of the purchase price in the first tax year. However, before TCJA, the extra portion of investments that could be deducted immediately was scheduled to decline from 50 percent in 2017, to 40 percent in 2018, and to 30 percent in 2019, after which it would disappear completely.

TCJA provides 100 percent bonus depreciation—which is essentially expensing—for purchases made after Sept. 27, 2017, through the end of 2022. TCJA also allows used assets to be eligible for bonus depreciation instead of just new property.

Figure 3-8



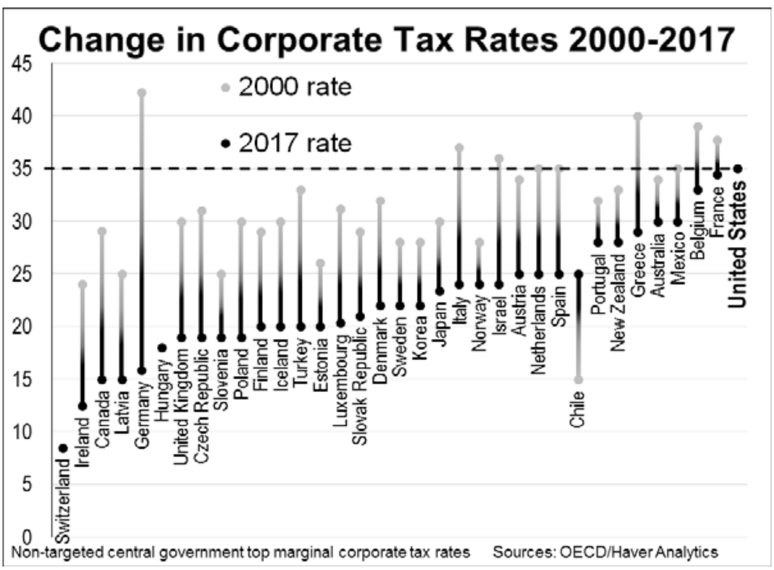
The JEC Majority recommends that expensing be made a permanent part of the tax code in order to maximize the economic benefit. According to the Tax Foundation, expensing of all business investments would create the equivalent of over one million new full-time jobs, raise the incomes of low- and middle-income Americans by at least 4.9 percent, and boost long-run GDP by 5.4 percent.[166]

Increasing the Competitiveness of U.S. Corporations

Before TCJA, the tax code imposed substantial burdens on American corporations competing in global markets on two fronts. First, among the 34 advanced economies in the OECD, the U.S. corporate rate topped all others in 2017 at nearly 39 percent, including both the 35 percent Federal rate and average State taxes.[167] In addition, U.S. businesses were faced with an uncompetitive worldwide tax system rather than a territorial system. Territorial systems allow active business income earned overseas to be brought back to the home country with little or no tax. In contrast, America's worldwide system subjected all income to U.S. taxation, regardless of where it was earned. The tax was triggered when profits are brought back to the United States, giving companies a strong incentive to leave earnings overseas. This created a lock-out effect, which resulted in reduced levels of investment by American companies in the United States.

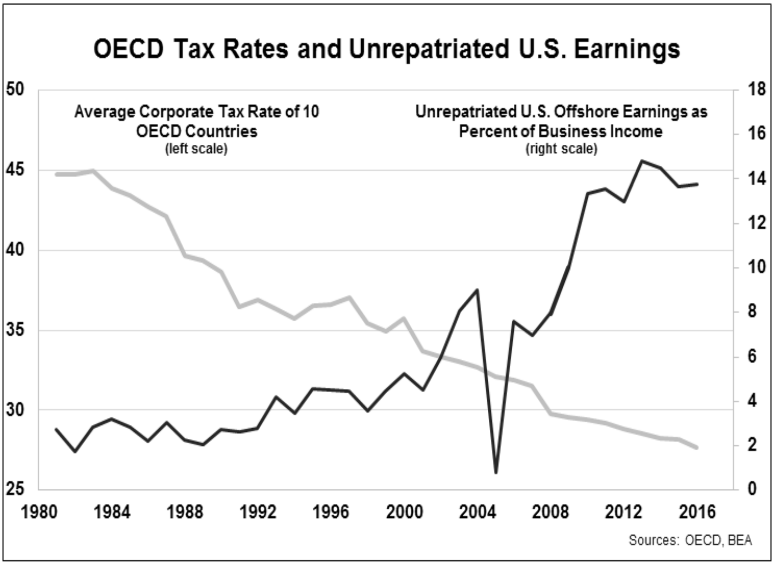
The United States was essentially losing ground by standing still as other nations lowered their corporate rates and moved to territorial systems to attract businesses, investment, and jobs. The chart below shows the movement in OECD tax rates from 2000-2017.

Figure 3-9



The next chart illustrates that as the corporate tax rates declined in 10 large economies in the OECD—all of which adopted territorial tax systems—a larger share of the income of U.S. businesses was left offshore.[168] Unsurprisingly, the dip in U.S. earnings that were left overseas in 2005 occurred due to a temporary tax holiday that allowed businesses to repatriate their profits to the United States at a much lower tax rate.[169]

Figure 3-10



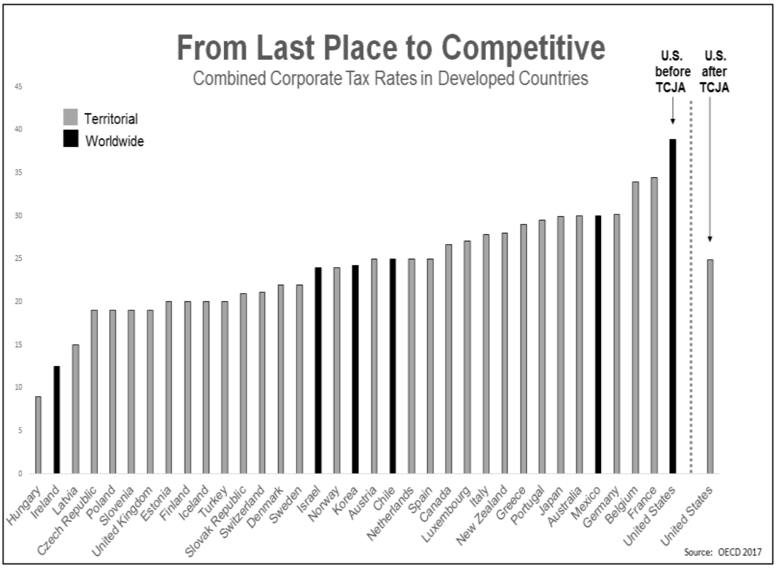
Additionally, in September 2017, CBO noted that America's high corporate rate and worldwide tax system encouraged U.S. businesses to convert their tax headquarters to foreign nations—a practice known as a corporate inversion—or engage in other methods of shifting income away from the United States so that it can be taxed at the lower rates of other nations.[170] A corporate inversion can be accomplished through a U.S. company's merger with or acquisition of a foreign company, after which the foreign company's home country with a more favorable tax system becomes the place of incorporation.

CBO noted that the net tax savings of inverted companies translate into an even greater loss for the U.S. Treasury, as more tax payments go to the low-taxing foreign jurisdiction and significantly less go to the U.S. CBO estimated that though the average tax savings of inverted companies was $47 million, payments to the U.S. were on average $65 million—or 46 percent—lower than they would have been without the inversion.[171]

At the time, CBO projected that unless America changed policy direction, inversions and other profit shifting would grow over the decade, reducing U.S. corporate tax revenue by $12 billion more in 2027 than if profit-shifting activity remained constant at 2017 levels.[172] CBO expected this growth in spite of strenuous efforts by the Obama Administration to shut down inversion transactions through regulation, further proving that treating the symptoms of an uncompetitive tax system was an ineffective and incomplete solution.

In order to prevent the loss of headquarters, jobs, and investment to nations with more attractive tax systems, TCJA lowered America's Federal corporate rate from 35 percent to 21 percent and moved to a competitive territorial system. The chart below, which incorporates both national and average sub-national taxes in OECD countries, illustrates how these two changes put America on a much more competitive footing with other developed economies.

Figure 3-11



Additionally, TCJA includes several provisions to limit the artificial shifting of U.S. profit to overseas locations. JCT analyzed the full effect of these anti-abuse provisions, the corporate rate cut, and new territorial system and concluded:

> *The provisions affecting taxation of foreign activity are expected to reduce the incentive for this "profit-shifting" activity... The macroeconomic estimate projects an increase in investment in the United States, both as a result of the proposals directly affecting taxation of foreign source income of U.S. multinational corporations, and from the reduction in the after-tax cost of capital in the United States due to more general reductions in taxes on business income.*[173]

The Relationship between Corporate Taxes and Wages

Since passage of TCJA, companies across America have announced worker bonuses, pay raises, investment in worker training, more generous benefits, greater investment in the United States, movement of overseas production to the United States, and increased contributions to charity.[174] In the *Report* CEA calculated that as of the date of publication, 4.2 million workers were enjoying higher wages, salaries, bonuses, and contributions to 401(k) retirement accounts as a direct result of TCJA. CEA also estimated the worker bonuses totaled $2.4 billion and that newly announced business investments totaled $190 billion.[175]

Despite tangible benefits to workers that are already apparent, economic debate continues over the incidence of corporate taxes, that is, which taxpayers bear the burden of the corporate tax. Prior to 2013, JCT assumed that the corporate tax was borne solely by owners of capital, generally the shareholders. However, in 2013 JCT announced that based on economic literature it would begin attributing 25 percent of the burden of corporate taxes to labor—in the form of lower compensation for U.S. workers—when analyzing the impact of various policy changes on taxpayers.[176] JCT cited a range of opinions on the matter. For example, in 2006 a working paper prepared by the Congressional Budget Office concluded that workers bear 70 percent of the burden. JCT therefore indicated it could no longer ignore the impact on workers due to the increasing weight that recent economic literature placed on labor.

The extent to which corporate taxes are borne by owners of capital or labor hinges on the mobility of capital. If capital is mobile, it will shift from high-tax to low-tax jurisdictions, leaving labor, which is less mobile, to bear the burden. Economists who assume America is a closed economy tend to claim that reducing corporate taxes will only benefit shareholders and other owners of capital, but that is not a sound assumption in today's global economy. It is much easier to move funds to the United Kingdom, for example, than for a worker to move to the United Kingdom. JCT's acknowledgement of the open nature of the U.S. economy was part of the reason for attributing at least some of the long-run effect of corporate taxes to labor.

However, JCT also considered other economic studies positing that the U.S. economy is so large that there are limited opportunities to shift capital overseas.[177] This led the authors to conclude that owners of capital bear a much larger share of corporate taxes, which perhaps influenced JCT to allocate a relatively small share to workers.

The trend outlined in the previous section of growing U.S. earnings kept offshore, corporate inversions, and profit shifting to lower-tax jurisdictions provides ample evidence of the mobility of U.S. capital despite the large size of our economy. For this reason, the JEC Majority believes that JCT may have underestimated the impact of corporate taxes on the wages of workers. For its part, CEA noted that profit-shifting activity is highly responsive to tax rate differentials and that U.S. business profits kept offshore tend to reduce the wages of U.S. workers.[178]

CEA analyzed the impact on wages of two pro-growth elements of TCJA that reduce the cost of capital—the reduction in the Federal corporate rate from 35 percent to 21 percent and the introduction of expensing of business investments. After examining a range of economic literature and cross-country studies, CEA concluded that these two reforms alone would boost annual average household incomes by about $4,000 or more in the long run.[179]

It is also important to remember that stock ownership is not exclusive to wealthy individuals. For example, an estimated 37 percent of corporate stock is held in retirement accounts, indicating that average workers would benefit from lower corporate taxes through more income in retirement.[180] Additionally, high taxes that burden either capital or workers damage the levers of economic potential outlined at the beginning of this chapter—labor supply, capital investment, and productivity.

Tax Simplification for Individuals

As noted earlier, the cost of filling out tax forms alone costs America more than $400 billion annually in lost productivity, a figure CEA also cited in a discussion of the excess burden of taxation on the economy.[181] Compliance costs, along with the cost of tax avoidance schemes, are part of the excess burden—or deadweight loss—which occurs when it costs the economy more than one dollar to collect one dollar in taxes. TCJA contains several provisions that offer greater simplicity to both individuals and businesses, which will reduce the excess burden of taxation.

The increased standard deduction simplifies the taxes of millions of Americans who would otherwise itemize a series of deductions. TCJA also eliminated a complex limit on itemized deductions that reduced their value for some taxpayers. Additionally, the law repealed a complicated phase-out of personal exemptions, choosing instead to replace personal exemptions with a straightforward $500 tax credit for non-child dependents. TCJA eliminated other targeted provisions that added extra lines to individual tax forms in favor of broad-based tax relief for all taxpayers.

Earlier versions of TCJA also would have repealed the individual Alternative Minimum Tax. The AMT operates as a parallel tax system that requires Americans to calculate their tax burden under two separate structures. The AMT tends to ensnare taxpayers with many children, a second mortgage, high State taxes, or who otherwise claim various tax benefits. AMT taxpayers must then recalculate their taxes under a different set of rules, usually resulting in paying much higher taxes.[182]

The AMT was originally inspired by 1969 testimony of the then-Treasury Secretary to the Joint Economic Committee that 155 affluent individuals paid no income tax.[183] Yet, instead of targeting the ultra-wealthy the AMT hit almost 4.5 million taxpayers during the 2016 tax filing season, including thousands of Americans with incomes of less than $15,000.[184] Over 10 million taxpayers in the same year had to use complicated calculations on a separate form to determine whether AMT might apply, and millions more had to do other calculations to see whether they were required to fill out that form.[185]

The final version of TCJA increased the amount of income that is exempt from the individual AMT rather than fully repealing it. While this provides additional monetary relief from the AMT, it does not lift the complexity burden for taxpayers who will still have to determine whether they owe AMT. The JEC Majority recommends that lawmakers consider fully repealing the Alternative Minimum Tax.

Tax Simplification for Businesses

Witnesses at the October 2017 JEC hearing on tax reform and entrepreneurship frequently mentioned tax complexity as a barrier for startups and other small businesses. The National Federation of Independent Business (NFIB) reports that tax compliance is 67 percent more costly for small businesses than for larger ones.[186] Large businesses enjoy economies of scale and can dedicate a team of professionals to compliance, while small startups generally need to focus precious resources on business survival and have difficulty affording professional help. Further, a study by the U.S. Small Business Administration noted that the tax system represents 80 percent of the overall Federal paperwork burden.

The hearing testimony recommended expanding the use of cash accounting for startup businesses. The two most common types of accounting are the cash and accrual methods. The cash method is considered simpler because it generally reflects the cash flow of the business; reportable income occurs when businesses receive payment and expenses are deducted when payments are made. Under the accrual method, taxpayers must report income when it is earned and payments when they are owed, even if payments are not made or received until a different tax year. As a result, a business may be taxed on phantom income it has not received yet and may never receive. Before TCJA, companies with $5 million or less in gross receipts could generally use the cash method, but the rules could be more or less restrictive depending on the type of business structure and activity, and a company could be forced to switch to the accrual method if it no longer qualified for the cash method under the maze of rules.[187] TCJA expanded the gross receipts test to $25 million and loosened other restrictions, allowing a larger universe of small businesses to grow without fear of triggering more burdensome accounting.[188]

TCJA's expansion of small business expensing and 100 percent bonus depreciation also provide relief from complexity. Traditional depreciation rules require business owners to track when an asset was purchased, which depreciation schedule applies to particular assets, and how much has already been deducted from the purchase price over past years. The Tax Foundation estimates that replacing depreciation with expensing would reduce annual tax paperwork costs by an estimated 448 million hours and $23 billion.[189] This is in addition to the other economic benefits mentioned earlier of higher business investments, economic growth, productivity, and wages, which is why the JEC Majority recommends that expensing be made permanent for businesses of all sizes.

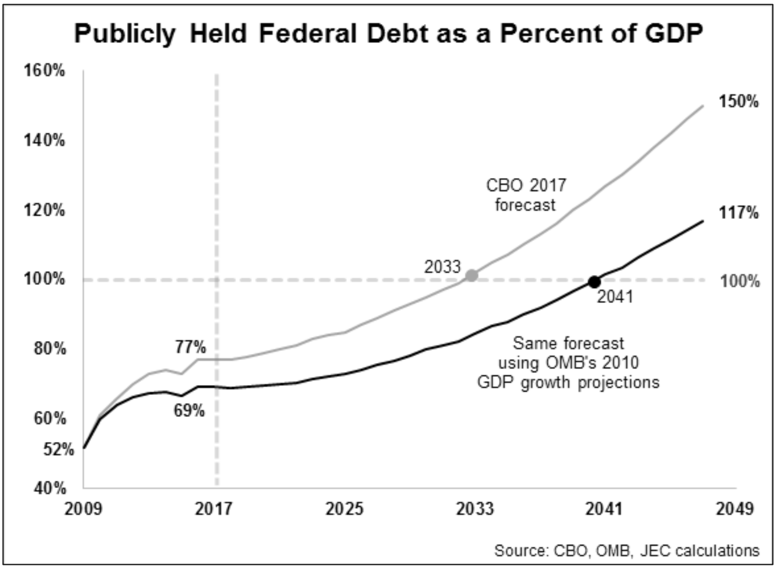
Expiring provisions in the tax code also create complexity and uncertainty for business owners and make long-term planning difficult, as it is unclear which tax rules will apply in a given year. Due to budget constraints and other factors, TCJA contains several provisions that expire, including bonus depreciation, the pass-through deduction, most tax relief for individuals and families, and several other provisions affecting businesses. The JEC Majority recommends that lawmakers make sound tax policy permanent by determining which provisions should be kept and which should be allowed to expire.

The Impact of Economic Growth on Deficits

Measuring debt as a share of GDP provides a useful guide for gauging an economy's ability to pay for the debt the Federal Government owes. The debt-to-GDP ratio can be reduced either by lowering the amount of debt owed or boosting the level of output a country produces. The debt-to-GDP ratio rose dramatically during the Obama Administration, worsened because the economy was growing slowly. The JEC Majority attributes much of this slow growth to the previous Administration's policies of increasing tax and regulatory burdens and the fact that most of the tax revenue was spent on Government transfer payments instead of productivity-enhancing investments.

The top line on the chart below is CBO's most recent projection of the long-term ratio of debt to GDP.[190] The bottom line shows that CBO's debt trajectory would have been much less steep had the Obama Administration's FY2010 projections of economic growth materialized.[191] This does not even include the macroeconomic effects of higher GDP on Federal revenues, which would have lowered the debt trajectory further. Because the promised growth dissolved into sluggish growth, subsequent Administrations and Congresses face a substantially more challenging fiscal situation.

Figure 3-12



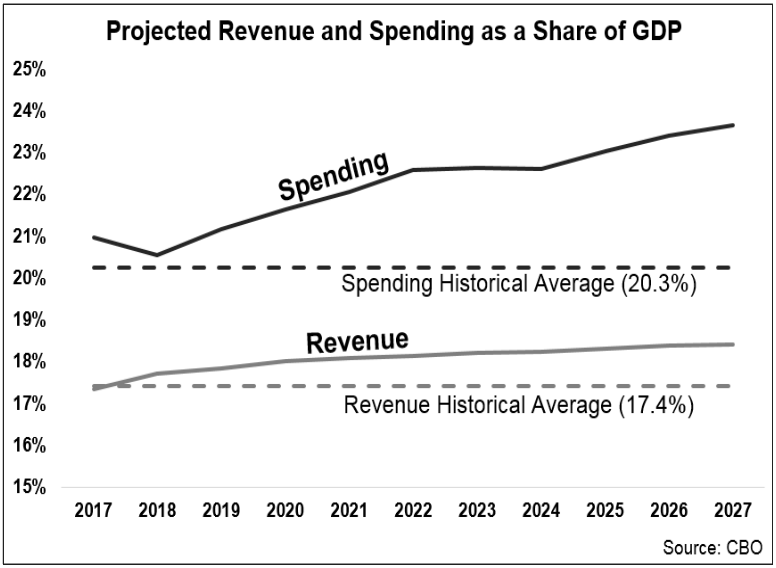
Faster economic growth not only reduces the debt-to-GDP ratio by enlarging the economy but lowers the nominal amount of deficits and debt as well. A growing economy generates more tax revenue through a greater number of people working and higher profits. It also reduces Federal spending on safety-net programs such as unemployment insurance and welfare payments. Similarly, slow growth worsens deficits. For example, in its January 2016 budget and economic projections, CBO estimated that if real GDP growth was even 0.1 percentage point lower than projected over the decade, deficits over the same period would grow by a total of $327 billion.[192]

TCJA aimed to boost economic potential and reset the economic growth trajectory to a higher level by transforming a broken tax code into one that allows faster economic growth, which would have the added benefit of making Federal debt less challenging to manage over the long term. The need for fundamental rather than incremental reform is why Congress dedicated $1.5 trillion in net tax relief within the first 10 years for TCJA.

Some critics who seemed less concerned about increases in Federal spending and debt of a far greater magnitude under the previous Administration now cite concerns about TJCA's impact on deficits and debt. The debt-to-GDP ratio nearly doubled on the Obama Administration's watch,[193] fueled by deficit spending on transfer payments and not growth-producing investments, and its policies *slowed* the recovery far below what is normal after a severe recession. TCJA facilitates *faster* economic growth, which renders deficits less threatening and creditors less concerned. The JEC Majority continues to believe that long-term debt represents a looming problem, but the major drivers of deficits and debt continue to be ever-growing mandatory spending programs, not a lack of revenue.

In June 2017, CBO projected that Federal revenue would remain above its historical average over the next decade, while spending will accelerate at a much faster rate.[194] Mandatory spending, which accounts for roughly two-thirds of the spending line in Figure 3-13, is expected to grow in nominal terms by 70 percent over the decade, far outpacing expected growth in GDP over the same period.[195]

Figure 3-13



Or from another perspective, the $1.5 trillion in net tax relief from TCJA is roughly equivalent to the amount of tax increases enacted during the Obama Administration, including over $1 trillion from the ACA and hundreds of billions more from the 2013 increase in individual and capital gains taxes due to the so-called "Fiscal Cliff" negotiations.[196] But while the Obama Administration's tax increases tended to slow economic growth, the tax relief in TCJA will accelerate economic growth.

CEA cited a study by Christina Romer, former CEA Chair in the Obama Administration, and well-known economist David Romer, which found an inverse relationship between tax increases and economic output.[197] Their research indicated that the effect of an exogenous tax increase—or in other words, an isolated change not affected by other factors that determine output—is not only large but highly statistically significant. Romer and Romer removed other factors that determine output—such as the business cycle, countercyclical Government fiscal policy and monetary policy—

and concluded that a tax increase equal to one percent of GDP lowers output up to three percent ten quarters later.[198] Thus, a tax reduction of equal magnitude to the tax increases enacted in the previous Administration was necessary to counteract residual negative effects on the economy.

Additionally, it is important to remember that TCJA was enacted under budget reconciliation procedures, which require that legislation not add to long-term deficits after the first 10 years. And even when examining the more temporary budget effect in the first 10 years, the tax reduction represents roughly three percent of Federal revenues and 0.6 percent of the GDP that CBO previously projected over the next decade, even without taking economic growth effects into account.[199] When growth effects are factored in, the temporary impact on deficits in the first decade is smaller still, even according to the relatively modest macroeconomic estimates of JCT.[200]

CEA projects a more robust effect on economic growth from TCJA than JCT. In addition to the effect on household income mentioned above, CEA estimates that lower corporate rates and expensing of business investment alone will boost GDP by two to four percent in the long run by lowering the cost of capital. If businesses expect that expensing will be made permanent, CEA projects the increase in GDP will be at the high end of that range.[201]

Conclusion

The *Tax Cuts and Jobs Act* will encourage potential workers to rejoin the workforce and boost capital investment and productivity. Tax reform will also help counter the policy constraints that burdened the economy under the previous Administration. All of these are necessary for restoring our

Nation's economic potential and creating greater prosperity for American households.

Recommendations

In order to build upon the progress achieved by TCJA, the JEC Majority recommends additional reforms that:

- Make permanent TCJA's provisions affecting individual taxpayers and pass-through businesses;
- Make expensing of business investments permanent;
- Provide additional tax simplification, including full repeal of the individual Alternative Minimum Tax; and
- Address the growing Federal debt through reforms to mandatory spending programs, which are the true drivers of deficits and debt.

Chapter 4: Regulation

- *The Report* discusses the benefits and costs of regulation extensively, drawing particular attention to less apparent costs such as from land use restrictions, which decrease labor mobility and job creation. It cites economic literature showing large burdens on the economy from unexpected regulatory costs.

- While regulation—and its economic impact—are not easy to measure, varied approaches all show that regulation in America has substantially increased both over time and in relation to a number of other countries.

- The Trump Administration's deregulatory actions eliminate unnecessary and harmful rules, and importantly, exceed the number of new regulations, thereby expanding economic opportunities.

Regulation That Helps or Hinders The Economy

When examining the relative health of economies around the world, one of the most important determinants of prosperity is the freedom of markets within a nation.

Markets are the Engine of Economic Growth

Natural resources, labor, capital, and technology determine economic growth in the long run. However, certain countries rich in factors of production do not succeed economically (Venezuela), while others with few of these factors become some of the world's wealthiest economies (Singapore). Institutional frameworks set them apart—government control and discretion in the former, and the freedom to conduct private commerce under predictable, generally unobtrusive laws in the latter.

Since the collapse of the Soviet Union, many countries have relied more upon markets. These include the social welfare states of Western Europe that already had market economies. Twenty-eight countries formed the European Union (EU) with no tariffs among them; some privatized state-owned enterprises, and many reduced business taxes and regulation. As Chapter 1 documents regarding corporate taxes and product market regulations, various EU countries continue efforts to scale back government overreach and liberalize markets to raise low economic growth. A prominent example is France since the election of President Emmanuel Macron last year.[202]

Markets Can Deal with Economic Challenges

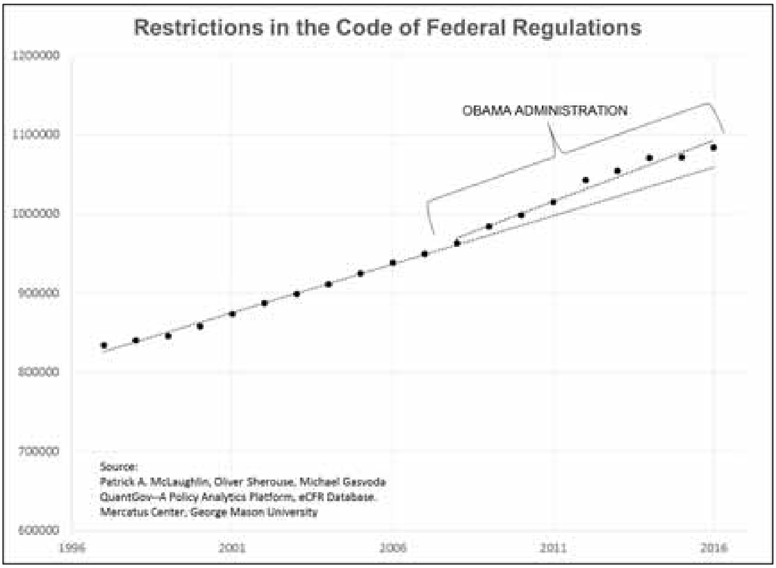
The experience of countries that have risen from poverty by making their institutions conducive to private entrepreneurship, particularly the ones with few natural resources such as South Korea, serves as a reminder of how best to address various challenges at home. Changes in the factors of production such as an aging workforce (see Chapter 1), and social problems such as the opioid crisis (Chapter 8) can make it more difficult to continue raising the standard of living. At the same time, advancing technologies continually demand new skills and new infrastructure. These developments challenge the economy to keep resources fully employed and productive.

Allowing markets to work without unduly restraining them is most effective. One kind of regulation tends to be more helpful in that pursuit than another. Economics Nobel Prize laureate F. A. Hayek distinguished "formal" rules that facilitate the use of resources and are almost a means of production from "substantive" rules by which governments direct resources to particular uses:

> *The difference between the two kinds of rules is the same as that between laying down a Rule of the Road, as in the Highway Code, and ordering people where to go; or better still, between providing signposts and commanding people which road to take.*
>
> *When the government has to decide how many pigs are to be raised or how many busses are to be run, which coal mines are to operate, or what price shoes are to be sold, these decisions cannot be deducted from formal principles or settled for long periods of time. They depend inevitably on the circumstances of the moment, and, in making such decisions, it will always be necessary to balance one against the other the interests of various persons and groups. In the end somebody's views will have to decide whose interests are more important ...*[203]

The Obama Administration prioritized social objectives and viewed markets as failing these objectives. Therefore, his Administration felt justified in advancing discretionary and prescriptive government intervention without publicly demonstrating concrete net benefits. From 2008 to 2016, the rules proliferated even faster than usual in health care, environment, finance, consumer products, employment, transportation, and more. What Hayek called substantive rules resulted in over 10 million words of tax rules[204] and 178,277 pages in the Code of Federal Regulations (CFR) as of 2015. The Mercatus Center counted 1,080,000 regulatory restrictions in the CFR at the end of 2016—compared with 400,000 in 1970—and estimated it would take three and one-half years to read.[205]

Figure 4-1



The Obama Administration attributed productivity gains to social regulation, and its Office of Information and Regulatory Affairs (OIRA) showed much larger total benefits than costs from Federal regulation in its annual reports to Congress under the *Regulatory Right-to-Know Act*.[206] For example, the Obama OIRA estimated aggregate annual benefits between $269 and $872 billion and costs between $74 and $110 billion (2014 dollars), for the major Federal regulations it reviewed from October 1, 2005, to September 30, 2015. The 2017 OIRA report released on February 23, 2018, shows even larger annual benefits of rules issued during the last decade, ranging from $287 to $911 billion and estimated costs in a similar range to last year between $78 and $115 billion (2015 dollars).[207]

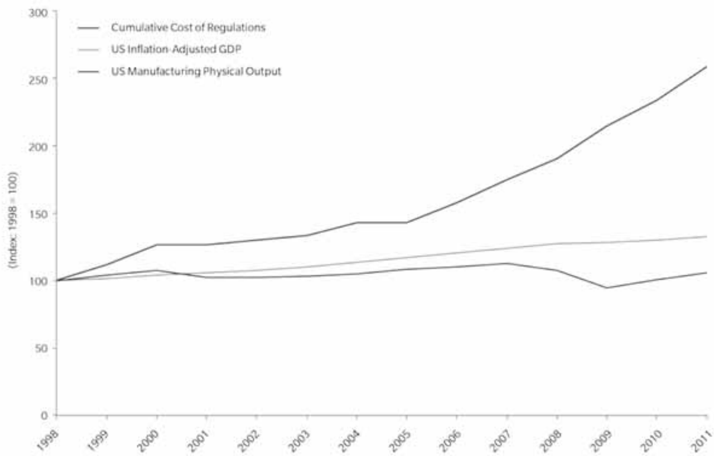
While regulatory costs clearly depressed business formation and expansion as shown in Chapter 1, OIRA never showed how and when claimed regulatory benefits would increase GDP.[208] Tangible regulatory costs beyond agency expenditures are not subject to any budget constraint, and they have accumulated much faster than the rate of economic growth.

The vast majority of regulations have not undergone any net benefit test and agency estimates do not include the cost of duplicative, conflicting, or even contradictory rules nor the costs arising from complying with a multiplicity of regulatory requirements. However, even by the regulators' own incomplete estimates, the cumulative regulatory burden has been rising in proportion to the economy.

Figure 4-2 from a study by NERA Consulting shows that the cost growth of major Federal regulation far outstrips GDP growth, and even more so output growth in manufacturing, a sector particularly burdened by prescriptive regulations. From 1998 to 2011, physical manufacturing volume grew by 0.4 percent, real GDP grew by 2.2 percent, and the cumulative cost of major regulations grew by 8.8 percent annually, inflation adjusted, based on NERA's summation of costs calculated by Federal agencies for their own rules.[209]

Figure 4-2

Cumulative Cost of Major Regulations vs. GDP and Manufacturing Output
1998-2011, Inflation Adjusted



Note: Rules with net present value cost estimates have been annualized assuming a 7% discount rate and 20-year regulatory lifetime.

Sources: OMB dataset; U.S. Department of Commerce: Bureau of Economic Analysis (via Federal Reserve Bank of St. Louis) and U.S. Department of Labor: Bureau of Labor Statistics (via Federal Reserve Bank of St. Louis; NERA analysis.

Those who resort to government prohibitions and mandates should prove their net public benefit. Government policies and mandates that raise workers' "reservation wage, which is the minimum they will work for; impose price and wage controls; or prescribe production methods, product attributes, and terms of employment may serve particular interests and political priorities. However, as Hayek pointed out, they are presumptively counterproductive to the optimal allocation and use of scarce resources.

Containing Growth of Regulations Long-term

Starting in 2017, Congress and the Administration began rolling back the regulatory surge to the greatest extent since Ronald Reagan, but Executive Orders reduced much of the regulatory burden, and another Administration could reverse those in the future.

One method of preventing a resurgence of rulemaking is to require an affirmative vote of Congress in order for major rules to go into effect and create a statutory requirement that certain regulations be eliminated in order for new ones to go into effect.[210] Another approach would extend cost-benefit analysis to more rules and to all Federal agencies, including independent agencies[211], while establishing a “regulatory budget” that Congress sets to limit the total regulatory burden each Federal agency imposes on the U.S. economy in a given year.[212] This latter approach should include improvements to the analytical methods agencies employ by giving stakeholders a greater say. The results of enhanced cost-benefit analysis then should carry increased legal significance for agency rulemaking and in the adjudication of disputes.

As mentioned earlier, it is also important to compare total regulatory cost growth with the growth rate of the economy. Perhaps fewer rules should be implemented during recessions, for instance, or particular ones introduced only when the economy has recovered, which was a consideration when President Obama delayed EPA’s ozone rule in 2011.[213] Applying a more thorough evaluation process to more rules and holding the rate of growth in cumulative regulatory cost to the rate of GDP growth would allow Congress to prevent new cost accumulation from exceeding what the economy can afford. The existing process, by which OIRA sums regulatory costs and benefits of major regulations in an annual report to Congress, lends itself to that approach. Setting a limit for total regulatory cost growth at the rate of GDP growth also would motivate an administration to manage the regulatory state by rescinding ineffective rules, prioritizing implementation of new ones, and devising rules that facilitate rather than hinder market function.

Conclusion

As noted in Chapter 2, Government responses to the recession and other policies progressively constrained the economy's potential, and before the surprise outcome of the last election most expected they would continue to do so. The United States fares better when the price and wage system can redirect the allocation of resources and motivate innovative solutions than when the government takes control and expands regulation, bureaucracy, transfers, and taxes. A quantitative regime that contains the growth in cumulative regulatory costs could help assure that Government does not increasingly weaken market function.

Recommendations

- The design of regulations generally should prioritize enhancing market function rather than attempt to impose preconceived outcomes.
- Congress should consider reforms that prevent a resurgence of the regulatory burden.
- OIRA should give priority to rules that benefit the economy. Regulatory benefits often do not increase economic output even though they are monetized in cost-benefit analysis the same as costs. Regulatory costs tend to materialize before the benefits and reduce output.
- Once the Administration has streamlined the massive existing regulatory burden, it should take steps to stabilize cumulative regulatory costs relative to the size of the economy.

Chapter 5: An Education and Training System Worthy of American Workers

- Despite massive spending, American high-school students perform far below that of other developed countries.
- Limited vocational and technical training, and choice of school, reduce student preparedness and employment options.
- Federal aid programs incentivize student-debt accumulation, passing costs onto taxpayers.
- High-school and college graduates fail to provide skills demanded by today's employers.

Introduction

America's education system is an expansive, well-funded combination of public and private, K-12 and post-secondary institutions. Total elementary and secondary enrollment exceeded 55 million in 2015, with 50.3 million students attending public schools and 5.3 million in private schools.[214] College enrollment was 20.2 million in the fall of 2014.[215] Elementary, secondary, and college enrollments are projected to rise in the coming years. In 2013, total public and private spending on all levels of education was 6.2 percent of GDP—higher than all Organization for Economic Cooperation and Development (OECD) countries except for the United Kingdom, New Zealand, Denmark, and Norway.[216] Similarly, American elementary and secondary spending per student was more than all OECD countries except Luxembourg, Switzerland, Norway, and Austria.[217]

Despite considerable funding, K-12 students perform relatively low compared to other countries and post-secondary schools do not always provide students with the required skills for gainful employment. In 2015, American secondary students age 15 ranked 25th internationally in science, 23rd in reading, and 40th in math;[218] and at the end of 2017 the skills gap contributed to nearly 6-million unfilled jobs.[219]

Many Americans attend high-quality K-12 and post-secondary schools that suit the individual needs and interests of the student, while others do not. Elementary and secondary school students often face barriers to a quality education, including State-government policies that force students to attend a public school that is underperforming and/or a poor fit for a child—a school based solely on a student's address. K-12 and post-secondary schools often fail to offer sufficient vocational and technical training for students not pursuing a 4-year degree. Post-secondary education barriers include a lack of awareness of educational options because of an over emphasis on traditional 4-year colleges and universities.

School choice may be beneficial by allowing students to attend a better fit public or private school. Public-school choice includes choice within the same school district (intra-district), in another school district (inter-district), a charter school, or a magnet school. Private-school choice includes tuition assistance in the form of vouchers, individual tax credits or deductions, tax-credit scholarships, and education savings accounts. Parents may also choose homeschooling.[220]

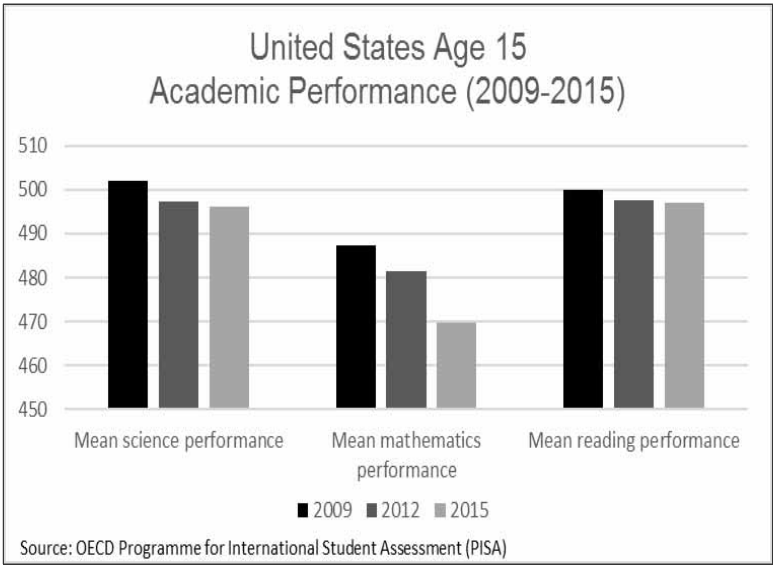
Access to the best-fit post-secondary school is achievable through a trade school, community college, or a traditional 4-year college or university; however, some poorly advised students pursue a 4-year degree, accumulate substantial debt, and yet fail to complete the school program or graduate with an unmarketable degree.

These students may have been better served in a trade school or community college. The result is a skills gap, leaving millions of job openings, and growing taxpayer costs through the inefficient Federal student loan program. By better matching students with the most appropriate post-secondary education—which may not be a 4-year degree—workers, firms, and taxpayers all benefit.

ELEMENTARY AND SECONDARY EDUCATION

In recent years, American student academic scores have fallen. The OECD Program for International Student Assessment (PISA) periodically assesses 15-year-old student performance in science, math, and reading; from 2009-2015, all three discipline's scores have fallen (Figure 5-1). With 90 percent of Americans attending public schools, these scores capture a troubling trend of declining student performance in our nation's public school systems. Another public-education concern is the low 4-year high school graduation rate. Nationally, the 2015 graduation rate was 83 percent, ranging from a low of 69 percent in New Mexico to a high of 91 percent in Iowa. Most minority graduation rates are even lower.[221]

Figure 5-1



For decades, Federal Government attempts to improve public K-12 schools have not led to the desired improvements—low graduation rates and falling performance persist. However, in hope of improving educational outcomes, a growing number of state governments and the Federal Government—in Washington, D.C.—have introduced school-choice options for families who wish to have students attend a school other than their assigned district school. By allowing students—with special needs, who are enrolled in underperforming public schools, or who are in low-income families that are dissatisfied with their children's education—the choice to attend a better-fit school, they are given the opportunity flourish in a more suitable academic environment.

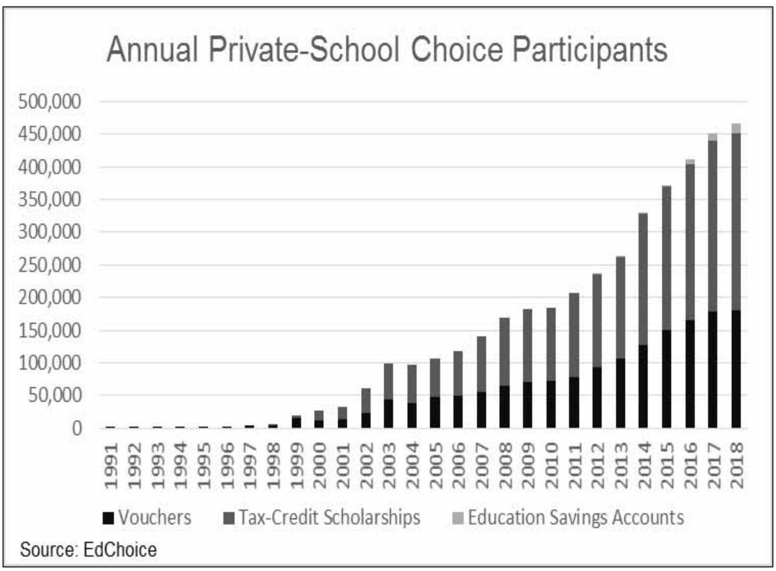
Prior to these recent school-choice expansions, American public education was unusual as a large government-funded program that generally prohibited or greatly limited provider choice. As stated in the *Committee's* December, 2017 analysis, "*The Fiscal Effect of Private-School Vouchers*," Americans are able to choose the provider of goods or services for most other large government programs.

> *Social Security beneficiaries can choose how they spend their benefits. Medicare and Medicaid recipients generally choose their health care providers. Supplemental Nutritional Assistance Program (SNAP) recipients can choose where they shop. Federal Housing Choice Voucher program recipients can choose where they live, and in fact, the federal government touts the accommodating aspect of housing choice: 'Since housing assistance is provided on behalf of the family or individual, participants are able to find their own housing, including single-family homes, townhouses and apartments.' Thus, adding choice in education is consistent with the tradition of other large government-funded programs'*[222]

Fortunately, a growing number of states and localities are acknowledging school-choice benefits by implementing new programs that help match more students with the most appropriate school. Public school choice expansion includes: a more than doubling of public-charter-school enrollment to more than 3 million from 2008-2017;[223] a 24 percent magnet-school enrollment increase to 2.6 million from 2010-2016;[224] and today all states and Washington D.C.—except for Alabama, Illinois, Maryland, and North Carolina—have clear intra-district or inter-district open enrollment options.[225]

Private-school choice is also expanding. The past 20 years have seen the introduction of new programs and annual student participation rise from roughly 1,000 to more than 450,000 (Figure 5-2).[226] In addition to their popularity—which is evident by the high level of voluntary participation—research finds other benefits including: higher academic outcomes of choice participants; higher academic outcomes of public schools through competition; lower school racial segregation; and greater student civic values and practices.[227] Also, some school-choice programs offer taxpayer savings and may simultaneously increase public-school per-pupil education spending. For example, private-school vouchers offer families the opportunity to have their child attend a private school paid for by a state-government issued voucher. Taxpayers benefit from lower education costs as voucher amounts are set below the public-school education costs—aggregate estimated 1990-2015 taxpayer savings is $3 billion.[228] Additionally, with relatively stable public-school funding, and fewer students in a school, there is higher per-pupil spending.

Figure 5-2



While both public-school and private-school choice expansion are improvements to America's education system, private-school offers a wider range of school options including schools specializing in special-needs students and religious schools—the latter of which are not publically available—and can save taxpayer dollars.

Public and private schools could serve students better by offering more options in vocational and technical training for the many students who choose not to attend a 4-year college. The German education system offers multiple secondary-school tracks, a college bound track or a vocational track that incorporates apprenticeships. Upon successful vocational completion, students are awarded certification in a trade or field of work.

Economists Edward Lazear and Simon Janssen *Wall Street Journal's* op-ed explain the earnings of German non-college graduates relative to their American counterparts.[229]

> *Germans with vocational apprenticeships earn about 92% of the average German wage; American high-school grads earn only 70% of the average American wage. Germans with vocational apprenticeships are considerably better off than their American counterparts. Data show this to be true for nearly 15 years.*

The skills gap indicates that Americans can be better equipped for post-secondary school employment. School-choice participants represent a small portion of total K-12 students. However, due to new and expanded programs more families are able to have a say in the schools their children attend. Moving forward, the combination of greater school choice and more vocational training will better prepare students for productive post-secondary work.

Post-Secondary Education

About two in three high-school graduates enroll in a 4-year college the following fall semester.[230] Many successfully earn a college degree and have long and rewarding careers, others graduate without marketable skills, and still others drop out of school; all categories of students often leave college with student debt. Federal intervention in education financing has fueled a number of problems including: tuition inflation; exposing taxpayers to growing Federal student-debt defaults and loan-forgiveness costs; and incentivizing debt accumulation by students. Additionally, the focus on bachelor's degrees, as opposed to technical and vocational training, has failed to close the skills gap, leaving workers unemployed and firms with unfilled positions. Clearly, America can do a better job preparing workers for a successful and rewarding career.

Over the past 30 years, tuition increased 225 percent more than inflation.[231] This increase is partly driven by schools' easy access to Federal student loans. When the Federal Government increases annual student loan amounts, colleges and universities raise their price and absorb the increase. As noted in the 2017 *Response*, a Federal Reserve study found that every subsidized student-loan dollar received by a college increased tuition by 60 cents, and every Pell Grant dollar received increased tuition by 40 cents.[232]

Federal student debt and taxpayer costs are rising. Many students find that the only way to afford a college education is to take out large student loans. Rising costs and the 2010 *Health Care and Education Reconciliation Act*—a Federal takeover of student loans—caused the doubling of Federal student debt in the past 8 years to about $1.4 trillion (see Chapter 1). Federally-run student debt means taxpayers must pay for the five million borrowers who have defaulted.[233] Additionally, the growth of Obama Administration student-loan forgiveness programs such as *Pay as You Earn* (PAYE), *Revised Pay as You Earn* (REPAYE), and *Income Based Repayment* (IBR) add costs by transferring college debt from students to taxpayers. The 2017 *Response* explained that these programs cap repayment amounts at 10 or 15 percent of discretionary income, and they forgive all outstanding debt after 20 years of payments.[234] *The Wall Street Journal* reports that loan forgiveness programs are pushing the student loan program toward deficits.[235]

Colleges and universities are also unaccountable for Federal student-debt defaults. If a student fails to complete the program or graduates with an unmarketable degree and is unable to make student-loan repayments, the school is financially unaffected. Schools receive Federal dollars during enrollment periods; following graduation, or pre-graduation student separation from the institution, all of the Federal student-debt risk falls on taxpayers.

Many students pursing a bachelor's degree would be better served by pursuing an associate's degree. Columbus State Community College President David T. Harrison explained at the Committee's July 2017 hearing, *A Record Six Million U.S. Job Vacancies: Reasons and Remedies* that overemphasizing a bachelor's degree has caused more than half of these students to reach age 25 without a post-secondary credential or employable skill. Further, he notes the benefits to an associate's degree:

> *Harvard University notes that jobs requiring an associate degree are growing at three times the rate as those requiring a bachelor's degree. Only a third of new jobs will require a bachelor's degree, with the rest requiring an associate degree or technical certificate.*[236]

Today many employers are unable to fill job openings because applicants do not have the necessary skills. As Honda North America's Scot McLemore explained at the Committee's July 2017 hearing, *A Record Six Million U.S. Job Vacancies: Reasons and Remedies*:

> *Modern manufacturing equipment and processes involve an integration of pneumatic, hydraulic, mechanical and computer network components. Too often individuals do not possess the problem-solving ability, technical training, computer knowledge, or math skills needed to compete in the 21st century workforce.*[237]

The skills gap represents an opportunity to better serve Americans who prefer a post-secondary path other than a 4-year degree. High-school guidance counselors and community colleges are the perfect vehicle to inform students of these opportunities. Manhattan Institute's Diana Furchtgott-Roth testified about community colleges' important role for a specific student type at the Committee's July 2017 hearing, *A Record Six Million U.S. Job Vacancies: Reasons and Remedies*:

> *I performed research using individual students in the State of Florida in 2009, showing that C students, students with a C average, performed much better when they went to community colleges and took a high-return degree. They were earning about $45,000 a year when they graduated…*[238]

Programs such as the American Association of Community Colleges Pathways Project guide students toward high-return professions where they can get a good high-earing job upon graduation. Speaker Ryan notes efforts by the House to overcome the skills gap through the *Strengthening Career and Technical Education for the 21st Century Act*, which aims to help equip students for in-demand jobs.[239] Closing the skills gap through vocational and technical training benefits students and taxpayers.

CONCLUSION

America has a strong K-12 and post-secondary education foundation; but through more and better choices and higher-education financing reform, America can more effectively provide all students with the education that best meets their needs. The Trump Administration and Congress are working toward education improvements. Education Secretary, Betsy DeVos's support of local control and more choices will improve K-12 learning and empower parents in their children's education. Legislation such as Senator Lee's *Higher Education Reform and Opportunity Act of 2017* and Representative Foxx's *Promoting Real Opportunity, Success, and Prosperity through Education Reform Act* (PROSPER), among others, address post-secondary education financing inefficiency.

Recommendations

The Committee Majority recommends that policy makers examine alternative approaches to expand opportunities and promote responsible choices, such as:

- Stop portraying college as necessary for a good career and avoid disparaging vocations that are technical or hands-on.
- Look for ways to expand more local control in education.
- Expand and encourage education options including technical and vocational training.
- Support higher education as an investment good, not as a consumption good, resulting in a net positive return in earnings an education.

Chapter 6: Infrastructure

- Chapter 4 of the *Report* emphasizes the importance of infrastructure for economic growth and points out that supply has not kept up with increasing demand.
- The *Report's* primary emphasis on how infrastructure affects productivity stands in contrast to the Obama Administration's emphasis on demand stimulus.
- The funding mechanisms for public infrastructure projects are often problematic.
- Overregulation has slowed public and private infrastructure investment.

Public vs. Private Infrastructure

What is Infrastructure?

The nature of a debate can change the use of critical terms, and their changing meaning in turn can affect the debate over time. For example, regulation has become synonymous with restriction and prescription, but what is often forgotten is that regulation can also be enabling and facilitating (see Chapter 4 on regulation).

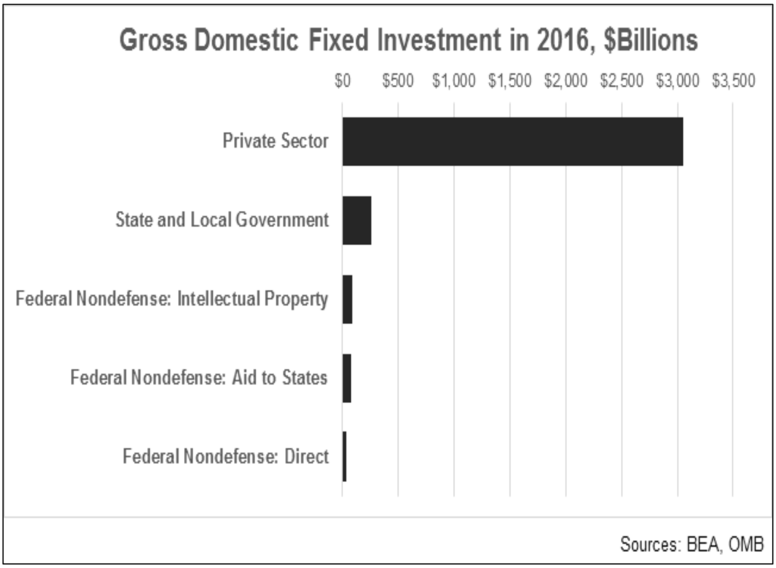
"Infrastructure" is another term that has taken on a particular meaning in policy discussions with a tendency to limit relevant considerations and narrow the range of policy options deemed appropriate. The term "infrastructure" is often used synonymously with public infrastructure, but such a premise is far too narrow.

In the context of a national economy, infrastructure assets are long-lived fixed assets that have an intermediate role in many supply chains for widely used goods or services. The private sector builds and maintains most infrastructure, which is not prone to systemic deficiencies and generally functions well. Under particular circumstances, government involvement can enhance economic efficiency—such as when it is difficult to collect a service charge from users—but different levels of government—Federal, State, or local—can choose from a range of measures short of public ownership and operation to facilitate the supply of infrastructure services. Indeed, various business models exist in other countries for providing a given infrastructure service.

Infrastructure Provision Is by No Means an Exclusive Government Function.

Infrastructure takes many forms and is supplied primarily by the private sector (Figure 6-1). In 2015, the Federal nondefense portion of gross fixed nonresidential investment was less than 6 percent. Federal, State, and local governments' combined portion was only 16 percent. Private investment in pipelines, power plants, satellites, cell towers, and so on—some of which also are considered public utilities or common carriers and regulated as such by the government—far exceeds government investment in projects such as highways, schools, and urban transit systems. If one excludes even half of private-sector gross domestic fixed investment as non-infrastructure, it still far exceeds what governments invest.

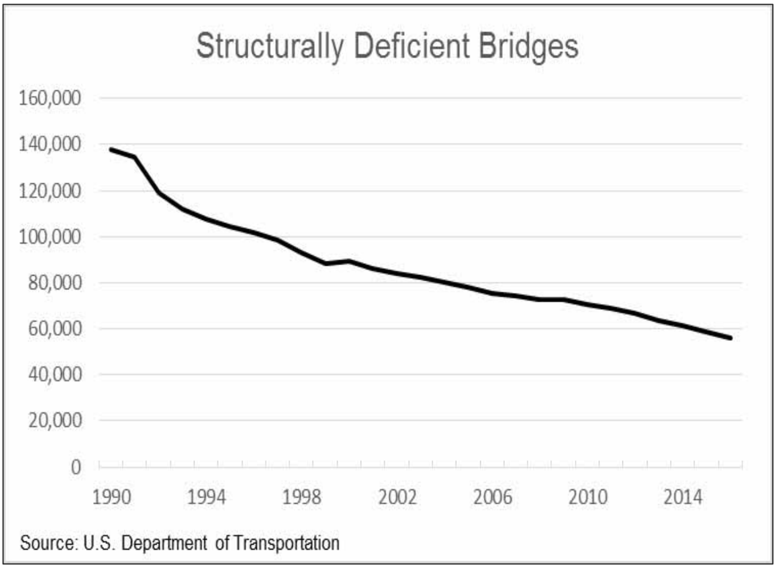
Figure 6-1



Petroleum pipelines are a good example of private infrastructure. Networks of crude oil, refined products, and natural gas pipelines that are built and operated by private firms traverse the country (see *Report*, p. 206). Pipelines have the same common use characteristic as highways, which State governments typically fund.

When critics say “American infrastructure is crumbling,” they are generally referring to roads and bridges. Yet the claim does not apply to most infrastructure, certainly not the private portion and not even the much smaller public portion. The number of structurally deficient bridges declined from 138,000 in 1990 to 56,000 in 2016 (Figure 6-2),[240] even as the number of highway bridges increased. Highway pavement has similarly improved. America’s rail transit systems, on the other hand, are deteriorating.

Figure 6-2



It is important to identify the specific reasons why certain kinds of public infrastructure are in poor condition. The reason could be that a government is not the right entity to own and/or operate the kind of infrastructure in question. Alternatively, the wrong level of government carries out the function, or that the government is not financing it in the right way.

The vast majority of structurally deficient bridges and roads are locally owned. States pay for road maintenance almost entirely out of user fees, while local governments pay for it with a combination of taxes and user fees. State and local transportation agencies collect about $2 in fuel taxes, tolls, transit fares, and other user fees for every dollar of Federal fuel taxes collected. Mass transit agencies, on the other hand, are not spending enough on the maintenance that they fund entirely with taxes. The quality of public infrastructure maintenance is inversely related to the share financed with general tax revenue.[241]

The line between government-administered and private-sector infrastructure is not the same in all countries. Over the past three decades, thousands of state-owned enterprises around the world have been sold to private buyers for trillions of dollars. Several other countries have privatized airports and harbors, for example, while they remain under government ownership and operation in the United States.[242] So-called public-private partnerships (P3s) have gained favor in other parts of the world. Privatization can take different forms and degrees. Governments may retain full or partial ownership and/or contract out operation and maintenance of facilities to private contractors, or they may allow private firms to build, manage, and profit from facilities under long-term leases. Alternatively, Canada fully privatized its air traffic control system by establishing a self-funding nonprofit corporation. Different governments do not necessarily exercise control over particular kinds of infrastructure the same way.

Different Reasons and Models for Government Infrastructure Provision.

Several considerations enter into whether and to what extent governments have a role in building and operating infrastructure. One is how difficult it is to charge for usage. Tollbooths and weigh stations introduce costs that in many cases make it prohibitive for private investors to recover their investment and earn a return from operating a road. In addition, traditional methods of collecting use charges from drivers cause traffic congestion and shipping delays. Governments have the power to tax and therefore can finance roads that otherwise would not be built even though they yield a net benefit.[243]

Another consideration is economies of scale relative to the size of the market. If scale economies lead to provision by a single supplier who can realize the lowest cost by virtue of supplying the entire market, a so-called natural monopoly, then the supplier can restrict the quantity and charge a price above cost. The presumption of natural monopoly has led governments to nationalize the providers in some cases (postal services) or to regulate them as utilities (electricity) or common carriers (telecommunications).[244]

A further reason for government involvement is “eminent domain.” The negotiation and transaction costs of obtaining rights of way from many individual property owners may be prohibitive for a private undertaking, blocking projects in which the value exceeds that of the use rights given up by the private property owners. Governments have the power to reduce negotiating and transactions costs and clear the way for investments that have a net benefit for society.

It bears emphasis that realizing greater public interest benefits through government financing of infrastructure, curtailing the potential for private market power, and overriding individual ownership rights can take varying forms and degrees. And it certainly does not imply that the government must replace private ownership and operation. A government should nationalize a function only for the most compelling reasons, because it thereby removes profitability as a gauge for value creation and the spur to achieve success. The persistently dismal conditions of some publicly owned and operated facilities and services (e.g., schools, mass transit systems, airports), derive from lack of accountability and corrective action that private stakeholders would demand if they were incurring losses.

A very important consideration is that the deeper a government’s involvement in supply, the more likely it will slow technological advancement. The concept of a natural monopoly, for example, holds technology constant. But technologies may develop that enable new market entrants to achieve lower costs and better service than those of the "natural monopolist." Utility and common carrier regulation—not to mention nationalization—protects existing suppliers and their methods from competition, delaying innovation.

Which Levels of Government Should Deal with Infrastructure?

The debate over infrastructure investment is taking place at the national level but most of the benefits are regional. Those who benefit should be the ones to pay for the cost and those who pay the cost should have oversight responsibility. Separating costs, benefits, and oversight invites inefficiency. Appropriately, States and localities build and operate most public infrastructure for this reason. To the extent that certain infrastructure facilities are beneficial nationally, supplemental Federal funding granted States and localities to increase supply may be useful, but the mechanism must not distort their incentives to invest in and maintain the facilities.

Is Infrastructure a Tool to Manage the Business Cycle?

The previous Administration represented debt-financed public infrastructure spending as a demand stimulus for the economy during the last recession, but long lead times make infrastructure generally ill-suited to accomplish countercyclical spending objectives. Long-lived fixed assets with a purpose of meeting specific, varied needs around the country that each take time to plan, implement, and construct cannot be accelerated in unison to lend the economy a short-term demand boost, whether they are public or private, debt or equity financed. Accordingly, President Obama found that there were not many "shovel ready" projects.

Governments can crowd out private investments that are more valuable by paying for preferred projects with higher taxes or by bidding up interest rates based on the power to raise future taxes.

Funding low-value projects this way is no less wasteful during a recession than afterwards. At full employment, the adverse effect may be more immediately apparent if better projects in progress lose funding as a result, but wasteful government spending during recessions will become apparent soon enough.

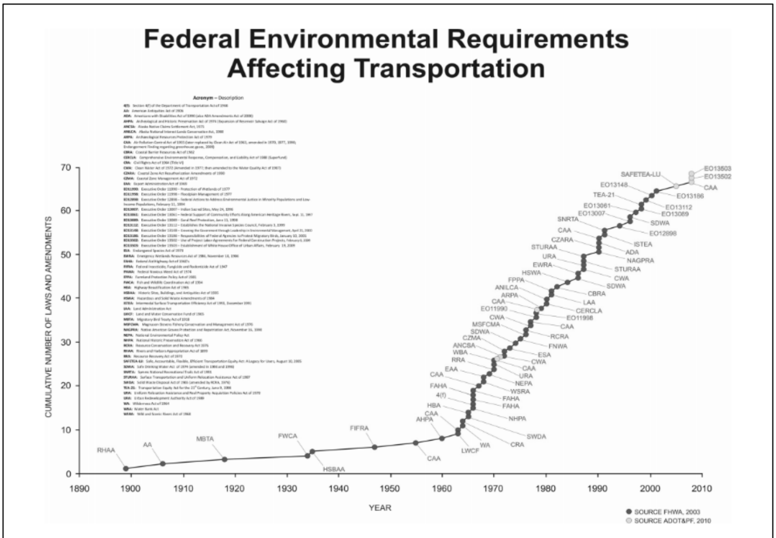
Productive infrastructure projects should also not be singled out and held back just because the economy is at full employment. The concern that infrastructure spending will be inflationary is misplaced, even when it is debt financed.[245] If there is an urgent need, then the benefit from addressing it presumably is greater than from some other investment, and the country should not have to wait until the next recession.

Productive infrastructure spending is an intermediate link in many supply chains that sustains and augments the economy's productive capabilities. Useful infrastructure strengthens the economy's supply potential just as factories, warehouses, and trucks. It thus will serve to reduce scarcity and prices. Financing construction of pipelines and bridges is not inherently more or less important than financing other worthwhile projects and should compete with their use of capital. Overinvestment can occur in an industry—as in the telecommunications industry during the late 1990s—but that by itself will not lead to inflation, because money that went into laying optic fiber cable was not available for other uses. When projects compete on an equal footing for the capital they use, they do not "overheat" the economy.

Problems with Regulation and Bureaucracy

Construction permits, regulations, and legal challenges combine to delay or thwart many projects. Nowhere is this more evident than with infrastructure. Bureaucracies and their approval process are often unaccountable and dysfunctional, as *The Rule of Nobody*,[246] for instance, documents. Many projects are held up for inordinate periods, including ones an administration especially desires. The deadline for completion of the California bullet train's first segment, initially mandated in 2010, was extended to 2022.[247] High-speed rail is the kind of project the Obama Administration and members of the same party favored. Larry Summers, former National Economic Council director in the Obama White House, complained bitterly about the drawn-out repair of a bridge connecting Boston and Harvard Square that began in 2012, which took five times longer to repair than it to build a century ago.[248]

Figure 6-3



Source: Associated General Contractors of California

Figure 6-3 shows the cumulative laws and amendments applied to transportation for environmental protection alone. Before appropriating more money to infrastructure projects, it would appear prudent first to remove extraneous obstacles to building them.

Conclusion

There are inefficient aspects to the way the Federal Government supports infrastructure development; many obstacles exist in current law and rules that hinder the use of alternative models involving privatization; and Federal regulation of constructing and renovating projects causes inordinate delays. It is no exaggeration to say that the Government essentially has lost control over the permitting process and the ability to deliver, even on infrastructure it particularly favors. The legal means to deliberately block construction are vast, and bureaucratic inertia itself makes it impossible to hold to a schedule.

From this perspective, it is highly appropriate to reevaluate the division of responsibilities among Federal, State, and local governments; try new business models involving the private sector; and explore ways to streamline the regulatory requirements construction projects face in this country. The Trump Administration infrastructure plan would seem to do so.

Recommendations

- For purposes of organizing infrastructure provision, it is best not to think of it as a unique segment of the economy that calls for government control, but to focus on the costs and benefits of particular functions the government may perform.
- In this connection, it is important to consider the effect that government's supply of infrastructure services has on technological progress. New technologies may greatly enhance existing forms of infrastructure and new forms may change their "public good" character.
- The incentives created by government support of infrastructure projects are critical. The terms of

government subsidies, private contracting, and privatization determine success more than appropriations to infrastructure projects. Further, overregulation and bureaucratization can thwart the best models for infrastructure provision and must be remedied.

Chapter 7: Enhancing U.S. Trade in a Global Economy

- The *Report* highlights that American exporters generally face higher trade barriers in other countries than foreign exports face upon entering the United States.
- China, in particular, is not playing by competitive market rules and has been causing market distortions.
- America's approach to disagreements with other countries over the terms of trade requires careful consideration as retreat from trade liberalization will harm the domestic economy. For instance, imposing tariffs on steel and aluminum, which are inputs to many products, is disconcerting.
- The United States possesses a comparative advantage in digital trade as well as energy and agriculture with which it may be able to increase export earnings.
- This chapter of the *Response* focuses on the issue of digital trade, which the Committee has studied extensively.

Digital Transformation of the Economy

Digital technology and the internet have transformed the economy's information processing, storage, communications, and transmission capabilities. Through countless applications, entirely new products and services have been created and conventional ones enhanced or replaced. Advances in digital technology and the internet continually accelerate production and distribution methods at lower costs, higher quality, and with more customization. These advances have facilitated management of global supply chains and international banking on a higher level.

The advances expand markets and give rise to startup firms. Digital technology has developed more rapidly in the United States than in most countries, but it has spread around the world, shaping international trade.

Digital trade includes a wide range of products—from movies and video games to the means of facilitating physical goods and services trade. The U.S. International Trade Commission (USITC) defines digital trade as "U.S. domestic commerce and international trade in which the internet and internet-based technologies play a particularly significant role in ordering, producing, or delivering products and services." Examples include orders received on e-commerce websites, such as Amazon and eBay; email and voice over internet protocol (VoIP); electronic banking; and data transmissions to manage global supply chains.[249]

At the Committee's September 2017 hearing, *The Dynamic Gains from Free Digital Trade for the U.S. Economy*, Chairman Paulsen emphasized the importance of advancing in this area:

> *There are hundreds of thousands of U.S. small businesses in nearly every sector, from manufacturing, to financial services, to mining, to agriculture, and food, in every single state and every Congressional District across the country that are harnessing the power of the internet and technology to reach new customers around the world. Digital trade accounts for more than half of all U.S. service exports. Digital trade is responsible for nearly 6.7 million American jobs. Nearly half of all U.S. companies have an online trading relationship with the EU, and the U.S. runs a $159 billion trade surplus in digitally deliverable services.*[250]

Vice Chairman Lee observed, “We are swiftly approaching the point where the word ‘digital’ will be an unnecessary adjective for trade.”

Dynamic Gains from Digital Trade

The basic case for international trade is that national resources move to uses in which a country has a comparative advantage—production tends to specialize in what a country does best. The U.S. economic system has a comparative advantage in bringing innovations to market, which is particularly important as digital development opens up ever more possibilities. The $159 billion digitally deliverable trade surplus referenced by Chairman Paulsen resulted from $399.7 billion in exports and $240.8 billion in imports in 2014, according to the U.S. Commerce Department. The surplus increased by 19 percent from 2011 to 2014.[251]

The United States is a leader in both connectedness and content production. McKinsey Global Institute’s “Connectedness Index” measures how much countries participate in digital trade and their openness to trade flows. America ranks third on the “Connectedness Index,” trailing only Singapore and the Netherlands, and America produces more than half of online content consumed in all regions outside Europe.[252]

U.S. firms have been the pioneers on the digital/internet technology frontier and are global leaders. Their pursuit of digital trade and investment internationally yields large dynamic gains that provide ongoing benefits for the United States. Digital trade increases economies of scale, product and service variety, and productivity. It continually reduces import costs for domestic production processes and increases potential export earnings. Advancements in digital technology and its widening applications mean digital trade’s scope is growing and capable of delivering ongoing improvements in production, distribution, and value delivered to Americans.

Economic Impact

USITC estimated that U.S. domestic and international digital trade added 3.4 to 4.8 percent ($517 billion to $710.7 billion) to U.S. GDP in 2011 and that digital trade increased real wages by 4.5 to 5.0 percent while adding up to 2.4 million jobs.[253]

McKinsey Global Institute estimated the contributions from increased digital globalization and found it contributed 10 percent to global GDP, or $7.8 trillion in 2014 dollars—almost equivalent to half the U.S. economy in extra global value.[254] Further, 12 percent of global goods now trade via digital platforms, and digitally delivered services doubled in value during the past decade to $2.4 trillion in 2014, or approximately half of the world's traded services.[255] From 2007 to 2014, cross-border internet capacity expanded by 38 percent annually.[256]

The McKinsey Global Institute found strong evidence that global data flows—both inflows and outflows—raise productivity by improving operating efficiency, extending economies of scale, tapping wider pools of talent and ideas, and increasing foreign direct investment. Dan Griswold's testimony explained:

> *The impact of digital trade on the US economy is not a one-time shift but an ongoing process that enhances the dynamic, long-term growth potential of the US economy. By reducing costs, spurring competition, and expanding markets, digital trade creates ongoing gains in efficiency that fuel productivity gains. By facilitating the spread of ideas and collaboration, digital trade contributes to product innovation. By playing to America's competitive strengths, digital trade allows us as a*

> *nation to use our physical, intellectual, and human capital in ways that permanently boost our gross domestic product and general living standards.*

Barriers to Digital Trade

> *... [I]f an economist wrote a free trade deal, then it would be one sentence. We would say: We got free trade. (CEA Chairman Kevin Hassett, JEC hearing "The Economic Outlook," October 25, 2017).*[257]

Digital technologies raise issues regarding protection of private property rights and contract enforcement that in principle are no different from conventional commerce. The former includes intellectual property such as trademarks, patents, copyrights, and rights to private information. Ensuring compatibility of technical standards in different countries is also important.

Governments introducing legal definitions, regulations, and technical standards can facilitate trade and innovation, but such actions can also be a hindrance—either inadvertently or by design. Rules and standards can all too easily constrain the use of better or more suitable technology. It bears emphasis that regulation should follow technology and not get in the way of market adaptation.

U.S. laws and regulations have largely allowed digital and internet applications to progress.[258] However, in other countries impediments to innovation and digital trade can seriously hinder expansion. World Trade Organization (WTO) frameworks cover some aspects of digital trade, but there is no comprehensive WTO agreement on digital trade. In 1998, WTO members agreed not to impose customs duties on electronic transmissions, but the agreement is neither permanent nor legally binding. Members have been renewing it at each WTO conference. Furthermore, the definition of electronic transmissions is not precise and members continue to debate it.[259] Bilateral or multilateral agreements have only recently begun to address digital trade issues.

The Office of the U.S. Trade Representative identified a number of key barriers to digital trade, such as China's government filtering cross-border internet traffic, blocking websites, and imposing redundant testing requirements for mobile phones; Russia's government requiring certain data to be stored and processed in country; and Brazil's requirement that foreign winners of spectrum-use rights in Brazil favor domestic technology, services, equipment, and materials for their networks. In 2015, Indonesia issued a regulation that appears to require all 4G-enabled devices to contain 30 percent local content, and all 4G base stations to contain 40 percent local content. Telecommunications operators in several EU Member States, including Portugal, Czech Republic, Croatia, Greece, and France, apply higher rates to phone calls if they originate outside the EU.[260] The French government promotes the use of *le cloud souverain*—the sovereign cloud—while Germany, as of July 1, requires local storage of telecommunications metadata.[261]

The reasons governments may want to impose tariffs or surcharges on digital trade or manage, condition, and limit digital trade are largely familiar: raising revenue for the state, protecting domestic firms and employment from foreign competition, nurturing particular domestic industries or technologies, and furthering national security interests.

In the digital era, certain interests and concerns are more pronounced than in the past. The ease of moving proprietary information across borders and a desire for preserving data privacy may motivate national requirements for local data storage, although physical location has little to do with securing data.[262] The fear of falling behind in extraordinarily fast-paced technological developments or a desire to jump ahead also may motivate requirements for national participation in data storage and processing; this may even include demands for foreign technology transfers.

USITC estimated that in 2011 the removal of foreign barriers to digital trade would have increased real GDP by 0.1 to 0.3 percent ($16.7 billion to $41.4 billion), real wages by 0.7 to 1.4 percent, and full-time equivalent employment by up to 400,000 in the United States.[263] A study commissioned by the U.S. Chamber of Commerce found that reducing market and regulatory barriers to cross-border information and communication technology (ICT) services could produce $1.72 trillion in global GDP gains, create millions of new jobs, and generate billions of dollars in potential new Government revenues.[264]

It is important to recognize that non-tariff barriers can become embedded in national regulatory regimes, even unintentionally. Sean Heather, Vice President of the U.S. Chamber of Commerce's Center for Global Regulatory Cooperation (GRC), noted at the Committee's digital trade hearing that the European Union's General Data Protection Regulation (GDPR), for instance, is not necessarily a traditional trade problem.

Complying with multiple national regulations raises costs and thwarts trade. Capitalizing on digital technology's potential to make international trade seamless requires regulatory harmonization. Heather referred to emerging rules in different countries for autonomous vehicles and challenged regulators and legislators to reorient their thinking:

> *There's a huge role here that goes beyond Commerce and State and USTR [U.S. Trade Representative] that goes to ... the mainline regulatory agencies that this Congress created in many cases 100 years ago before there were*

> *international markets. And these regulatory agencies all have offices of international affairs, but they aren't central to the policymaking function of these agencies. ... [O]nce we've decided on a regulatory model we think works here, why aren't we out there advocating it to the rest of the world?*

Former State Department Ambassador Daniel Sepulveda seconded this concern at the hearing:

> *The United States needs to lead the way with workable solutions to these challenges or we will end up dealing with a global patchwork of laws and regulations that end up doing more harm than good, and splintering the global Internet.*
>
> *If America does not engage and seek harmonization, we could quickly end up in a morass of international red tape that will prevent small businesses from navigating.*

Rules for Digital Trading

How to appropriately conduct regulation and standard setting is an important question. Although universal rules would be desirable, establishing them through the WTO is an arduous task that may never come to fruition because it requires consensus among all members.

The U.S.-Korea Free Trade Agreement was the first U.S. agreement to include a chapter on digital commerce, guaranteeing the movement of data and digital items without tariffs or fees.[265] Congress subsequently codified instructions for digital trade negotiations. In 2015, Congress passed and President Obama signed the *Bipartisan Congressional Trade Priorities and Accountability Act of 2015*, known as Trade Promotion Authority

(TPA).[266] TPA instructs U.S. negotiators to ensure that foreign governments allow cross-border data flows; do not require local storage or processing of data; and refrain from imposing other impediments on digital trade. Additionally, U.S. trade representatives are directed to seek openness, transparency, and harmonization of standards to encourage cross-border investment and trade. TPA also sets the negotiating objective of a permanent WTO moratorium on duties for electronic transmissions.[267]

Using trade agreements to negotiate digital rules may be more manageable, but also risks becoming tangled in other trade matters and even non-trade matters inserted into trade negotiations, such as environmental and workplace conditions. The fate of the Trans-Pacific Partnership (TPP) illustrates how generally well-regarded rules for digital trade were not adopted because they were part of a larger, controversial agreement.[268]

Chairman Paulsen and Rep. Suzan DelBene launched the Bipartisan Digital Trade Caucus in May 2017. The Caucus aims to engage fellow policymakers and promote American leadership in the digital economy.[269]

Digital Trade as Equalizer

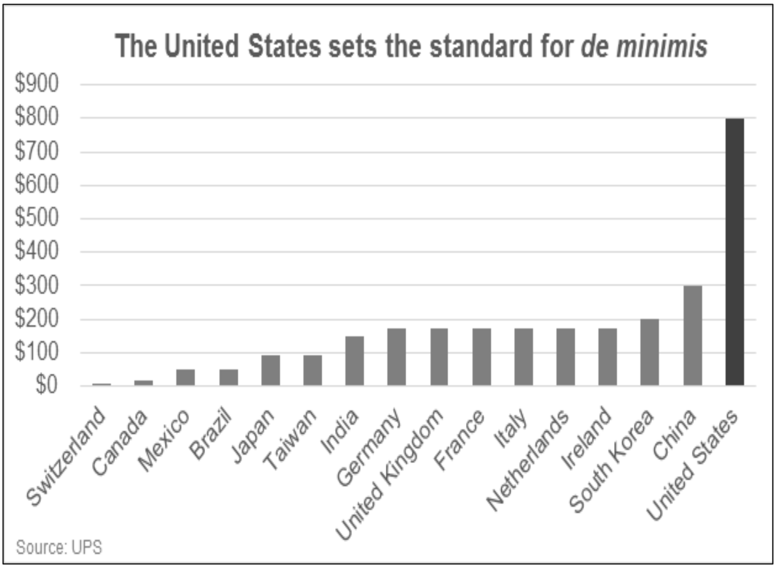
Small and medium sized enterprises (SMEs) that previously could not afford the initial investment and/or operating costs are able to import and export goods and services through the internet. Digital devices and services and the internet lower entry and operating costs in many international markets, which reduces the minimum required firm size. A local small business with a computer (or even a smartphone) and a worldwide web connection now has the capacity to do what was once possible only for larger firms, such as advertising abroad. This boosts domestic production and employment, and it may introduce more competition to the benefit of consumers.

According to the Boston Consulting Group, SMEs that are heavy internet users are 50 percent more likely to sell outside their immediate region and 63 percent more likely to source products and services from afar.[270] Another Boston Consulting Group study found SMEs that were high web users realized 10 percent sales growth on average during the previous three years, while SMEs that were low web users or had no presence online experienced sales declines over the same period.[271] Similarly, when McKinsey surveyed small businesses around the world in 2011, it found firms with a strong web presence grew twice as fast as companies with little or no web presence.[272] With ever-expanding smartphones and network coverage, this trend will likely continue.

The digital ubiquity has been so powerful that smaller firms are exporting at rates similar to their larger competitors. For example, eBay found that 94 percent of small firms engage in exports, comparable to the 97 percent rate of the largest firms.[273] Even on the American craft site Etsy, approximately one-third of all transactions involve buyers or sellers outside of the U.S.[274] Such trends prompted researchers to coin new terms such as "micro-multinational" and "born global." Micro-multinationals are smaller firms that can navigate into new international markets as well as their larger counterparts, and "born global" or "global on day one" refers to an entrepreneur's ability to conduct business globally with no longer lead-time than domestically.

All the witnesses at JEC's September 2017 trade hearing expressed full agreement that raising the *de minimis* threshold for duty-free goods around the world would accommodate many more opportunities for cross-border sales by small- and medium-sized businesses.

Figure 7-1



CONCLUSION

International trade is beneficial because it offers more choices to American consumers and allows gains from greater specialization in production. Digital trade, in particular, also continually lowers costs as it grows and transforms the ways in which trade is conducted, whereby technological advancements expand its applications ever further. "Blockchain," for example, is a secure transmission and recordkeeping technology in its infancy with vast potential to revolutionize the forms in which we transact and document commercial activity of virtually any kind around the world (see Chapter 9).[275] The "Internet of Things,"[276] which is projected to connect more than 50 billion devices by 2020,[277] drones, and autonomous vehicles are other examples of new technologies that are in the early stages of development. It is critical for future U.S. economic success to ensure a regulatory setting in which innovators, entrepreneurs, and businesses of any shape and size can experiment with new technology, are free to compete, and adopt the best methods of supply.

That applies both domestically and internationally. Free external trade is good for the economy but free internal trade is no less important. An overregulated, overtaxed domestic economy cannot realize maximum gains from trade. On the contrary, domestic market rigidity is prone to creating tensions with imports and forgoing opportunities for export earnings.

Recommendations

- Raise *de minimis* thresholds for duty free trade of low-value goods, and expedite the customs process with electronic customs forms, electronic signature and authentication, electronic labeling, and secure on-line payment.
- Prohibit customs duties on electronic transmissions.
- Prohibit measures that condition market access on localization of data; require use of local technology infrastructure; sharing software source code or algorithms; or discriminate against U.S. companies, products, and services.

Chapter 8: Addressing Healthcare Challenges through Innovation

- Chapter 6 of the *Report* outlines many of the failures of the *Affordable Care Act* (ACA). CEA notes that expanded insurance coverage from the ACA did not translate into improved health outcomes.
- CEA also provides economic analysis of the healthcare industry and its regulatory framework, identifying reasons and remedies for public dissatisfaction with existing practices and conditions such as pharmaceutical pricing.
- CEA also mentions Administration efforts to combat the opioid epidemic—a topic the JEC has studied extensively.
- The JEC Majority agrees that the ACA failed to improve health outcomes and instead left patients with fewer choices, less flexibility, rising costs, and higher taxes.
- The ACA also reduced economic potential by damaging incentives to work, which limits both the economic mobility of low-income Americans and the health of the economy they live in.
- Though Congress was unable to pass a full repeal and replacement of the flawed ACA, Congress and the Administration have made progress in addressing some of the more harmful aspects of the ACA.
- Rising healthcare costs, an aging population, and a broken healthcare system require more innovative solutions for delivering quality health care in a cost-effective manner.

The Health System after the Affordable Care Act

Before the ACA, the vast majority of insured Americans were covered either through a plan offered by their employer or a Government program such as Medicare, Medicaid, the State Children's Health Insurance Program (CHIP), or plans through the Departments of Defense or Veterans Affairs. The same is true after the ACA. These types of programs already offered protections for those with pre-existing medical conditions before the ACA. People without this kind of coverage could seek health insurance through the individual (non-group) insurance market regulated by States. However, people with pre-existing conditions sometimes had difficulty affording or obtaining coverage in the individual market.

Prior to ACA enactment, national healthcare spending represented a larger share of the U.S. economy than similar measures in other developed economies. Supporters of the ACA claimed that the law would provide universal health insurance coverage for Americans at a lower cost.

A Failed Design

The ACA expanded the Medicaid program beyond its original mission of serving vulnerable Americans below the poverty line, requiring States to expand Medicaid coverage to able-bodied adults with incomes up to 138 percent of the Federal poverty level. The U.S. Supreme Court subsequently made this requirement voluntary through its decision in *National Federation of Independent Business v. Sebelius*.[278]

The ACA also established a Federal health insurance marketplace for States that elected not to create their own exchange. Individuals without employer-sponsored insurance or coverage by a Government program—but with incomes too high to qualify for Medicaid—were required to purchase insurance that met ACA's strict requirements, either through the ACA-established marketplace exchanges or otherwise through the individual market. Those who choose insurance through Federal or State exchanges with incomes between 133 percent and 400 percent of the poverty line are eligible for Federal subsidies through premium tax credits, which are sent directly to the insurer they select.[279]

Consumers lost flexibility in choosing an insurance plan because the ACA required all health insurance plans to meet federally mandated minimum standards, including requiring them to cover types of care an individual may not want or need.[280] After the ACA's enactment, millions of people who were enrolled in health plans received notices that their plan would no longer be offered because it did not fully comply with ACA mandates.[281] By some estimates, roughly four million Americans lost their health insurance.[282]

The ACA also prohibited those eligible for Medicaid from receiving insurance subsidies in the exchanges. In States that did not expand Medicaid income eligibility to 138 percent, ACA guidelines required individuals to earn at least 100 percent of the poverty level to qualify for a premium subsidy. That left roughly 2.5 million low-income Americans below 100 percent of the poverty level with no meaningful coverage option, since they earned too much to qualify for traditional Medicaid and too little to get help affording a private plan.[283]

In order to enforce the requirement that Americans have insurance that meets strict ACA requirements, the ACA created a tax on uninsured Americans known as the individual mandate designed to become more severe over time. As of 2017, the tax was the higher of 2.5 percent of household income or $695 per adult and $347.50 per child.[284]

Over the past year, the JEC Majority has documented the failures of the ACA. Premiums have skyrocketed in the individual market, with an average premium increase in the Federal exchange of 105 percent from 2013 to 2017.[285] In 2018, the average premium for 27-year-olds—a relatively healthy and low-cost demographic—is 37 percent higher than in 2017.[286]

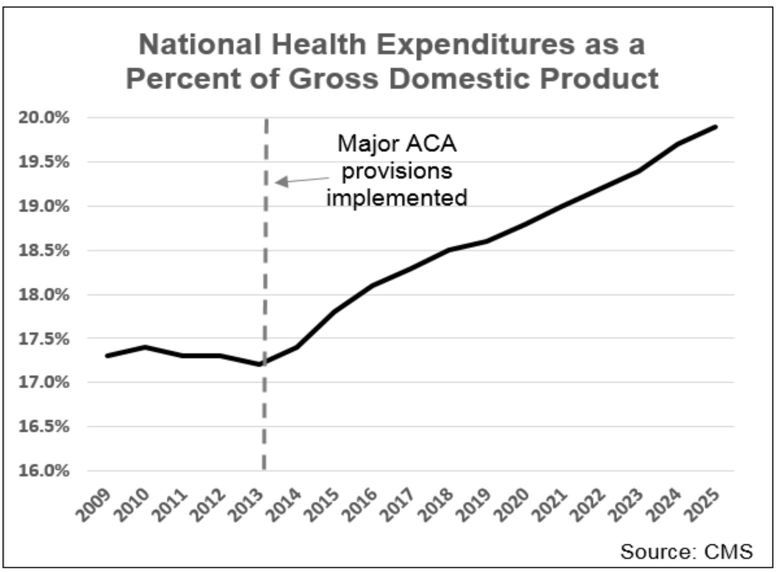
Even with Federal subsidies for premiums, consumers with ACA plans are facing higher out-of-pocket costs through rising deductibles,[287] limited choices of doctors and hospitals, and a shrinking number of insurance choices. The Centers for Medicare and Medicaid Services (CMS) recently estimated that almost 30 percent of enrollees will have only one insurer to choose from in the ACA exchanges this year.[288]

Because the ACA limits the ability of health insurers to vary premiums based on age, the ACA exchanges continue to lack the 40 percent of young, healthy enrollees needed to keep premiums stable.[289] The population that remains in the exchanges tends to be older, sicker, and costlier. Unsurprisingly, enrollment in the exchanges is dwindling. When ACA became law in 2010, actuaries for CMS predicted that over 31 million Americans would have insurance through the exchanges in 2018,[290] while CBO projected 24 million.[291] As of the end of open season for enrollment, only 8.7 million had signed up for 2018 coverage, and many of those will drop out by not paying monthly premiums.[292]

Rising Healthcare Costs

During President Obama's first year in office in 2009, National health expenditures—which include the amount Federal and State governments, individuals and institutions spend on health care—represented 17.3 percent of GDP, larger than the ratios in other developed economies.[293] This was often cited by proponents of the ACA as a reason to reform the healthcare system. However, following implementation of the ACA exchanges and Medicaid expansion, health spending began consuming a growing share of the U.S. economy. CMS recently projected that health spending will represent nearly 20 percent of the economy by 2025 (Figure 8-1).

Figure 8-1



This cannot be attributed solely to an aging population, since both private- and public-sector spending are growing at faster rates in the U.S. than in other comparable countries with similar demographic challenges.[294]

Even before this surge in spending that followed ACA implementation, a 2011 study featured by the National Institutes of Health observed, “The fraction of GDP devoted to health care in the United States is the highest in the world and rising rapidly.”[295] The authors concluded that high levels of spending would lead to future tax increases:

> *With almost half of health expenditures publicly financed and the prospect of further government subsidization of health insurance under health care reform, the rising burden of health care spending during the next half-century will most likely necessitate large increases in tax rates.*

As outlined in previous chapters of this *Response*, large tax increases can have very damaging effects on economic growth.

The Tax Burden Imposed by the ACA

In addition to threatening future tax increases, the ACA imposed over $1 trillion in new taxes, many of which damaged the economy and drove up the cost of health care. Importantly, despite President Obama’s pledge not to raise taxes on those making less than $200,000 ($250,000 if filing jointly) per year,[296] several of the taxes hit Americans with incomes far below that threshold.[297] The Joint Committee on Taxation (JCT) confirmed that many ACA taxes affect lower-income taxpayers, either directly by increasing their tax burden or indirectly through higher consumer prices arising from taxes on insurance and healthcare products.[298]

A particularly harmful provision in ACA that raised the cost of health care for consumers is the medical device excise tax, which also operates as a tax on innovation. According to one estimate, when it is in effect the 2.3 percent excise tax reduces research and development (R&D) investments by $2 billion per year, depriving patients of potentially lifesaving breakthroughs.[299]

Because the device tax is based on gross sales and not profits, it is particularly harmful to small companies that are not yet profitable but are struggling to launch innovative devices.[300] Additionally, before Congress temporarily suspended the tax for 2016 and 2017, there was evidence it caused job losses even among large companies.[301] In fact, when the tax was in effect from 2013 to 2015, Census data indicated it caused the loss of an estimated 28,800 jobs in the medical device industry.[302] Another study calculated that full repeal of the tax could net more than 53,000 additional jobs:

> *If the tax is permanently repealed, it is likely that the 28,800 jobs lost when the tax was in effect will be recovered within three to five years. Combined with the 25,000 jobs projected to be lost upon resumption of the tax, permanently repealing the medical device tax could net an excess of 53,000 additional jobs, compared to current law.*[303]

According to an industry survey, 71 percent of companies would reinstate previously foregone hiring and 85 percent would reinstate foregone R&D investments if the tax were repealed.[304] These are some of the reasons that efforts to repeal the device tax—led by JEC Chairman Paulsen in the House and Senate Finance Committee Chairman Orrin Hatch in the Senate—have gained such broad bipartisan support.[305]

The device tax was recently suspended for two additional years, 2018 and 2019, in the *Extension of Continuing Appropriations Act of 2018* (ECAA). However, the JEC Majority strongly recommends full repeal to lower health costs, spur greater innovation, prevent job losses, maintain the U.S. competitive edge in medical technology,[306] and preserve patients' access to devices that save and improve lives.

ACA also raised health costs by imposing taxes on manufacturers and importers of brand-name drugs. Patients have very little discretion to forgo a medication when it becomes more expensive, which makes the tax likely to be passed to consumers in the form of higher prices.[307] According to Tax Foundation analysis, the tax may have contributed to recent spikes in prescription drug costs.[308]

Another ACA tax increase discourages employers from offering prescription drug coverage to their retirees. When Congress created Medicare Part D to provide seniors with prescription drug coverage, the law provided a tax incentive for companies to maintain retiree drug coverage out of concern that they might otherwise drop the coverage and shift costs to retirees and Medicare.[309] The ACA repealed the 28 percent deduction for retiree coverage, which human resources professionals warned would likely cause retirees to lose access to employer drug plans.[310]

In addition to indirect taxes that affect low-and middle-income taxpayers through higher costs, the ACA imposed direct taxes affecting people who are far from wealthy. As explained in Chapter 3 of this *Response*, the ACA's penalty tax on uninsured Americans through the individual mandate was paid disproportionately by Americans with incomes less than $50,000. At the same time, studies by ACA architect Jonathan Gruber and other researchers found that the individual mandate was ineffective at boosting insurance coverage.[311]

Chapter 3 also explained how the ACA made catastrophic health costs more unaffordable by slashing the medical expense deduction, which is primarily used by Americans with less than $100,000 in income.

The ACA also placed a limit on healthcare flexible spending arrangements (FSAs), which made it more difficult for families to manage rising out-of-pocket expenses. FSAs are offered by employers and allow workers to set aside a portion of their paychecks on a pre-tax basis for out-of-pocket medical costs. The ACA cap on FSAs is particularly burdensome for families with many children, those who are dealing with multiple chronic conditions,[312] or who use FSAs to finance services for children with special needs.[313]

Additionally, the ACA raised the penalty tax on certain withdrawals from Health Savings Accounts (HSAs). HSAs combine the benefit of a lower-premium high deductible health plan with a tax-free savings account to cover out-of-pocket medical expenses. Previously, when consumers withdrew funds from an HSA for unexpected non-medical expenses, the rules were similar to those governing retirement accounts—the funds would be taxable and a 10 percent penalty applied. The ACA doubled the HSA penalty to 20 percent, making it more difficult for families facing situations like sudden job loss.

Over-the-counter (OTC) medications also became less affordable under the ACA. OTC medications theoretically allow consumers to treat their ailments without the inconvenience and expense of dealing with the healthcare system. Previously, Americans could easily use tax-free FSAs, HSAs, or Health Reimbursement Accounts (HRAs) to purchase OTC products like allergy medications or smoking cessation aids. The ACA prohibits using these accounts for OTC medicines unless consumers first obtain a doctor’s prescription, causing more costly interactions with the health system.[314]

The ACA not only imposed taxes on those without health insurance, but also on those who are insured. One of the ACA’s taxes on private insurers known as the health insurance tax (HIT) was passed directly to consumers in the form of higher premiums and it even appeared as a line item on monthly premium bills.[315] JCT estimated that the HIT would raise the cost of premiums up to 2.5 percent and that repealing it would have reduced premiums for the average family by $350-$400 in 2016.[316] A temporary moratorium on this tax was extended in ECAA through 2019.[317]

A particularly destructive tax discourages employers from hiring additional workers and providing full-time work. The employer mandate forces employers to provide insurance or face a penalty tax, triggered if even one full-time worker receives an insurance subsidy in the ACA exchanges.[318] Since the tax is generally assessed per full-time worker—redefined by the ACA as someone working 30 hours or more per week—the mandate provides an incentive to cut individual workers' hours.[319] Even if employers do provide insurance, another tax applies if the government determines it is not "affordable."[320] Also, because the mandate applies to companies with 50 or more full-time employees, it discourages small businesses approaching that threshold from hiring additional workers,[321] causing an estimated loss of 250,000 jobs.[322]

An employer offering health insurance that meets the ACA's definition of "affordable" may face yet another tax if the ACA defines the benefits as too generous to employees. The ACA imposes a 40 percent excise tax known as the "Cadillac tax" on the value of health benefits that exceed a certain threshold, including both employer and employee contributions to the plan.[323] The tax is broad, covering not only the value of basic health plans offered by employers but also any pre-tax wellness programs, disease-specific coverage, HRAs, FSAs, and contributions to HSAs by either the employer or employee. Because the threshold that triggers the tax is designed to grow more slowly than costs, a growing percentage of employees will be subject to the tax over time.[324] The likely result will be fewer benefits, reduced networks for receiving care, and higher costs for employees.[325] Along with temporarily suspending the health insurance tax and medical device tax, ECAA postponed the implementation of the Cadillac tax from 2020 to 2022.

Other ACA taxes aimed at higher-income Americans caused collateral damage for small business owners and employment. The ACA imposed an extra 0.9 percent Medicare payroll tax and a 3.8 percent investment income tax on individuals with incomes over $200,000 ($250,000 for married couples). Like many tax penalties aimed at higher-income Americans, both of these taxes hit small businesses. As mentioned in Chapter 3 of this *Response*, the vast majority of small businesses are organized so that income from the business is taxed on business owners' individual tax returns.[326] An Obama Treasury Department study released shortly after the ACA was enacted found the average gross income of small businesses was $270,000, putting many of them at risk of paying this tax.[327] Chapter 3 also discussed how the investment income tax contributed to the top small business tax rate rising from 35 percent in 2012 to effectively 44.6 percent in 2013. With more small business income consumed by taxes, fewer funds are available to hire workers, give pay raises, and make capital investments to expand the business.

Similarly, the 0.9 percent Medicare surtax affects owners who manage the day-to-day operations of the business and are compensated by the business for their work. CBO listed several ACA policies that contribute to its projection of the law causing a loss of the equivalent of two million full-time employees over the decade, and the Medicare surtax is one of them.[328] CBO also noted the surtax would affect a growing share of workers over time because the tax is not indexed for inflation.

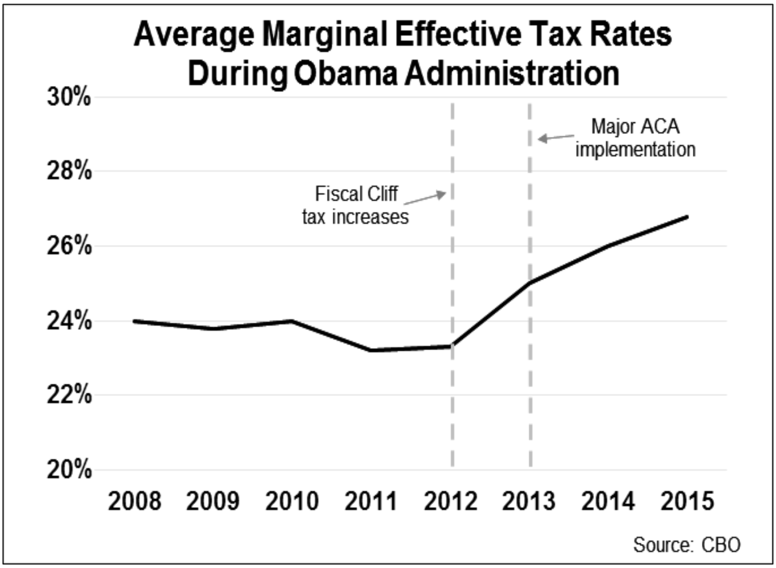
Aside from the possible loss of job opportunities from small businesses, low- and middle-income Americans also face direct tax increases from these two tax hikes. While most of the impact will fall on high-income taxpayers, JCT estimated that people with incomes of less than $75,000 would face a total of $20 million in higher taxes in 2015 alone due to these two ACA taxes, and this includes some taxpayers earning less than $10,000.[329]

Economic Effects of the ACA

CBO recently analyzed factors contributing to the subdued levels of workforce participation by prime-age workers.[330] CBO discussed how effective marginal tax rates—including both higher tax rates and the loss of Federal benefits—affect the willingness to work (Figure 8-2). Average marginal tax rates increased as Fiscal Cliff tax increases (see Chapter 3), the ACA exchanges, Medicaid expansion, and major ACA taxes were implemented. CBO also concluded:

> *…[S]ome provisions of the Affordable Care Act probably discouraged some people from participating in the labor force in the past few years by raising their effective tax rates. The resulting reduction in take-home pay probably had the largest effect on lower-earning workers.*[331]

Figure 8-2



CBO's most recent analysis of marginal effective tax rates faced by low- and middle-income Americans reinforced that those with very low incomes have the greatest fiscal incentive to stay out of the workforce. CBO estimated that in 2016, the income group with the highest potential marginal tax rates included people between 100 and 149 percent of the poverty level.[332] Depending on factors such as family circumstances, those slightly above the poverty level could lose over 65 cents of each additional dollar earned. People in this income range represent the Medicaid expansion population and those who receive the largest insurance subsidies in the ACA exchanges. In essence the ACA discourages those on the edge of climbing out of poverty from seeking employment that would give them greater economic mobility and the dignity of a job.

These are among the reasons why CBO projected in the report mentioned earlier that the ACA will cause the equivalent of two million full-time workers to leave or stay out of the workforce in 2025.[333]

Other economists have found even more severe economic damage from the ACA. Noted economist Casey Mulligan testified at a 2016 JEC hearing that the combination of ACA tax increases and ACA's benefit structure would reduce aggregate hours worked by almost three percent and national income by two percent.[334]

Mulligan also explained that the ACA had a negative impact on productivity:

> *The Affordable Care Act has several effects on productivity… Households and businesses sacrifice productivity in order to rearrange activities for less of a tax burden. These include excessive part-time work, segregation of low-skill and high-skill employees, constricting large employers in order to expand small ones, and failing to invest as much in business capital.*[335]

Mulligan concluded his testimony with this warning:

> *The bottom line is that helping people who cannot or will not purchase health insurance has a price in terms of labor market inefficiency. The ACA is no exception: it creates new income taxes and full-time employment taxes that will be directly experienced by about half of the workforce and indirectly experienced by essentially the entire nation. As long as incentives to work and earn remain far below what they were eight or nine years ago, we cannot reasonably expect the labor market to return to where it was back then. We cannot expect employment per capita to go back to where it was.*[336]

Questionable Outcomes

The ACA's top-down design—reliant on a complex web of regulations, taxes, and other incentives—is now entrenched in the healthcare system. Yet, in spite of a massive Government takeover of the healthcare system and a Federal command to buy insurance, CBO projected as of December 2017—before Congress removed the individual mandate penalty—that 30 million Americans would still lack health insurance this year.[337]

CEA estimated that at most, the ACA extended coverage to six percent of the population, and much of this through expanded Medicaid enrollment.[338] And as CEA discussed, despite expanded insurance coverage, there is scant evidence that health outcomes improved.[339] In fact, life expectancy in the United States actually declined in 2015 and 2016, the first time in half a century that it dropped for two consecutive years. CEA attributes part of this decline to increased substance abuse.[340]

America's Opioid Epidemic

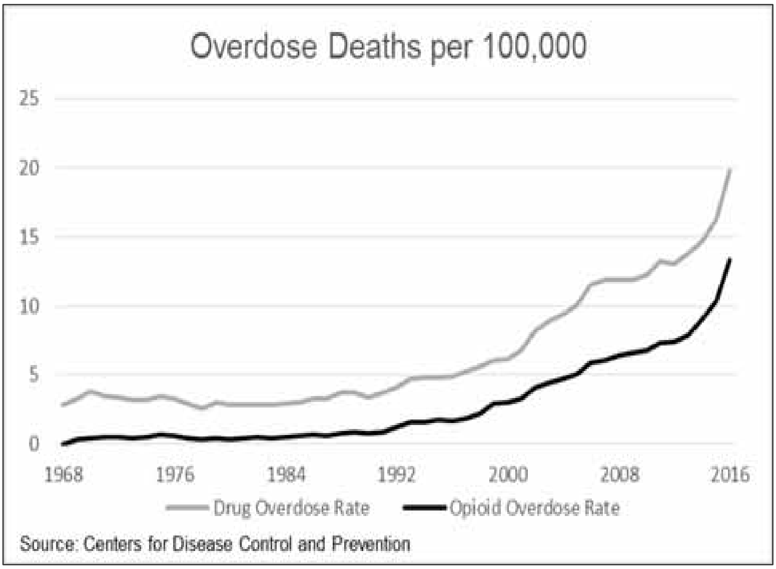
CEA included a discussion of the opioid epidemic in a section of the *Report* addressing costly diseases that can be prevented, such as obesity and smoking-related illnesses.[341] The JEC Majority agrees that a greater emphasis on prevention and promoting healthy behaviors within the health system could reduce needless costs as well as mitigate human suffering.

As mentioned in Chapter 1 of this *Response*, the JEC has devoted a great deal of study to the opioid epidemic, which the Administration rightly declared a "public health emergency."[342]

The opioid market is expanding in both demand and supply; opioid overdose deaths continue to increase and today are at an unprecedented level (Figure 8-3). Since 2009, total annual drug-poisoning deaths have surpassed automobile deaths; from 1999-

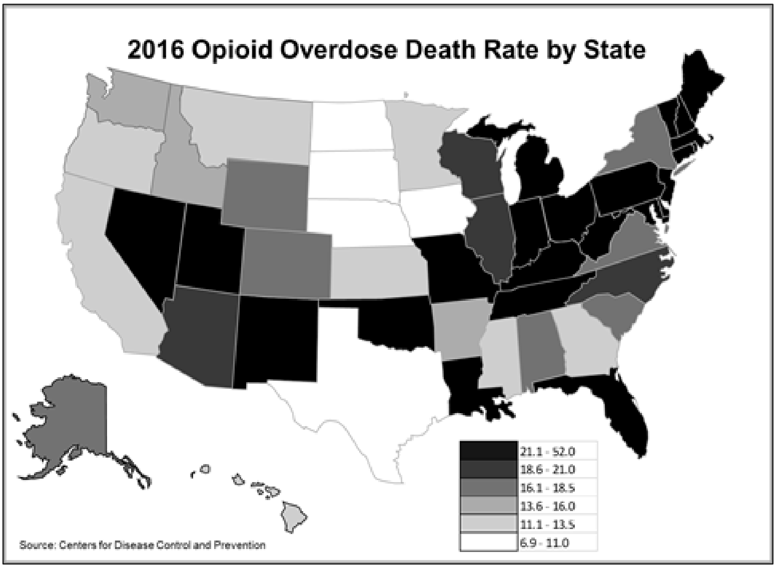
2016, opioid-involved deaths increased five-fold to 42,249.[343] CEA estimates that in 2015 alone, the economic cost of the opioid crisis was more than $500 billion or 2.8 percent of GDP.[344] Opioid overdose deaths fall into three broad categories: prescription drugs, heroin, and synthetics such as fentanyl. From 2000-2011, prescription overdose deaths grew steadily; however, following the 2010 reformulation of heavily abused OxyContin, prescription opioid overdoses leveled off as users switched to greater-potency heroin and fentanyl.[345]

Figure 8-3



Addiction and overdose deaths, initially fueled by expanded use of legitimate and black-market prescription painkillers, were later exacerbated by an increased supply of potent low-cost Mexican heroin and Chinese fentanyl. As Ohio Attorney General DeWine testified before the Committee, "Four out of five individuals now suffering from heroin or fentanyl addiction first started down this road by using prescription opioids."346 Aggregate measures reinforce that this is a national crisis, while State death rates vary widely (Figure 8-4).

Figure 8-4



Heroin overdose deaths have been a persistent problem for several counties with dense metropolitan areas for a number of decades. The arrival of new prescription opioids in the late 1990s and their use in the treatment of chronic pain presented a new avenue for opioid misuse. In 1999, prescription opioids were already becoming a problem in a handful of areas around the United States, and by 2015 deaths from prescription opioid overdoses were widespread. Heroin and fentanyl followed suit, with overdose death rates spreading in areas that heavily overlap with prescription overdose deaths.

Synthetic opioid overdose death rates, like those from fentanyl and its derivatives, remain largely concentrated in the eastern United States. Recent research suggests that this might reflect a divide in the type of heroin distributed in the eastern and western United

States. West of the Mississippi River, heroin is largely found in its black tar form, while in the eastern United States, heroin is mostly sold and distributed in white powder form.[347] This makes fentanyl and its derivatives, which are also commonly in white powder form, more easily disguisable as heroin and counterfeit pills in the eastern States.[348]

Prelude to a Crisis: Demand

In 1986, the World Health Organization published *Cancer Pain Relief* and encouraged the use of opioid painkillers. The Food and Drug Administration (FDA) approved a pharmaceutical company's semisynthetic-opioid OxyContin in 1995 for the treatment of moderate-to-severe pain lasting for more than a few days. With an expanded sales force rewarded with large bonuses, the company aggressively marketed OxyContin encouraging physicians—many of whom may not have been trained in pain management—to prescribe it as an initial medication for non-cancer pain. Twice the FDA cited the company for using potentially false and misleading medical journal advertisements.[349] Prescription opioid demand increased rapidly as doctors and dentists prescribed opioid painkillers on an expanded scale.

A 2016 *Time* article entitled "How Obamacare Is Fueling America's Opioid Epidemic" described one way the ACA may have contributed to the crisis.[350] The ACA conditioned a portion of hospitals' funding on patient surveys, including how well they managed patients' pain and even whether the hospital was doing *everything it could* to control pain. Unsurprisingly, this created an incentive for hospitals to overprescribe painkillers. While this policy has thankfully ended, the damage will likely linger for some time to come. Prescription opioids still account for nearly half of all opioid overdose deaths,[351] and though addiction to illicit opioids like heroin is becoming more prevalent, an estimated 80 percent of people addicted to heroin started by using prescription opioids.[352]

Prescription opioid use has lasting implications for patients. In 2015, physicians prescribed 648.7 morphine milligram equivalents per person in the median U.S. county.[353] That amounts to nearly a two-week supply for every resident. In 2016, nearly 215 million prescriptions for opioids were filled in the United States. Data analyzed by the Centers for Disease Control (CDC) show that 61.8 million patients received those prescriptions, or 19.1 percent of the U.S. population.[354] Of the patients who were prescribed opioids, 3.7 million were ages 19 and under. Forty-one percent of opioid prescriptions were for a supply of 30 days or more. A March 2017 study from the CDC determined that 13.5 percent of patients receiving eight days or more of prescription opioid therapy used opioids one year later—up from 6 percent among patients receiving any prescription opioid therapy.[355] Among patients taking prescription opioids for at least 30 days, 30 percent were using opioids one year later.

Simultaneously, labor market changes have posed significant challenges to workers in certain geographic and occupational segments. The cohort of workers affected the most tends to have a high-school education or less and live in industrial areas concentrated in the Midwest. Princeton University's Professor Sir Angus Deaton's testimony at the Committee's June 2017 hearing, *Economic Aspects of the Opioid Crisis* explained that these workers had a prolonged decline in their economic position. Progressively deteriorating labor-market opportunities have worsened working and personal outcomes, partially contributing to the doubling of "deaths of despair" since 2000.[356] These deaths include suicide, deaths from alcohol liver disease, and accidental overdoses from legal and illegal drugs; they are often the result of long-term conditions for those currently in their middle age from a "cumulative disadvantage." The largest component of these deaths is opioid overdoses.

The first reports of OxyContin abuse were from rural communities in the Appalachian region (Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia) and Maine. In these areas in 2000, pain patients, teens, and recreational drug users that abused the drug entered drug treatment with physical-addiction symptoms.[357] The Appalachian region's mining, timber, and manufacturing industries are prone to pain-producing injuries and together with a high unemployment rate and low employment-to-population ratio may predispose the region to drug overuse.[358]

Prior to its 2010 abuse-deterrent reformulation, OxyContin was particularly conducive for abuse because its controlled-release property allowed for a high quantity of the opioid active ingredient per pill. Abusers found that in addition to simply swallowing a pill, crushing it bypassed the controlled-release property, intensifying the effect. Abusers' demand for prescription painkillers eventually spilled over to illicit heroin and fentanyl.

Prelude to a Crisis: Supply

The expanding opioid supply is rooted in prescription drugs. OxyContin prescriptions grew from 300,000 in 1996 to more than 7.2 million in 2002; simultaneously annual sales grew from $45 million to $1.5 billion.[359] The expansion of OxyContin prescriptions was partly due to physicians' honest mistakes, which caused some high-school athletes, for example, to become addicted after taking pain medication following sports injuries. Additionally, unethical and criminal conduct by doctors and pharmacies fueled widespread distribution. The rise of "pill mills" where doctors would prescribe large amounts of opioids to anyone increased black-market prescription opioid supply. In many cases, Medicaid, Medicare Part D, and private insurance paid for prescribed opioids allowing patients low-cost access to a lucrative black market product.[360] *Dreamland: The True Tale of America's Opiate Epidemic*, by Sam Quinones explains how Dr. David Proctor of Portsmouth, Ohio, ran an early pill mill operation, launched others into the business, and spread opioids throughout the Appalachian region that became the epicenter of the opioid crisis. In 2003, Dr. Proctor pled guilty to illegally prescribing controlled substances. Attorney General DeWine testified that, since taking office, he has revoked over 100 doctor and pharmacist licenses from individuals he described as "drug dealers." A number of States and localities have filed a multidistrict litigation againts pharmaceutical manufacturers and distributors to recoup costs associated with the epidemic.

Around 1997, drug traffickers from Mexico began selling black-tar heroin wholesale to New Mexico dealers. In 1998, it crossed the Mississippi and arrived in Columbus, Ohio, compounding the region's opioid problem.[361] Due to the relatively short transportation distance from producer to customer, inexpensive but potent Mexican heroin spread across America. Mexican smugglers and dealers developed a low cost, door-to-door method of delivering heroin. Attorney General DeWine referred to this as a "pizza delivery system" in his testimony:

> *You pick up the phone, you call, and they will deliver it to you. You get it in half an hour, and you are going to get it cheap...*[362]

Fentanyl is even more deadly than heroin; as little as two milligrams can be lethal.[363] According to Congressional Research Service analyst Lisa Sacco's hearing testimony, it is 50 to 100 times more potent than heroin.[364] Licit fentanyl is available in patches and lozenges or can be injectable or sublingual—under the tongue—and can be diverted to black markets. Illicit fentanyl is often used as a substitute active ingredient in black-market products; frequently the customer is unaware of its presence in the drugs. It is known to be manufactured in China, is suspected to be manufactured in Mexico, and is sold as or mixed with heroin and used in the production of counterfeit prescription pills.[365] National Forensic Laboratory Information System estimated that from 2013-2015 fentanyl reports grew to 14,440 from 978.[366] The National Center for Health Statistics reports that overdose deaths involving synthetic non-methadone opioids (fentanyl, fentanyl analogs, and tramadol) doubled from 2015 to 2016.[367]

Opioid Crisis and the Labor Market

More than a year ago, the *New York Times* published, "Hiring Hurdle: Finding Workers Who Can Pass a Drug Test." Employers across the country are having difficulty finding applicants who can pass a drug test.[368] Attorney General DeWine testified that Ohio employers tell him many applicants either withdraw their application upon discovering they must take a drug test, or they take it and fail. Since the 2009 peak unemployment rate of 10 percent, the rate has trended downward; however, despite the current low rate some aspects of the labor market continue to show weakness. Job openings remain around six million as the prime-age labor force participation rate remains depressed (Figure 8-5). Among the reasons for this divergence may be job applicants' failure to pass drug tests. Drug abuse also hinders worker relocation from less productive positions to more productive positions that generally offer higher wages.[369]

Figure 8-5

Opioid Crisis and Future Generations

An opioid-related addiction, overdose, or death is far from an isolated event. Many lives are affected by the devastation caused by these drugs. Families struggle to keep their loved ones alive through treatments and interventions. Children are affected directly, making this crisis multigenerational.

Reports of young children overwhelming foster care systems are pouring out of States like Ohio, which since 2010 have witnessed an increase of nearly one-fifth in the number of children placed with relatives or in foster care.[370] Between fiscal years 2009 and 2016, the percentage of children nationwide with parental drug use as a factor in out-of-home placement rose from 21.3 percent to 33.7 percent, according to data from the National Data Archive on Child Abuse and Neglect.[371]

Rising rates of neonatal abstinence syndrome (NAS), the diagnosis of a newborn physiologically dependent on drugs or alcohol that leads to withdrawal symptoms, are generally driven by the opioids that mothers abuse while pregnant.[372] About half of babies who are exposed to opioids during pregnancy will experience NAS.[373]

New England and Appalachia have the highest rates of NAS per 1,000 hospital births. In 2013, according to a CDC study, NAS incidence per 1,000 hospital births was highest in Vermont (33.3) and West Virginia (33.4). In 2012, Maine had a similar level (30.4), but data were not available for 2013.[374]

Increasing numbers of children entering foster care, living with grandparents, or entering the world dependent on opioids will have consequences for decades to come. Many dealing with the childhood trauma of a parent addicted to opioids have suffered severe physical and mental distress, and some researchers speculate that the damage may be behind the recent rise in suicides among children and teenagers.[375]

Economic Costs of the Opioid Crisis

This crisis has been costly to society in many ways. Recent estimates have focused on both the fatal and non-fatal costs. For 2013, CDC researchers estimated that the total economic burden of the crisis was about $78.5 billion.[376] This estimate includes an analysis of the costs derived from health care, substance abuse treatment, criminal justice, and lost productivity.

CEA partially relied on the CDC research to build an even broader cost estimate of the crisis. Using generally accepted methods to estimate the value of a statistical life, CEA estimated that the costs of the crisis due to premature loss of life in 2015 was $431.7 billion.[377] By combining its estimate of the fatality costs with the CDC's estimate, the CEA reported that the total costs of the crisis in 2015 were $504 billion.

Research at the American Enterprise Institute (AEI) relied on both the CDC's and CEA's cost estimates to produce a State-by-State analysis of the cost of the opioid crisis.[378] AEI's estimates use the differential effect of the crisis across States for opioid overdose deaths, opioid abuse disorders, and other costs related to the crisis. To account for variation in population, AEI presents costs by State on a per-capita basis. The analysis shows that non-fatal opioid costs per capita are generally higher in western States and in New England. The highest non-fatal costs per capita are in the District of Columbia ($352 per person) while the lowest are in South Dakota ($162 per person). However, when costs due to loss of life are included, the highest per-capita costs are in Appalachia. West Virginia has the highest per-capita cost by this measure at $4,793 and Nebraska has the lowest at $465 per person.

Possible Solutions

Advances in medical technology may offer solutions for treatment of pain without the need for addictive opioid-based painkillers. For example, devices that emit electronic pulses can interrupt pain signals for patients suffering with chronic pain.[379] Other advances are assisting with controlling the supply of opioids by providing a safe means of deactivating and disposing of unused prescription painkillers.[380]

On a broader economic level, an improved labor market—especially for those who choose not to pursue a college degree—would be beneficial (see Chapter 5 of the *Response*). Also, certain opioid solutions may best be crafted at the community level since aspects of the crisis vary across States and localities. Additionally, CEA outlined several steps the Administration has taken to prevent opioid abuse, improve access to treatment, encourage innovative solutions through research, and disrupt the illicit supply of opioids.[381]

Other solutions will likely come from public and community initiatives. Manhattan Institute's Diana Furchtgott-Roth testified that past massive reeducation campaigns have reduced smoking, decreased littering, and increased recycling; a similar strategy should be applied to opioids beginning in grade school.[382] Representative Darin LaHood explained that drunk driving was reduced in his State through both aggressive law enforcement and campaigns by Mothers Against Drunk Driving (MADD).[383]

INNOVATIVE SOLUTIONS FOR IMPROVING THE HEALTHCARE SYSTEM

Clearly, the health system under its current structure is not serving patients well. Americans deserve more innovative solutions, a point also emphasized by CEA in Chapter 6 of the Report.

Efforts to Repeal and Replace the ACA

In 2017 Congress attempted to repeal and replace the ACA with more market-driven reforms. The House of Representatives succeeded in passing the *American Health Care Act* (AHCA).[384]

AHCA offered States greater flexibility and control over their insurance markets, and CBO estimated that if AHCA became law, average premiums within a decade would be 30 percent lower in certain states that make modest changes, 20 percent lower on average across all states that make changes, and four percent lower in States that made no changes.[385]

CBO also projected that AHCA would reduce mandatory spending by $1.1 trillion, provide nearly $1 trillion in tax relief by repealing ACA taxes, and reduce deficits by $119 billion over the decade.[386]

In addition to maintaining protections for people with pre-existing conditions, AHCA aimed to reduce the price and increase the quality of health care for consumers. To stabilize State insurance markets, it provided a $138 billion Patient and State Stability Fund to lower costs and provide better access for patients. The fund also dedicated $15 billion for State-run invisible risk pools (with subsidies for high-cost enrollees who remain within a general insurance pool in the individual market) and an additional $8 billion for high-risk pools (separate insurance pools of high-cost individuals). Additionally, the fund included $15 billion targeted for treating addiction and serious mental illness, as well as for maternity and newborn care.

AHCA also reformed ACA's age band restrictions that have made insurance unaffordable for young and healthy enrollees that are needed to keep insurance costs down for everyone in the insurance pool. At the same time, AHCA provided tax credits for buying insurance that increase with age.

Other AHCA reforms included improved and expanded HSAs as well as repeal of ACA taxes, including those that make health care less affordable. To provide more State flexibility and insurance options for patients, AHCA included a waiver process allowing States to design their own package of "essential health benefits" that insurers must cover—rather than a one-size-fits-all Federal list—so their residents are not forced to pay for coverage they do not want and will never use.[387]

The Senate was unable to pass its own repeal and replacement legislation, but the JEC Majority recommends that Congress continue to pursue replacement reforms that will reduce the economic burden and provide consumers with lower costs and more choices.

Progress on Repairing Economic Damage

In addition to actions by Congress to repeal the harmful individual mandate tax and delay other ACA tax increases, the current Administration has taken several steps on its own to provide States with more flexibility, address harmful disincentives to work, and allow consumers to have more insurance options.

Allowing work incentives within Medicaid. In January 2018 the Administration announced a new Medicaid waiver process so that States could require able-bodied enrollees to engage in work, education and training, or other community engagement such as volunteer service. The announcement cited evidence that higher earnings are associated with a longer lifespan and that unemployed persons are more likely to suffer from severe physical and mental health challenges.[388] As noted earlier, the work disincentives of the ACA are particularly severe for those on the edge of poverty—the Medicaid population. Providing an incentive to work may lead to greater future prosperity and better health outcomes for enrollees. The program is voluntary with required protections for enrollees and will provide a useful experiment to determine whether more Americans can be moved out of poverty with incentives to work.

Greater access to Association Health Plans. The current Administration is also improving small business access to affordable health coverage by expanding Association Health Plans (AHPs). AHPs allow small businesses to join together and form a single insurance pool, which provides them with greater purchasing power and lower costs. The Department of Labor estimates that the proposal would benefit up to 11 million Americans who are working in small businesses or are sole proprietors.[389]

The same proposal rule would allow insurance to be purchased across State lines, injecting greater competition in the market, while providing relief from some of the ACA's more onerous requirements about the design of insurance. However, insurers participating in AHPs could not discriminate against enrollees or employers based on health factors.

Expanded short-term coverage. On February 20, 2018, the Administration announced that it would expand the duration of short-term insurance plans used to fill gaps in health coverage from less than three months to less than a year. These plans are generally available for less than a third of the cost of other ACA individual market plans and allow consumers to choose the types of coverage they prefer instead of imposing a one-size-fits-all design.[390]

Chronic Care Management

According to the CDC, chronic diseases are the leading cause of death and disability in the United States and were responsible for 86 percent of the $2.7 trillion spent on health care in 2014.[391] The CDC also cites research findings that chronic conditions have a significant impact on worker productivity. For example, from 2012 to 2013 cardiovascular disease cost $126.4 billion in lost productivity through premature death. In 2012 diabetes reduced productivity by $69 billion due to absenteeism and by causing workers to be less productive on the job. From 2009 to 2012, smoking-related diseases cost over $156 billion in lost productivity.[392]

Thus, a health system that incentivizes better management and prevention of chronic diseases would prevent needless human, monetary, and economic costs.

Much of the health system is designed on a fee-for-service model. That is, providers are reimbursed based on the volume of visits, treatments, and procedures rather than the health outcomes of patients. In the Medicare program—which serves Americans age 65 and older as well as those unable to work due to a disability—patients with multiple chronic conditions are responsible for 93 percent of Medicare costs, and a system that rewards volume over quality does not serve them well.[393]

In 2016, JEC Chairman Paulsen joined with Rep. Peter Welch in introducing the bipartisan *Better Care, Lower Cost Act* to provide more coordinated care, better health outcomes, and lower costs for Medicare patients with multiple chronic conditions.[394] By providing a flat payment to a group of providers and rewarding the coordinated group for keeping a patient healthy, the legislation would promote—as the name suggests—better care at a lower cost.

A structure in which providers have some "skin in the game" is vastly superior to the Accountable Care Organizations (ACOs) that were created through the ACA. As CEA discussed, ACOs were intended to help curb costs but had the opposite result. ACOs received "shared savings" through Medicare if they provided efficient care but bore little downside risk if the care became costly. Rather than reducing Medicare costs, ACOs increased Medicare spending by $216 million in 2015 and $39 million in 2016, according to a study cited by CEA.[395]

The JEC Majority recommends that Congress consider the *Better Care, Lower Cost Act* and other approaches that reward quality outcomes rather than expensive care.

The Promise of Medical Technology

Advances in medical technology also hold great promise for treating patients with chronic conditions, both in saving and improving lives and preventing lost productivity. For example, insulin pumps allow patients with Type I diabetes to better manage their disease. Implanted pacemakers and defibrillators can prevent death for people with cardiovascular disease. Also, orthopedic devices allow patients to perform better at work and in their private lives.

That is why the JEC Majority continues to advocate full repeal of the medical device tax, which is making breakthroughs like these less likely in the future. The U.S. also generally experiences trade surpluses with medical technology products, which helps boost GDP.[396]

As CEA noted, the fact that the new tax law allows expensing of capital investments is likely to encourage further innovation in the healthcare field.[397] The Administration has also streamlined the FDA approval process for new therapies. CEA indicated that in 2017 this resulted in the first-ever gene therapies as well as record numbers of approved new medical devices, new drugs and biologics, and generic drugs.[398]

Another technological innovation that could provide patients with better and more efficient care is greater coordination and portability of medical records. The 2016 Better Way framework for reforming health care called for policies to promote innovation in electronic medical records.[399] These included reforming unnecessary restrictions while protecting patient privacy. The plan envisions records that would be portable for patients, freeing them from paperwork burdens each time they see a new provider and preventing medical errors that occur because of incomplete information about the patient's medical history.

Blockchain technology, discussed more fully in Chapter 9 of this *Response*, could provide a powerful solution for portability, enabling medical records to be carried on a smartphone or other mobile device with very little risk of being vulnerable to cyberattacks.

CEA devoted a great deal of discussion to pharmaceuticals and their affordability. As mentioned earlier, repealing the ACA's tax on brand-name drugs would likely reduce prices for patients, since this is the type of tax generally passed to consumers.

Other nations impose price controls on prescription drugs, a practice that the JEC Majority strongly cautions against. The freer market in the United States is one of the reasons that pharmaceutical innovation has flocked to the United States. As CEA described it, America is "the engine of worldwide pharmaceutical innovation, accounting for an estimated 46 percent of OECD patented pharmaceutical sales."[400]

The JEC Majority also agrees that reforming Government-imposed regulatory burdens and eliminating other artificial barriers that create unnecessary costs are part of the solution. As CEA noted, the more efficient FDA approval process is an example of one of those reforms.[401]

The JEC Majority looks forward to seeing more details on Administration proposals for lowering prescription drug costs and injecting more price competition in the health system. Congress and the Administration have a shared goal of ensuring that Americans have access to the best medical innovations in the world.[402]

CONCLUSION

The ACA has damaged the economy and left patients with higher costs, fewer choices, and questionable health outcomes. While Congress and the Administration have made some progress in addressing harmful aspects of the ACA, more should be done to provide greater competition and choices within insurance markets, lower costs, and higher quality.

Recommendations

In order to provide more innovative solutions for challenges within the healthcare system, the JEC Majority recommends:

- Continuation of ACA replacement efforts that reduce work disincentives, lower costs, expand choices, and repeal harmful ACA taxes;
- A national focus on combatting the opioid epidemic, including through better prevention via an education campaign, treatment of pain without addictive painkillers, community-oriented solutions for those already addicted, and greater disruption of supply.
- Greater emphasis on preventing and coordinating treatment for chronic conditions, with a focus on rewarding quality outcomes instead of costly care; and
- Expanded access to medical technology that could revolutionize health care, including through (1) repeal of the medical device tax, (2) coordination and portability of medical records, and (3) reform of regulatory burdens that delay innovation or make products more costly.

Chapter 9: Building a Secure Future, One Blockchain at a Time

- The *Report* estimates the substantial direct costs and longer-term indirect loss incurred to the economy and critical infrastructure from cyberattacks and threats. The *Report* suggests blockchain as a potential tool for securing America's digital infrastructure.
- Blockchain technology—providing cybersecurity and many other potential benefits—broke into the mainstream in 2017 driven by widespread interest and surging valuations in digital currencies such as Bitcoin and Ethereum.
- These new innovations and markets presented America's regulatory and legislative institutions with unique challenges as well as technology that could revolutionize the world's digital landscape and economy.

Introduction

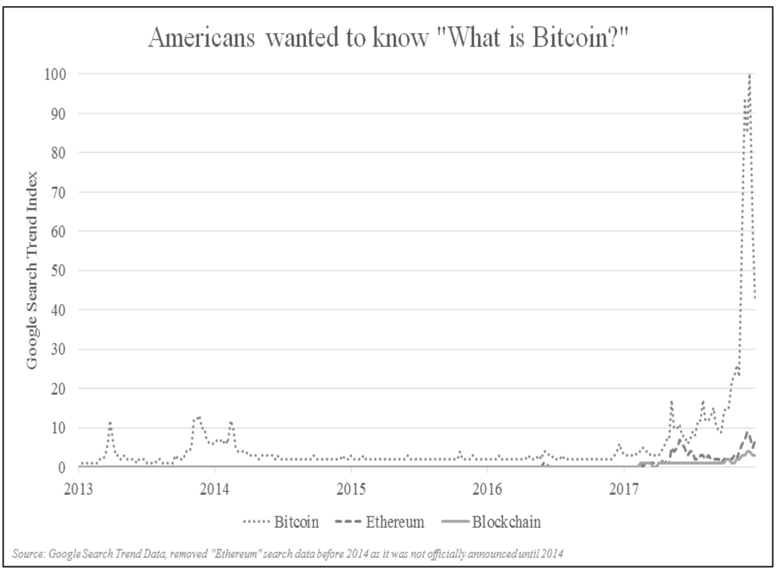
The *Report* reviews the new digital threats facing America today. Ensuring the security of computers, the internet, networks, and infrastructure is an enormous task, and the *Report* estimates the costs incurred from cyberattacks. As methods of theft, espionage, and vandalism shift from physical toward virtual—including data and intellectual property—law enforcement's role in fighting property crime remains vital. The economy benefits from protecting private property and contract integrity.

This chapter of the *Response* discusses a particular technology—blockchain—that is not only nearly invulnerable to cyberattack but is revolutionizing the way the world conducts commerce and shares information.

The Year of Cryptocurrencies

Many significant economic events stand out in 2017—passage of tax reform, regulatory reform, the continued drop in unemployment and the emergence of cryptocurrencies should be listed among them. Sensational headlines and intense fascination drove "Bitcoin" to second place as a global news topic in Google's Year in Search 2017.[403] As shown in Figure 9-1, "Bitcoin" searches skyrocketed, and "blockchain" and "Ethereum" moved out of relative obscurity.

Figure 9-1



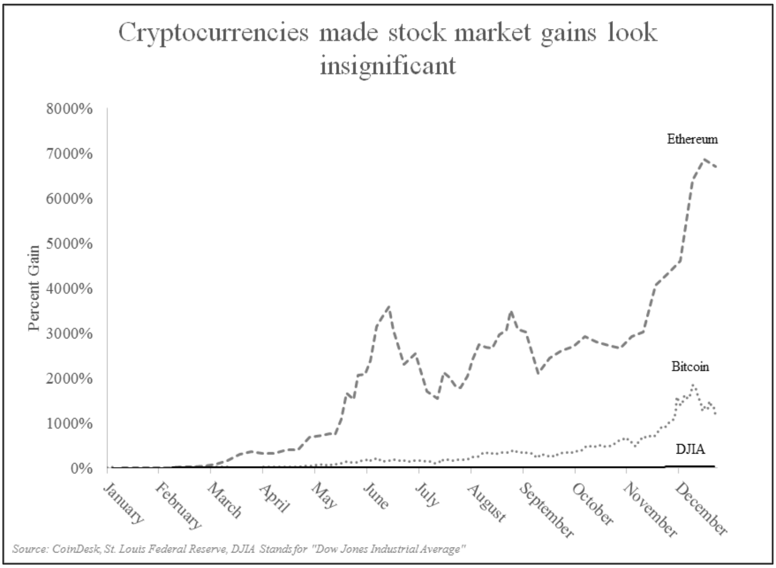
In addition to the surge in searches, the price of many cryptocurrency and blockchain assets skyrocketed. The Dow Jones Industrial Average (DJIA) started 2017 over 19,881 points and grew 24 percent to 24,719; the S&P 500 grew by more than

17 percent.[404] Yet, while both stock market measures experienced strong growth, cryptocurrencies dwarfed their performance.

Bitcoin started 2017 at a price just under $1,000 per bitcoin and finished well over $12,500 per bitcoin, an appreciation of over 1,100 percent. During that period, Bitcoin topped out over $19,000 per bitcoin. The second largest cryptocurrency, Ethereum, did even better. At the beginning of 2017, ether (Ethereum's currency) was worth under $10. By the end of 2017, ether shot up to over $719, an astronomical appreciation of 6,713 percent.[405] Stock market gains seem meager in comparison (Figure 8-2).

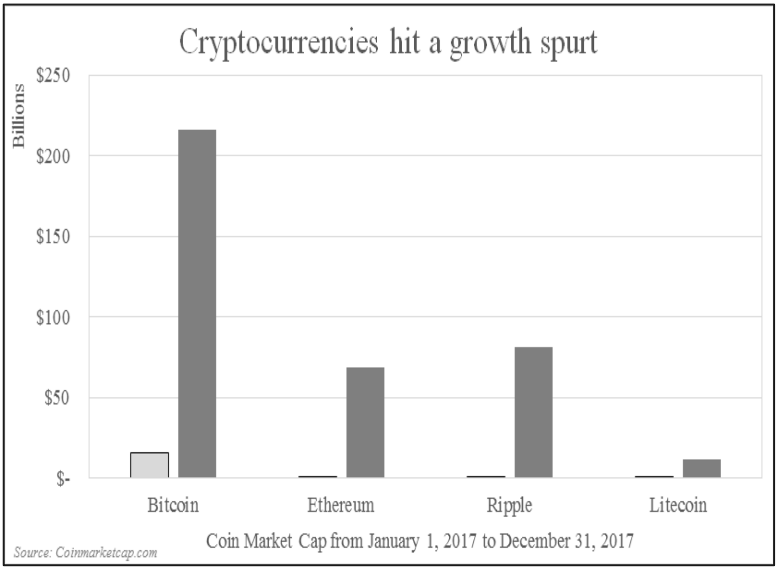
The buzz surrounding digital currencies resembles the internet excitement in the late 1990s when people recognized technology companies could change the world. Many internet companies launched and their valuations took off in short order. Many failed, but a few succeeded spectacularly and challenged the conventional ways of doing business. For example, people considered GeoCities the "home page" for individuals and Yahoo bought the company for $3.57 billion in 1999.[406] GeoCities had characteristics similar to Facebook today (or MySpace in the early 2000s), but it never came close to Facebook's reach and remained unprofitable. A company that did eventually succeed is an online book retailer called Amazon.com, but along the way its price gyrated with stock splits and recessions.[407]

Figure 9-2



Surging prices also drove up cryptocurrency market capitalization. At the beginning of 2017, the total value of all bitcoin in circulation was almost $15.5 billion, but by year's end it increased almost 14-fold to over $216 billion. Other cryptocurrencies such as Ethereum, Ripple, and Litecoin experienced similar gains. Ether's total circulating value multiplied by 98 from just under $700 million to over $68 billion. Ripple's market cap multiplied by an even larger 342 from $237 million to over $81 billion. Finally, Litecoin lost its position as the third-largest cryptocurrency in 2017. It still grew robustly but increased to just 55 times its original market cap of over $212 million, to well over $11 billion.[408]

Figure 9-3



WHAT ARE CRYPTOCURRENCIES AND BLOCKCHAIN?

Blockchain is the distributed ledger technology that underlies digital currencies such as Bitcoin. A ledger is the accounting tool that tracks the movement of money from one person or account to another. Conventionally, such records are stored in central locations like banks, headquarters, and Paypal servers. Blockchain revolutionizes ledger technology with a network of distributed ledgers. Instead of one central, authoritative record of all transactions or information, blockchain creates potentially thousands of identical ledgers in computers and servers all over the world.

In "permissionless" proof-of-work blockchain, people compete to validate each transaction in return for a reward. The protocol rewards users for creating and validating entries into the ledger. This reward creates an incentive for competition and gives these validators ("miners" see Box 9-1) new tokens to use in the system. Users who do not earn tokens by performing verifications, i.e., not "miners," must buy the tokens. This interplay between miners and purchasers create an ecosystem where people have clear incentives and rewards to maintain the distributed ledger for everyone.[409]

Bitcoin was the first blockchain. Bitcoin's network creates a new record of verified transactions approximately every ten minutes and packages the records into a so-called "block". Ethereum is the second-largest cryptocurrency in the world, and though it uses the same blockchain technology as Bitcoin, it serves different purposes. While Bitcoin's blockchain records each transaction in its currency, Ethereum records results from the programs users upload to its network. It allows programmers to create applications and "smart contracts" that utilize computing power from Ethereum's network to execute them.[410] This brings the decentralized security of blockchain to computing power, while allowing developers to build applications, smart contracts, and other digital coins on top of Ethereum. Additionally, it uses the same proof-of-work mining that Bitcoin does, but its network produces a block every 12 to 15 seconds and rewards its miners three ethers per block, with additional rewards for solutions found but not included.[411]

Box 9-1: Bitcoin Mining (Proof-of-Work)

Each block contains data related to Bitcoins sent and received, as well as digital signatures using cryptographic keys, by which each party confirms its agreement to a transaction. Each block is chained to the previous block, as computers throughout the network confirm its validity and solve a complex cryptographic proof. Solving this proof requires immense energy consumption, deterring other computers from spamming the Bitcoin network.[412] Once a block is in the chain, it can never be removed or altered and will be there for everyone on the network to see. The protocol then begins working on the next block in the chain.

The process is called mining using a proof-of-work method.[413] Essentially, users on the network have to prove that they constructed a block and solved the cryptographic proof. The Bitcoin protocol adjusts the difficulty of the proof to ensure a new block approximately every ten minutes. The users who successfully mine a new block are allowed to reward themselves with new bitcoins. The rewards dwindle based on the number of blocks in the chain. Thus, the only revenue miners can earn will come from the transaction fees.[414] The mining process varies among cryptocurrencies.

Are Digital Currencies Actual Currencies?

Blockchain technology could compete with existing mechanisms, goods, and services. Its initial application as a payment medium prompted questions about whether it might replace national currencies and challenge the U.S. dollar. While skyrocketing cryptocurrency prices impress, economists question whether these new digital technologies should be considered currencies. Currencies serve three functions: medium of exchange, unit of account, and store of value. A medium of exchange is something people willingly accept for goods and services. People willingly accept the medium of exchange because they believe it can be used for other transactions. A unit of account is a measure people use to post prices. A currency provides a common measurement unit of pricing, enabling direct comparisons across different products or services. Finally, a store of value is something that individuals can use to transfer purchasing power over time. A currency will not be the only store of value in an economy. Many items can potentially store value, but money normally maintains relatively stable purchasing power over time and individuals expect it to remain an acceptable medium of exchange in the future.[415]

At this point, many prominent economists do not believe cryptocurrencies fit the standard definition of money. Former Federal Reserve Chair Janet Yellen considered Bitcoin a “highly speculative asset” that is not considered legal tender.[416] Bitcoin itself has technical and economic limitations that hinder its use as a medium of exchange. Transaction processing time and fees on the Bitcoin network keep increasing and render Bitcoin uneconomical for common purchases. According to one report, Bitcoin transaction fees averaged $28 in December 2017 and processing time reached an average of 19.8 hours.[417] This was at the height of Bitcoin’s popularity in 2017 and highlighted the limitations of its underlying protocol. Bitcoin’s current design can only process about seven transactions per second, while Visa or Mastercard can process thousands. The debate over scalability deeply divides the Bitcoin community. Ethereum experienced similar problems, but underwent a planned and substantial upgrade in October of 2017 that improved its processing time.[418] If Bitcoin or other digital currencies can improve their underlying protocols or find off- chain solutions, they could speed up processing time and reduce transaction fees.

Extreme volatility in the dollar price of cryptocurrencies also impairs their use as money because people price goods and services in dollars and thus their purchasing power fluctuates wildly. For example, the price of pizza could move from a fraction of a bitcoin to thousands of them in a short time.[419] In order to value items in terms of bitcoin, ether, or ripple, the dollar exchange values of these units would have to stabilize. The dollar loses about two percent of its value per year due to inflation, but its purchasing power loss is modest and predictable so people can incorporate it in their decisions. If digital currencies become less volatile in the future, valuing items in those denominations could become easier and individuals might begin using them more frequently as a medium of exchange.

Some critics of currencies controlled by government fiat welcome cryptocurrencies because their supply is preprogrammed and perceived as unchangeable.[420] For example, only 21 million bitcoins will ever be issued and the last fraction of a bitcoin will be issued in approximately 2140.[421] Additionally, the creator of Ethereum designed its mining reward to decline exponentially as more miners create blocks, and according to his calculations the supply will be just over 100 million ether.[422] The volatility of digital currency values has not resulted from variability of their supply,[423] as was the case with the Venezuelan bolivar, which lost essentially all its value in less than a year;[424] rather, the value fluctuations of digital currencies stem from the demand side.

In 2017, demand for these assets spiked, leading to the significant price appreciation. Whether digital currencies hold their value will depend upon whether they offer benefits in terms of ease of use and accessibility, low transaction costs, security, anonymity, and other considerations in sufficient degree relative to conventional currencies and other stores of value such as gold. Venezuelans bought Bitcoin in increasing amounts recently, presumably because their national currency lost value and the government imposed capital controls. In this sense, cryptocurrencies resemble real assets or commodities more than currencies, though their future role could expand to include functioning as mediums of exchange.

Initial Coin Offerings

A new market formed around blockchain startups, called Initial Coin Offerings (ICO). An ICO allows developers to raise funds for a project by issuing tokens to use on that project. For example, if a group of economists wants to exchange papers, research, analysis, and review or editing services, developers would create an online platform to allow each person to have an account for conducting these activities. Before blockchain, such a site would usually use outside payment systems such as Paypal or Visa to process transactions, but in this example, users could transact with hypothetical scarce tokens called EconoCoins.[425]

The second element would be a "smart contract." While smart contracts might sound new, the concept is rooted in basic contract law. Usually the judicial system adjudicates contractual disputes and enforces terms, but it is also common to have another arbitration method, especially for international transactions. With smart contracts, a program enforces the contract built into the code. Using the EconoCoin example above, if economist A wants economist B to edit her paper, economist B agrees and both create a smart contract that will reward economist B with EconoCoins from economist A's wallet upon delivery of edits. The network will enforce the contract without a third party, but the two economists can also build in a provision that would enlist others in the network to resolve disputes for a fee.

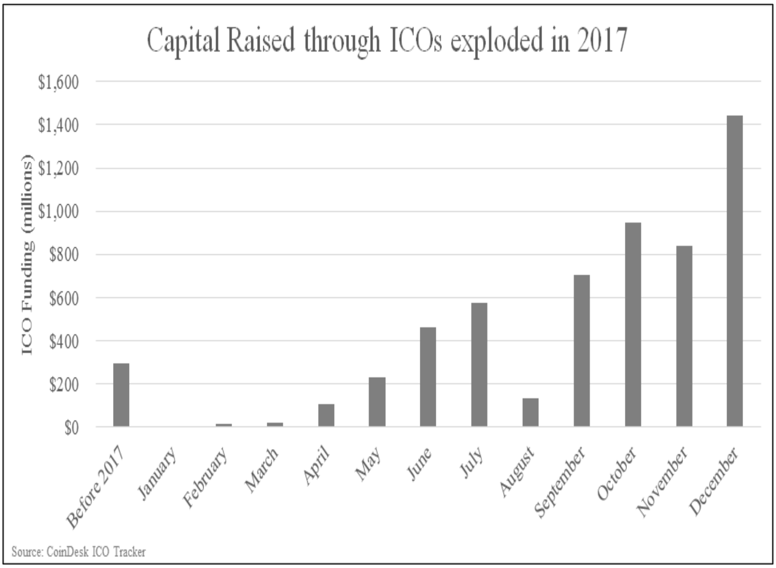
The developers and economists in this example do not need an influx of outside capital to begin the project. With an ICO, the creators explain the concept to potential users and offer for purchase initial coins that can be used in the network. Platform users would utilize the coins on the network to obtain the services or goods listed above.

An ICO consolidates two important elements of building a new economic ecosystem, obtaining funding and creating a network. ICOs do not offer equity and are much less expensive than an Initial Public Offering (IPO). PricewaterhouseCoopers estimated that an IPO costs companies between four to seven percent of the capital raised and an additional $4.2 million in accounting costs. Further, after surveying chief financial officers, PricewaterhouseCoopers found that companies spend between $1 million and $2 million annually on maintaining their status as a publicly listed entity.[426] These costs help explain why only the largest of companies go public.

In contrast, developer Merunas Grincalaitis estimated that an ICO would take three months and cost approximately $60,000. A third of this cost comes from legal fees to ensure the ICO complies with relevant laws.[427] Once up and running, these platforms continue to raise funding for upgrades and maintenance through either transaction fees for verification, appreciation of the tokens, or donations. During 2017, developers launched hundreds of ICOs and investors realized their potential. Most new tokens utilized the Ethereum blockchain to launch their tokens and execute their code.

As shown in Figure 9-4 below, the enthusiasm led to an explosion in capital flowing into the ICO market. Before 2017, developers raised just under $300 million in funding for ICO projects. Although this number may seem high, it is misleading. Approximately $152 million of these funds went into the infamous Decentralized Autonomous Organization (DAO) which eventually shut down and returned a portion of those funds (more details below). During 2017, developers raised over $5.3 billion for new token companies. Such capital includes a plethora of projects and ideas. For example, FileCoin, a blockchain intended to decentralize cloud storage away from Amazon and Google, raised $262 million to move forward with its vision. Many of these projects will likely fail, as most startups do, but the ones that do survive could transform the way the internet and technology works for decades to come.

Figure 9-4



Blockchain Innovations

Cryptocurrencies and ICOs create headlines, and the pace of financial innovation in the blockchain space amazes skeptics. Yet, with all the headlines focusing on the financial applications, people may miss the digital revolution now happening with other blockchain applications. Even worse, people could be frightened about new developments with the technology as they associate blockchains with the negative headlines. Blockchain technology offers a decentralized, secure, and efficient way to store almost any form of data across multiple platforms. Developers, companies, and governments recognize the potential and have already starting to implement blockchains for many different uses.

For instance, health care providers, patients, and policymakers continue searching for portable and secure ways to store medical records digitally. On a Joint Economic Committee podcast, Committee member Representative David Schweikert described how health care companies are already researching blockchains as a secure way to keep medical records on personal smartphones or within provider networks, and what this advance could mean for America's future:[428]

> *[M]edical records have no value if they don't move with you. So think of if I could put my medical records on a blockchain where just like on many phones, I could use my thumbprint and a password and with a certain type of encryption…It would be HIPAA [Health Insurance Portability and Accountability Act, which includes patient privacy protections] compliant. Now all of a sudden you and I and the rest of society can carry their medical records on their phone.*[429]

Unlike many innovations that attempt to skirt laws or regulations and become associated with the underground, these new blockchain products attempt to comply with the current system and even work together with regulators. The new products range from coordinating payment (healthnexus),[430] monitoring and rewarding patients for following clinical recommendations (RoboMed Network),[431] tracking pharmaceuticals along the supply chain (MediLedger),[432] and even identifying specific supply chain problems such as those associated with the opioid crisis (BlockMedx).[433]

On the regulatory side, Representative Schweikert currently coordinates with institutions like the Massachusetts Institute of Technology and the National Institute of Standards and Technology (NIST) to develop encryption standards that would protect Americans' private medical data.[434] Further, in 2016 the United States Department of Health and Human Services (HHS) announced the "Use of Blockchain in Health IT and Health-Related Research" Ideation Challenge.[435] The initiative requested white papers examining how blockchain technology could change health information technology. Researchers submitted 77 papers and 15 won awards from their work.[436]

From applications ranging from management of the electrical grid and utilities to how companies manage global supply chains, the potential for blockchain is truly revolutionary. For example, power plants could record the electricity they generates on a blockchain as available for purchase. Utilities could then purchase the power, and the blockchain would record the purchase and the transfer. Finally, the meters of end users would communicate with the utility to purchase portions of the power. These steps occur now but using a distributed ledger would streamline and speed up delivery, lowering costs and saving power.

Blockchains could also enable microgrids from local power sources. The company LO3 Energy currently runs a pilot program for trading power from solar panels on Brooklyn roofs. Smart meters throughout the neighborhood would buy and sell power generated from these alternative sources as it enters the grid.[437] With these developments and countless possibilities, it is no surprise that governments around the world started working with energy providers to explore blockchain's use.[438] Even the Department of Energy partnered with BlockCypher to demonstrate how blockchains could facilitate a smarter energy grid.[439]

Shipping a product from a supplier to retail creates mountains of paperwork or computer records that are rarely compatible across differing systems, especially a when distributor acts as a middle-man between the two. The paperwork and data tracking multiplies when sending said product overseas or importing. Not only will multiple parties need to ship the product, but the supplier and customer will have to deal with customs agency paper work. Recognizing blockchain's potential, IBM teamed up with the world's largest shipping company, Maersk, to develop a consensus distributed ledger that would allow all companies and government agencies along the chain to record, track, and verify products throughout their journey.[440]

Walmart and other grocers started testing blockchains for their supply chains. In testimony before the House Science and Technology Committee, Frank Yiannas, Walmart's Vice President of Food Safety, described how tracking E. coli and other contaminated food took companies and regulators weeks, which left Americans at risk and incurring large costs in food waste. Walmart tested a blockchain platform to track sliced mangos from farm to shelves and reduced the tracking time from 7 days to 2.2 seconds. Walmart and ten of the largest grocers in America formed a coalition to implement this technology throughout their supply chains.[441]

Growing Pains and Misuses

The potential for theft remains a problem but not due to the structure of blockchain. No evidence exists of anyone hacking blockchain's underlying protocol, but digital currencies are still vulnerable to theft. Users keep their currencies on digital "wallets" stored as files on a computer. For many, this could be a technical barrier deterring them from directly using the tokens. Centralized exchanges and internet services emerged to solve this hurdle where users could buy, sell, and store their virtual currency on that site. The most well-known American example is the site Coinbase. However, using an exchange to store ones' digital assets increases the risk of theft. When individuals keep their digital asset in a single "wallet," the only way to access it is by knowing their private key. But with online exchanges that pool multiple assets into much larger "wallets" to facilitate trading, many people will have access to those funds.

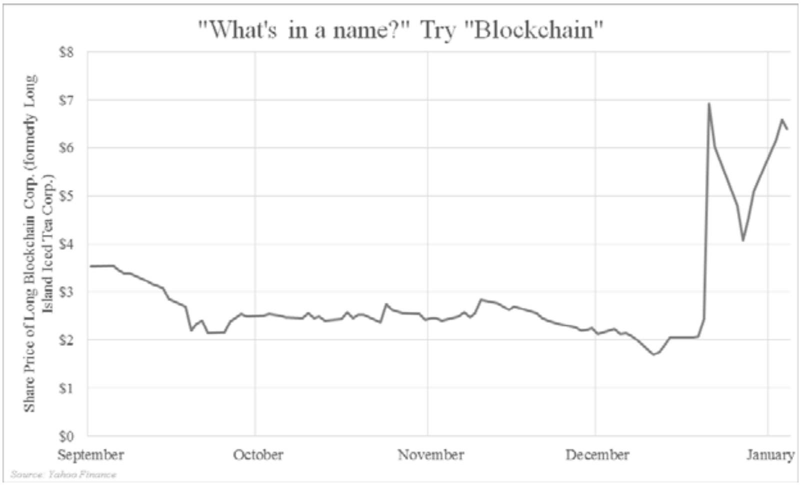
Although Coinbase and other exchanges earned reputations for security, a few early exchanges did not. The most infamous theft occurred on the Mt. Gox exchange. This early Japanese exchange allowed users to create accounts and store Bitcoin. In 2014, bad actors gained access to Mt. Gox's main wallet and transferred hundreds of millions of dollars' worth of Bitcoin to their account. Mt. Gox's system was so flawed that a user accidently entered a negative symbol under payment and the site credited him with extra bitcoin. After multiple thefts and the arrest of the owner, the site was shut down.[442] Users in a cryptocurrency exchange must remember that they are putting their trust in the security of that entity in a manner similar to depositors in early banks.

In July 2017, YouGov polled internet users about what they believed people mainly used cryptocurrencies to do. While just under 40 percent said they did not know, almost a quarter said these currencies were used for illegal transactions. Anecdotal reports furthered this sentiment as sites such as Silk Road, an online marketplace for illicit drugs, publicized Bitcoin's use for the transactions.[443] Recently economists estimated that approximately 25 percent of all users conduct illegal transactions on Bitcoin, and while the proportion of transactions for illegal purposes fell, the absolute level remained at an all-time high in April 2017.[444]

The rapid appreciation in value of cryptocurrencies and ICOs contributed to the doubt and unease about blockchain technology. *The New Palgrave Dictionary of Economics* defines price bubbles as "asset prices that exceed an asset's fundamental value because current owners believe they can resell the asset at an even higher price."[445] Nobel Prize Winners Eugene Fama and Robert Shiller disagree on the reasons for an asset's value.[446] The former maintains that markets always set efficient prices based on the information available. The latter claims that, at times, irrational decisions can determine prices. With new kinds of investments, detailed information about the product will likely be hard to find or could be manipulated. This makes establishing the fundamental value difficult. Investors will estimate the possible future value, but with only unreliable and changing information to go on, their valuations fluctuate. Market participants will rationally speculate to varying degrees and the price reflects the "best guess" of future value. Still, Robert Shiller would note that "irrational exuberance" could take hold and drive up asset prices beyond reasonable estimations of fundamental value, which eventually leads to a rapid downward correction. "Bubble" sceptics will point out that no one can identify bubbles *a priori* with any consistency.[447]

Blockchain's market reception fits the pattern of a new, not fully understood technology. Within the financial community, it is a running joke that adding "blockchain" to a company's name, prospectus, or business plan will drive up the stock price. A recent example of this phenomenon is the unprofitable New York-based Long Island Iced Tea Corporation, which specialized in selling non-alcoholic beverages. With the NASDAQ threatening to delist the publicly traded company, it changed the name to Long Blockchain Corporation.[448] As Figure 9-5 shows, the stock price skyrocketed after the announcement and closed at a price three times the higher value.

Figure 9-5



Outside what may seem an obvious attempt at cash grabs, observers will point to other warning signs such as Useless Ethereum Token (UET) and DogeCoin. The creator of UET advertised the coin with the following: "The UET ICO transparently offers no value" and "Might be secure, definitely not audited."[449] The ICO still raised $336,038 and issued almost 4 million tokens. DogeCoin's recent rise raises similar concerns. In 2013, Jackson Palmer created a "joke" cryptocurrency called DogeCoin as a parody of many alternative currencies started at that time and to raise awareness about cryptocurrencies generally. A year later, scammers fleeced millions from the DogeCoin community, and users including Jackson Palmer left as enthusiasm and good will evaporated.[450] Prior to 2017, the highest market capitalization was just over $89 million in February of 2014. As enthusiasm grew, DogeCoin expanded to almost $2 billion in market capitalization.[451]

REGULATORY QUESTIONS

Cryptocurrencies, ICOs, and their exchanges present novel regulatory challenges. Their rapid ascension led to instances of new products running afoul of America's current regulatory framework. This demonstrated how certain regulatory environments are simply out of touch with the internet age. The market expanded with a light regulatory touch, but its explosion in 2017 and the well-publicized nefarious actions in this space prompted regulators to act. Further, American regulators spent years convening working groups, watching developments, and conducting research to ensure they understood how these technologies operated and how they could be regulated. Rather than covering the plethora of regulatory challenges cryptocurrencies and blockchain present, this *Response* will focus on securities regulations, money transmission laws, taxation definitions, and possible future regulatory action.

Securities Regulation

ICOs developed so rapidly, as shown in the above in Figure 9-4, that many innovators did not ask the question, "Is this a security that would need to be registered with the Securities and Exchange Commission (SEC) or other regulators?" The most well-known example is Ethereum's Decentralized Autonomous Organization (DAO). The DAO was a digital organization that allowed users to contribute ether to a pool that would be invested in proposed projects based on a vote. The amount contributed would determine how many votes a user had. The DAO launched its tokens on Ethereum's blockchain as an open source program in May 2016 and attracted 14 percent of all ether created at that point.[452] Within a month, someone exploited a flaw in the code and stole over $50 million in ether.[453] This caused Ethereum's value to drop and eventually led to shutting down the DAO and a splitting of the currency to return the ether to its original owners before the DAO.[454]

The DAO represented amazing innovation in democratized finance, but its operation certainly seemed as if it were similar to a mutual or hedge fund. If so, then it should have registered as a security with the SEC. The SEC launched an investigation into the DAO to determine if it should have been defined as a security subject to SEC regulation. The normal test for this purpose is considered the Howey Test, named for a case the SEC brought against a 1946 orange grove.[455] Peter Van Valkenburgh summarizes the test as four prongs:

> *A [security] for the purposes of the Securities Act means a contract, transaction or scheme whereby a person…*
>
> - *invests his money in*
> - *a common enterprise and is led to*
> - *expect profits*
> - *solely from the efforts of the promoter or a third party*[456]

The SEC found the DAO should have been defined as a security under this test.[457] Since this ruling, the SEC started pursuing more enforcement actions against new tokens for both securities registration issues[458] and fraud.[459] Additionally, SEC Chairman Clayton started warning against unregistered securities offerings, fraud, and pursuit of superficial name changes such as the one undertaken by Long Island Iced Tea.[460]

Market innovators knew securities regulators would scrutinize both the potential fraud and securities registration. A group of participants joined in brainstorming an industry standard for future token launches.[461] The agreement they launched was called the Simple Agreement for Future Tokens (SAFT).[462] The SAFT acknowledges that presale tokens before a network operates should be considered a security available for accredited investors.

Once the network is running, the tokens would be available to the public as utility tokens and not classified as securities. Using the EconoCoin example, the token sales to raise funds for the project would be considered a security. Once the project was up and running, those tokens would then be available to the public and not a security. SEC Chairman Clayton has yet to comment on the SAFT proposal, but it exemplifies the good actors within a market working to root out fraud and ensure that new innovations comply with existing regulations.

Taxation

Securities regulations are not the only federal rules challenged by the innovation of cryptocurrencies challenge. Bitcoin's rise introduced an ever-growing question about how these assets should be taxed. For example, dollar fluctuations are not taxed. If a person held cash for a number of years and the purchasing power went up relative to other currencies, the appreciation would not be considered taxable if the dollar is later exchanged for foreign currency. However, the tax code treats foreign currency as property rather than currency.

If foreign currency is received as part of a business transaction, it is considered ordinary income and must be reported as a dollar value at the time it is received. If the currency then appreciates before the foreign currency is actually exchanged for dollars, the appreciation is treated as a capital gain and subject to capital gains taxes. If the taxpayer is an individual and not a business and holds foreign currency for an investment, the gains when the currency is converted to dollars are considered capital gains. However, if an individual is not holding foreign currency as part of a business or an investment—as often occurs in foreign travel—then up to $200 in appreciation is exempt from taxes and any additional amount is capital gain.

This distinction made participants wonder if cryptocurrencies receive the same treatment. In 2014, the IRS recognized the need for clarity and issued a guidance document to answer frequently asked questions and request further comments on the issue. Like foreign currency, the IRS classified virtual currencies as property and not currency, but noted they should not be considered foreign currency for tax purposes. Similar to foreign currency, taxpayers who receive digital currency as payment for goods and services must treat it as ordinary income and report the fair market value in dollars, and any appreciation after that point as capital gain when exchanged for dollars. Additionally, taxpayers who hold virtual currency as an investment must treat appreciation like capital gain. However, the $200 exemption that applies to personal foreign currency transactions does not appear to apply to virtual currency. Hypothetically, if a person paid a coffee shop for a cup of espresso with a virtual currency, that person would need to track the basis and fair market value of each small transaction like this to determine gain or loss in the virtual currency. Additionally, the IRS clarified that mining awards should be included in users' gross income.[463]

While the guidance provided some clarity, it left many unanswered questions that prompted comments requesting clarification. For example, the American Institute for Certified Public Accountants (AICPA) noted that while the IRS indicated fair market value could be obtained from exchanges, it did not specify which exchanges should be used. Further, AICPA pointed out that tracking basis and fair market value in very small transactions would create an enormous compliance burden for users without significantly affecting the total gain or loss in virtual currencies.[464] The IRS has agreed to better coordinate virtual currency.[465]

The larger issue for virtual currency market participants is that the absence of guidance could expose them to enforcement actions later if rules are applied retroactively. Such a situation could freeze investment and exploration into new virtual currencies, especially for smaller transactions such as coffee purchases. Representative Schweikert, along with Colorado Representative Jared Polis, introduced the Cryptocurrency Tax Fairness Act of 2017.[466] The bill would essentially create a *de minimis* reporting exemption for virtual currency purchases under $600.[467] The bill has yet to become law, but as virtual currencies' popularity and technical abilities improve, more bills on this topic will likely be introduced.

Money Transmission

One of the more vexing questions cryptocurrencies created involve money transmission laws. Money transmitters are entities that take money from one customer and give it to another; common examples include Western Union and MoneyGram. As explained by Peter Van Valkenburgh, historically, States regulated and licensed money transmitters. These licensure regimes were intended to protect customers if the funds were lost or stolen. However, State licensing requires those operating across State lines to obtain a license to operate in all States and territories except Montana.[468] Normally, many take the federalist view on state laws and regulations.[469] From this perspective, States can experiment with new and novel policies and if citizens do not like it, they can move to another State. It also gives State policymakers flexibility to craft new policies that might better fit their circumstances than a uniform national policy.

Cryptocurrency and ICO emergence challenged the "states as laboratories" view on these licensing regimes. Every cryptocurrency exchange or ICO is "global on day one." This means once launched, anyone around the world can access the site and potentially use its services. Using the example of EconoCoin above, when the new token launches the sites that traded the token for money—including the launch site itself—might theoretically have needed a license in every State. This would deter investment and research into new innovative products.

Market participants and organizations proposed multiple ways for a path forward. The Uniform Law Commission, a nonpartisan commission focused on creating consistent state laws, drafted and approved legislative text that would clearly define what virtual currency businesses need to file as money transmitters.[470] States would still need to enact the proposed legislation, which would likely take years. This delay caused others to recommend Federal alternatives. Peter Van Valkenburg listed various options, including creating a "passporting" regime similar to the European Union or Federal preemption of State transmission laws.[471] None of these solutions would be perfect, and all should undergo rigorous cost-benefit analysis.

Future Regulatory Questions

Solving the challenges cryptocurrencies and blockchains present will require unique solutions that balance the needs of consumer protection, security, and entrepreneurship. While it is impossible to determine precisely which rules, regulations, and guidance will result from this process, one thing is certain. Regulatory agencies will need to coordinate to ensure they do not work at cross purposes. America is already subject to a complex set of regulatory institutions governing financial products and transactions. As Perianne Boring of the Chamber of Digital Commerce highlighted, this regulatory web produced four different classifications of digital assets (commodity, security, currency, and property),[472] which is not conducive an environment where entrepreneurs are enthusiastic about launching a startup.

Regulators recognized the need for coordination. In the *Wall Street Journal*, SEC Chairman Jay Clayton and Commodities Futures Trading Commission Chairman J. Christopher Ginacarlo noted:

> *The CFTC and SEC, along with other federal and state regulators and criminal authorities, will continue to work together to bring transparency and integrity to these markets and, importantly, to deter and prosecute fraud and abuse.*[473]

Outside the financial space, as noted above, other executive agencies such as NIST and HHS continue working towards standards that promote compliance without needlessly halting innovation. For cryptocurrencies and blockchain to further thrive, policymakers will need collaborative and innovative solutions that set the rules of the game without overly prescriptive regulations that constrain this emerging technology from reaching its full potential

CONCLUSION

Technology presents evolving challenges and generates new solutions. Blockchain technology essentially stores and transmits data securely, in large volume, and at high speeds. So far, the technology has proved largely resistant to hacking, and given this feature, developers first applied it to digital currencies. Yet blockchain has many more potential applications, such as portable medical records and securing the critical financial and energy infrastructure that the *Report* identified.

Recommendations

- Policymakers and the public should become more familiar with digital currencies and other uses of blockchain technology, which have a wide range of applications in the future.

- Regulators should continue to coordinate among each other to guarantee coherent policy frameworks, definitions, and jurisdiction.
- Policymakers, regulators, and entrepreneurs should continue to work together to ensure developers can deploy these new blockchain technologies quickly and in a manner that protects Americans from fraud, theft, and abuse, while ensuring compliance with relevant regulations.
- Government agencies at all levels should consider and examine new uses for this technology that could make the government more efficient in performing its functions.

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[87] *"Inflation has been high, spurred by the earlier increases in the prices of energy and some other commodities. The Committee expects inflation to moderate later this year and next year, but the inflation outlook remains highly uncertain.*

"The downside risks to growth and the upside risks to inflation are both of significant concern to the Committee. The Committee will monitor economic and financial developments carefully and will act as needed to promote sustainable economic growth and price stability."

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[89] The Federal Reserve's rationale was that *"The payment of interest on excess reserve balances will give the Federal Reserve greater scope to use its lending programs to address conditions in credit markets while also maintaining the federal funds rate close to the target established by the Federal Open Market Committee."*

"Board announces that it will begin to pay interest on depository institutions' required and excess reserve balances." Board of Governors of the Federal Reserve System, October 6, 2008, https://www.federalreserve.gov/newsevents/pressreleases/monetary20081006a.htm

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securities and residential MBS), which constitutes a credit easing policy (also Ben Bernanke's term, see next footnote) rather than a monetary easing policy.

[92] *In pursuing our strategy, which I have called 'credit easing,' we have also taken care to design our programs so that they can be unwound as markets and the economy revive."* Bernanke, Ben S, "The Federal Reserve Balance Sheet," Board of Governors of the Federal Reserve System, April 3, 2009, https://www.federalreserve.gov/newsevents/speech/bernanke20090403a.htm. Note: Bernanke's identification of QE1 as "credit easing" implies that the intent to sterilize the expansion using IOER.

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[97] *"If the Fed pays interest on reserves, then the quantity theory of money (more money means more inflation) doesn't necessarily hold. They recently started paying interest on reserves, and that's one reason why the big injections from 2008 didn't have an inflationary impact. The Fed can adjust the rate as necessary, and indeed in my view a lower IOR [interest on reserves] would be more effective than QE2."* Sumner, Scott, "Open Letter to Conservatives on Monetary Policy," The American Catholic, November 16, 2010, http://the-american-catholic.com/2010/11/16/open-letter-to-conservatives-on-monetary-policy/

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Syndicate, June 28, 2013, p. 2. http://www.nber.org/feldstein/projectsyndicatejune2013.pdf

[99] "…*[The] large expansion of the monetary base has to be temporary otherwise the price level would have jumped several hundred percent already…Ostensibly for this reason the Fed has been very clear that it plans to eventually reduce its balance sheet. In the meantime, the Fed is using IOER to manage its balance sheet in a manner that effectively sterilizes the above-trend growth in the monetary base. The use of the IOER reinforces the Fed's goals that the excess reserves are to be ultimately temporary."* Beckworth, David, "Permanent versus Temporary Monetary Base Injections: Implications for Past and Future Fed Policy," *Journal of Macroeconomics,* Vol. 54, Part A, December 2017, p. 114.

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[101] *"First, paying interest on reserves made monetary policy tighter than it would otherwise have been, as measured either by the higher federal funds rate or the lower equilibrium price level implied by the shifting but still intersecting demand and supply curves for reserves. Ex ante, the use of interest on reserves to minimize the effects of emergency lending on the price level seemed prudent. Ex post, however, it turned out to be a mistake: as Hetzel (2012) points out, monetary policy ought to have been substantially more accommodative than it was throughout 2008, considering the severe deflationary recession that followed."* Ireland, Peter N, "Interest on Reserves: History and Rationale, Complications and Risks," Boston College and Shadow Open Market Committee, February 2018, p. 3, http://irelandp.com/papers/somc201803.pdf

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depositing the borrowings with the Fed. Thus, the Fed's balance sheet would grow infinitely. By citing the primary credit rate as a relevant short-term interest rate, the Fed remains in de facto compliance with the law.

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[124] When the forecast period ended before 2018, the Majority staff used the final forecast growth rate to interpolate the implied level of potential real GDP for 2028.

[125] ERP 2018, p. 446.

[126] As the proportion of goods and services produced rises relative to money, this pushes inflation rates down.

[127] Specifically, the average hourly earnings for all employees on private nonfarm payrolls registered a gain of 2.9 percent as reported in the February 2, 2018 release of the BLS January Employment Situation report, https://www.bls.gov/news.release/archives/empsit_02022018.htm

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Views of Ranking Member Martin Heinrich

I am pleased to share the Joint Economic Committee (JEC) Democratic response to the 2018 *Economic Report of the President.* The JEC is required by law to submit findings and recommendations in response to the *Economic Report of the President* (the ERP), which is prepared and released each year by the Council of Economic Advisers (CEA).

This response focuses, in particular, on the actions Republicans have taken on taxes, their ongoing efforts to undermine Americans' health care, the administration's belated and inadequate plan to address the nation's crumbling infrastructure, and its dangerous efforts to roll back regulations that protect consumers and the environment.

As detailed in the pages that follow, the Republican tax law will explode the deficit, widen the gap between the rich and everyone else, and ultimately increase taxes on tens of millions of middle-class households. The changes in health care will reduce the number of insured and push premiums higher. The administration's infrastructure plan shifts the burden of responsibility to state and local governments and fails to meet the urgent needs identified in the ERP. Its approach to deregulation picks winner and losers, threatens the health and safety of Americans, and fails to address increased market concentration across industries and its negative impacts on growth, productivity and wages.

In fundamental ways, the 2018 ERP is disconnected from reality. It devotes a chapter to innovative policies to improving all Americans' health while dismissing recent gains in health insurance coverage through the Affordable Care Act (ACA) and attempting to call into question the link between health insurance and health outcomes. Such thinking motivated the unsuccessful Republican attempts to repeal the ACA and animates their continued efforts to sabotage the health care markets and undermine Medicaid enrollment, ultimately reducing coverage and increasing costs for those who need it the most.

The ERP includes a chapter on addressing cybersecurity threats, somehow ignoring the fact that President Trump has refused to acknowledge in any meaningful way that Russia interfered with the 2016 elections, through bots, fake news, manipulation of social media, and direct infiltration of voting systems, and is preparing to do so again in the upcoming 2018 midterms. Head of the National Security Agency Admiral Mike Rogers recently testified to Congress that the president has not asked him to counter Russian efforts to influence U.S. elections.[1]

The ERP lays out the need for enhancing U.S. trade, glossing over the fact that the trade deficit increased by 12.1 percent in 2017, reaching its highest level since 2008 as U.S. imports surged, despite a falling dollar.[2] In its discussion of the administration's recent imposition of a tariff on all solar panel imports, the ERP fails to acknowledge that this tariff will actually hurt American workers and consumers for the benefit of foreign-owned firms.

For an ERP to have lasting value, it should offer objective, academic analysis, rooted in rigorous examination of the facts and grounded in economic theory to inform policymaking in the future. Unfortunately, like the CEA's analysis last year estimating that a large cut in the corporate tax rate would boost average household income by at least $4,000, which is again repeated in the ERP, much of this report lies far outside of the economic mainstream.

For example, the ERP and the administration's recent FY 2019 budget make estimates about economic growth that are very different from those of the Federal Reserve, Congressional Budget Office, and private forecasters.[3] While the administration is predicting growth of about 3 percent each year for the next decade, others estimate that growth will be closer to 2 percent.[4] Growth of 3 percent would be a significant departure from past performance, where annual GDP growth has averaged less than 2 percent since 2001.[5]

President Trump inherited an economy that was continuing to strengthen in its 8th year of recovery and adding more than 2 million jobs annually for the six previous years. Wages had begun to move up. GDP had grown a modest 1.5 percent in 2016, after increasing by 2.9 percent in 2015.[6] Those trends remain largely in place today, despite the administration's harmful agenda. But so, too, do the demographic and structural challenges constraining long-term economic growth.

Longer-term structural challenges include:

- An aging population, which will slow labor force growth, in the absence of immigration reform or efforts that bring disconnected workers back into the labor force.

- Slow productivity growth as well as slow public and private sector investment growth.

- Increasing concentration in many industries, which limits innovation and entrepreneurship and leads to lower pay for workers

- High levels of income inequality and low levels of economic mobility, which threaten the underpinnings of the economy.

The administration is projecting 3 percent growth without taking any actions to overcome well-known barriers to long-term growth. Faster economic growth can be achieved by more people working or people working more productively. The retirement of baby boomers, along with the plateauing of women's labor force participation rates, makes a dramatic increase in hours worked unlikely. In fact, the Congressional Budget Office estimates that hours worked over the next decade will increase by 0.4 percent each year compared to 1.3 percent annually from 1950 to 2016.[7] Changes to immigration laws advocated by the Trump administration to restrict immigration, or to kick out workers already here, would further limit the size of the labor force and apply downward pressure on growth. It is not surprising, therefore, that the ERP is silent on immigration reform.

Recent history suggests strong productivity growth will be difficult to achieve as well. As noted in the ERP, average annual productivity growth between 1953 and 2017 was 2.0 percent (Table 8-2). And more recently, between 2007 and 2016, average annual labor productivity growth was just 1.1 percent.[8] Yet, to reach its aggressive growth targets, the administration is predicting annual productivity gains of 2.6 percent over the next decade (Table 8-2). The sluggish productivity growth over the past decade is not just a U.S. phenomenon – it's a worldwide challenge. In fact, the United States has actually outpaced Japan, Canada, Germany, and France in productivity growth over the past decade (Figure 8-41).

One path to increasing the number of hours worked is to implement policies that enable workers to better meet both their work and family responsibilities. Instituting a national paid leave policy, for example, would allow more workers to stay connected to the workforce after the birth or adoption of a child, reducing turnover rates and boosting labor participation rates.[9] More accessible and affordable child care would help reach the same objectives. Opioid abuse treatment and prevention could help more workers stay in the workforce, contributing to their communities and increasing economic output. Despite campaign promises in each of these areas, the Trump administration has been slow to address these challenges.

Similarly, fixing the nation's infrastructure, as noted in the ERP, can boost productivity and increase competitiveness. Yet, while it is not stated in the ERP, the administration failed to present an infrastructure plan it its first year in office, and when the plan was finally announced in February, it failed to address the nation's urgent needs.

Republicans are counting on businesses to significantly increase capital investment, which would make workers more productive. And, certainly, some increase in business investment is expected following tax reform. But the early signs are concerning. Instead of investing in their plants and facilities, companies have moved quickly to initiate stock buybacks, which will benefit shareholders and wealthy investors but do little to increase productivity or ultimately boost worker wages. Since January 1st, companies have announced more than $200 billion in buybacks, more than 30 times the amount companies have announced in bonuses and wage hikes for workers.[10]

What's particularly damaging, over the longer term, is that the administration and Republicans in Congress have jeopardized the nation's fiscal health by passing a tax package that will add nearly $1.5 trillion to deficits over the next 10 years. Republicans pursued fiscal stimulus when it wasn't warranted or needed. They also elected not to pay for it, instead passing the cost on to the next generation and to state and local governments. In fact, Republicans are shifting more responsibilities, such as infrastructure, to the states while simultaneously constraining states' ability to raise revenues through a new cap on the state and local income tax deduction (SALT).

The administration has already taken actions that will harm consumers and the economy in areas such tax, health care, and consumer financial protection. Under the mantle of deregulation, the administration has removed fundamental labor, environmental and consumer protections. In other areas, including infrastructure, the administration has unveiled plans, but so far it has not been successful in persuading Congress of the merits of its approach and there has been little movement. In still other areas, the administration has ignored major challenges, such as the opioid crisis, the rising costs of education, the impact of climate change already being felt by communities, and others.

To foster strong inclusive economic growth, it is vital that the United States invest in our nation's physical and human capital. A real infrastructure plan that modernizes roads, bridges, schools, ports, and water systems and improves access to broadband networks is critical to laying the groundwork for strong future growth. So too are investments in our children, workers, R&D, and communities of all sizes and in all regions of this country. Other than a brief discussion of broadband expansion, which calls out the supposed "detrimental effects" government intervention can have on the private market, there is little attention in the ERP paid to the unique challenges facing rural America. Ignoring these varied challenges or looking to the private sector to address them, as the administration regularly advocates, will not achieve significant progress.

The administration and congressional Republicans spent much of the past year focused on repealing health care coverage and handing out tax gains to the wealthy and large corporations. They ignored issues that demand action – from addressing DACA by the deadline the president created, to reducing gun violence, to fixing the nation's broken infrastructure. The same selective approach to identifying the challenges and opportunities ahead is evident in the ERP. As we look forward, it is vital that Republicans and Democrats work together to craft bipartisan solutions to the nation's most urgent problems.

CHAPTER 1: THE REPUBLICAN TAX LAW LEAVES AMERICAN FAMILIES BEHIND

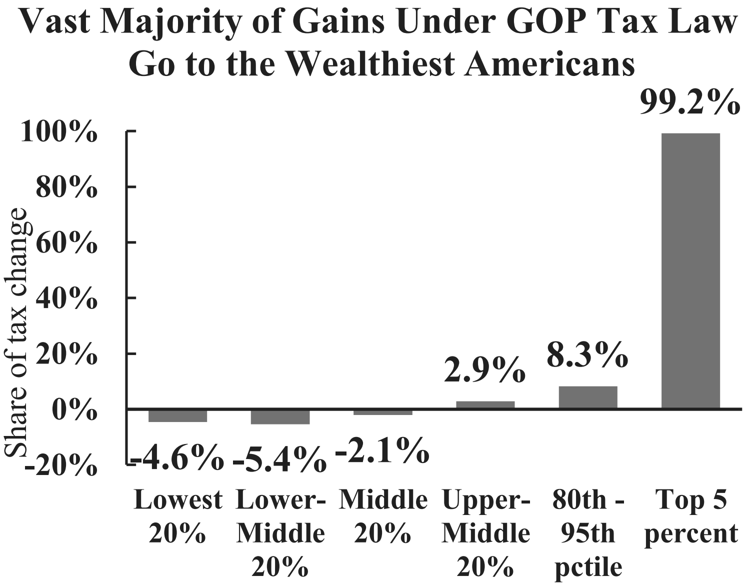
In 2017, the Trump administration and congressional Republicans rushed into law a highly partisan effort to remake the tax code. Smart reform would have made the tax code more efficient and fairer, while maintaining sufficient revenue to fund the government. Instead, Republicans cut taxes for the wealthy, raised taxes on working families over the next decade, and put the burden of paying for the cuts on future generations.

The ERP makes bold claims about the impact of the tax law, claims that are absurdly out of step with nonpartisan experts' estimates. It claims that the law will result in two to four percent additional GDP growth, despite nonpartisan scorekeepers estimating that the economic impact will be a fraction of one percent.[11] It claims that the law will result in thousands of dollars in wage gains for the average family, despite a large body of literature demonstrating that this is highly unlikely. It is also worth noting that the ERP analysis only focuses on a small portion of the tax changes, namely the statutory corporate rate cut, and ignores most of the law. It also presents estimates of provisions not even part of the law, such as permanent full expensing, further inflating already overly optimistic estimates of the economic impact.

The actual impacts of the new tax law are clear. The wealthy will get wealthier. Working families see what little relief they get disappear after a few years. The deficit will soar as revenues plummet, and Republicans will point to spending as the problem. Corporations will pocket the gains. And the law will create confusion and complexity for years to come.

THE TAX LAW WILL OVERWHELMINGLY BENEFIT THE WEALTHY

The ERP portrays the tax plan as tax relief for the middle class and small businesses, but distributional analyses from nonpartisan organizations were all in agreement that this is false—the wealthiest Americans are the big winners from the Republican tax cut. By the time the law is fully implemented in 2027, 99.2 percent of the tax benefits will flow to the top five percent of households. This is largely due to the fact that the tax cuts for middle-class families are small and temporary, while the biggest cuts, which are reserved for corporations, are permanent. The benefits of a reduction in corporate taxes largely go to the owners of capital, who are overwhelmingly wealthy. The highest ten percent of earners hold, on average, more than 26 times as much in stock investments as the bottom half of earners hold on average.[12]



Source: Tax Policy Center
Note: Shows the tax change once the law is fully implemented in 2027.

Changes to the individual side of the code will also increase wealth and income inequality. The ERP focuses on limitations to the mortgage interest deduction and state and local tax deductions, claiming that it will make the code more progressive. This is disingenuous, though, as it fails to account for many other pieces of reform that more than counteract those changes and benefit the wealthy.

Doubling the estate tax exemption, for instance, only benefits families bequeathing millions of dollars to their heirs. The impact will be to further exacerbate intergenerational wealth inequality. Contrary to Republican claims, the estate tax impacts few small businesses and family farms, and those that it does impact have the ability to pay the tax over an extended time period to avoid having to divest such assets.[13] The tax law also raised the threshold for the Alternative Minimum Tax, which will provide $637 billion in tax cuts over the next ten years that will flow to the wealthiest Americans.[14] Overall, nonpartisan distributional analyses are clear—the wealthiest Americans get a huge and permanent tax break in the new law.

WORKING FAMILIES WILL ULTIMATELY SEE A TAX HIKE

The administration touted the doubling of the standard deduction as a win for American families. In reality, however, the impact of this change is muted by the removal of exemptions and other important deductions. For families with multiple dependents, trading those exemptions for the larger standard deduction could be a net loss. Further, limiting deductions that many middle-class families rely on, such as the state and local income tax deduction and mortgage interest deduction, results in millions of families seeing a tax hike. This year alone, more than 8.4 million households will see a tax increase.[15]

This is all compounded by the fact that the little tax relief provided to families is scheduled to sunset in 2025. Meanwhile, a permanent change to how tax brackets are indexed will result in bracket creep, where inflation eats into the thresholds and families start moving up in brackets even without gains in real income.[16] The end result is that the plan will actually raise taxes on middle-income families in the long-run. By 2027, more than half of households will be paying more than they would have before the GOP tax law.[17]

The ultimate effect of tax cuts for the wealthy and tax hikes for working families is that, by 2027, the law will increase after-tax income inequality. The top 1 percent will receive a 0.9 percent increase in after tax income, and the top 0.1 percent will receive a 1.4 percent increase in after tax income. Meanwhile, households in the bottom 80 percent of income will have no net change to after tax income or will even see a decrease, as taxes rise.[18] This comes at a time where income inequality has been on the rise for decades and is likely already having negative effects on economic growth.[19]

THE LAW WASTES $1.5 TRILLION THAT COULD HAVE BEEN INVESTED IN PEOPLE AND COMMUNITIES

Economists have long called for leveling out the corporate income tax by eliminating loopholes and using that revenue to lower the topline rate. The opportunity for this type of deficit-neutral reform could be seen in the gap between effective tax rates and statutory tax rates. Under this approach, the corporate tax rate could have been lowered to the mid to high twenty percent range, without incurring huge deficits or raising taxes on individuals.

Instead, Republicans became fixated on getting the corporate tax rate to as close to 20 percent as possible and in the process ended up blowing the deficit wide open. In the end, they cut it from 35 to 21 percent, a 40 percent reduction. For eight years under the Obama administration, congressional Republicans and other party leaders decried the increase in the deficit and national debt that followed the recession. Those concerns were nowhere to be found in the tax debate, though. Republicans eventually landed on passing $1.5 trillion in unfunded tax cuts.

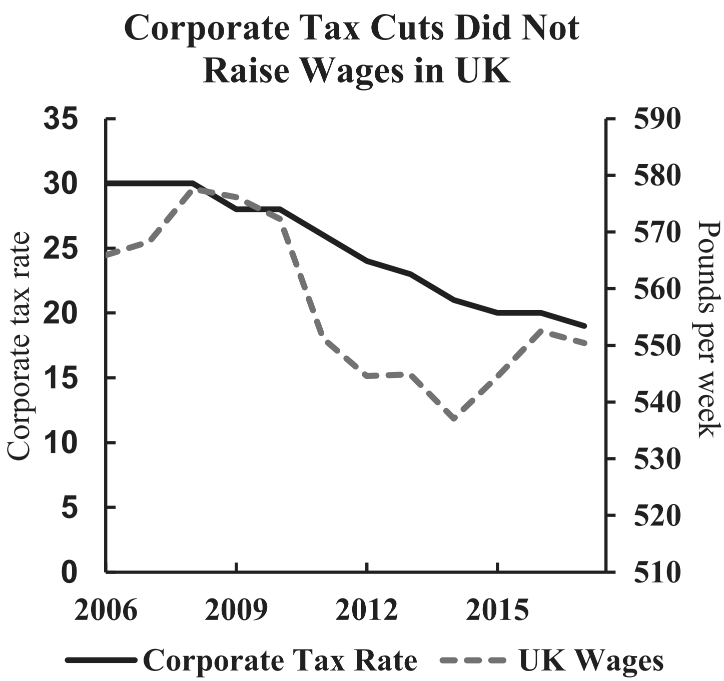
Deficit spending is not always bad for the economy. During economic downturns, running federal deficits can stimulate the economy and reduce the impact and duration of recessions. But most mainstream economists tend to advocate for either lowering deficits as the economy recovers or at least holding them steady as the economy grows, thereby reducing the deficit-to-GDP ratio. Few advocate for large stimulus spending this far into a recovery. Larger deficits now could potentially result in higher levels of inflation, and spur the Federal Open Market Committee to raise interest rates faster than they had otherwise planned.

That $1.5 trillion also represents a missed opportunity. While the tax plan is unlikely to generate much additional economic growth, it will reduce revenues that could have been used on more productive programs. Republicans could have used that money to expand the Earned Income Tax Credit, which has been proven to increase labor force participation and reduce poverty.[20] They could have sent every child in America to a high-quality early education program and expanded access to affordable college.[21] Or they could have put a serious dent in America's infrastructure gap. Research by the CBO has shown that spending on infrastructure or other direct spending by the government has substantially more stimulative impact on the economy than tax cuts for the wealthy.[22]

THE TAX PLAN IS UNLIKELY TO LEAD TO LARGE WAGE GAINS

The administration and congressional Republicans pitched the tax cuts as a boon for the middle class, arguing that the corporate tax cut will lead to massive wage gains. Their most highly-cited figure of an increase in average household income of $4,000 was met with skepticism and doubt by experts. Even authors cited in the Council of Economic Advisers' research claimed that the administration misused their findings to come to an implausible result.[23] The ERP repeats this unlikely claim and doubles down on it by suggesting that the gains will likely even be larger.

Economists largely agree that a small portion of the corporate income tax falls on workers. The Joint Committee on Taxation estimates that 25 percent of the tax falls on labor, while the Tax Policy Center assumes 20 percent.[24] But the vast majority of the benefits go to capital, the shareholders and owners of the companies. Expecting corporate tax cuts to largely trickle down to workers does not align with past research or history. The United Kingdom presents an apt example—when the country cut their corporate tax rate from 30 percent to 20 percent, wages actually declined.



Source: U.K. Office of National Statistics and OECD

And recent company announcements already provide early evidence that shareholders will be the big winners of the tax cut. Companies have made many announcements about what they plan to do with their tax windfalls. A small share is going to bonuses and direct raises—although there should be doubt that these raises and bonuses are entirely due to the tax cut and not due to tightening labor markets. And a small share is going to capital spending – again, though, without a plausible counterfactual it is difficult to give entire credit for this spending to the tax plan.[25] Meanwhile, companies announced more than twice as much in share buybacks through the first week of February as they had through the same point in the prior year.[26]

The administration's claims on wage gains from the tax cut also fail to factor in the inequality within labor income. The share of gains that go to labor because of the tax cut will not be evenly distributed. In fact, there is increasing divergence between productivity gains and the earnings of the median worker.[27] This is likely due to a myriad of factors, such as declining bargaining power for workers and increasing market concentration enhancing monopsony effects (where workers have fewer options for employers, and therefore employers are under less pressure to share productivity gains with them in the form of wage increases).[28] Without addressing these other factors, simply boosting productive investments will not solve the problem of stagnating wages for most American families.

COMPLEXITY AND LOOPHOLES ABOUND IN THE NEW TAX LAW

Over time, the tax law tends to increase in complexity, as Congress creates new credits and deductions to incentivize some activity, and businesses and industries change over time. Republicans talked about simplifying the tax code. They said it was a primary motivation behind reform and even promised that individuals would be able to file their taxes on a postcard. The goal was to clear out deductions and credits that were no longer justified, fix loopholes that allowed businesses and individuals to avoid paying taxes, and make it easier for people and businesses to file taxes. On this account, the Republican tax law fails unequivocally.

To pass the law through on a partisan basis, without Democratic input or votes, Republicans used budget reconciliation, which requires bills to be deficit neutral after the ten year budget window. This meant putting in sunsets on many of the changes. Because the GOP's goal was to enact permanent corporate tax cuts, they sunset most of the changes to the individual side (with the major exception being the permanent change in inflation measure that raises taxes on families in the long run). Their talking points, though, told Americans that they can expect Congress to extend those provisions once the deadline is near.[29] This sets up a situation where Americans will not be sure how they will be taxed in the long-run, making it difficult for them to make decisions on home purchases, moves, medical expenses, and other major life expenses whose tax implications will be unknown.

If Republicans intended to close loopholes in the tax code, they failed on that account as well. Tax experts identified dozens of potential loopholes before the law was even implemented.[30] Corporate attorneys and accountants will be spending the next several years identifying many more. Absent uncertain fixes, this could further undermine tax revenue and cause deficits to be even higher. Further, it will create imbalances where contractors and workers in similar positions are paying different rates, and where business owners will have a tax incentive to actually not work. It will be years before we fully know all of the distortive and revenue-decreasing impacts of the new tax law, but the early indications are that there will be plenty.

BIPARTISANSHIP WOULD HAVE BEEN A GOOD PLACE TO START FOR TAX REFORM

Undertaking tax reform was a worthwhile objective. The corporate tax code was rife with loopholes, allowing companies in the same industry or of the same size to pay vastly different tax rates and allowing multinational corporations to stash trillions of dollars in profits in overseas accounts that let them off without paying taxes.

Further, the individual side of the code was overly complex leading to confusion and high compliance costs for many tax payers.

Enacting bipartisan and deficit-neutral tax reform would have been a significant accomplishment for the administration and Congress. But Republicans decided to take another track in 2017, never trying to engage congressional Democrats and instead opting to use arcane budget procedures to jam through an ill-conceived bill. The result was a deficit-busting tax cut for the wealthy with few redeeming qualities. The legacy of this tax law will be a boon to the wealthy and a burden on future generations.

CHAPTER 2: REPUBLICANS UNDERMINE AMERICANS' HEALTH CARE

Nowhere has the Republican assault on American families been more sustained and harmful than in the area of health care. Throughout 2017, the president and congressional Republicans launched many attacks on our health care system, attempting to take coverage away from millions of Americans and threatening to destabilize nearly one-sixth of our economy.[31]

PROGRESS FROM THE ACA

First, it is useful to recall the important progress made by the Affordable Care Act (ACA) in expanding access to affordable, quality health care. In 2016, 26.3 million more people had health coverage than before the passage of the ACA.[32] The uninsured rate has more than halved, from 18.2 percent to 8.8 percent.[33] These important gains are dismissed in the ERP, though, by questioning the link between health insurance and health outcomes.

Prior to the implementation of the ACA, the individual market was in disarray. People were regularly denied coverage due to pre-existing conditions, and there was very little competition. One study estimated that 62 percent of pre-ACA individual market plans did not cover maternity care, nearly 20 percent did not cover mental health, and 34 percent did not cover substance abuse treatment services.[34] Information provided by insurers was unclear on what any given plan did or did not cover, leaving families to navigate murky benefits language and ultimately play guessing games with their health. The ACA guaranteed that insurers could no longer discriminate against Americans for having pre-existing conditions, for being a woman, or for being older, and it guaranteed coverage for essential health benefits.

The ACA slowed the rise in costs for both patients and providers and improved care across the board. For families with employer-sponsored insurance, total premiums and out-of-pocket costs rose half as fast in the six years after the passage of the ACA, compared the prior decade.[35] The ACA's Medicaid expansion was particularly important to hospitals: from 2013 to 2015, the burden of uncompensated care declined by more than a quarter as a share of hospital operating costs.[36] It especially helped rural hospitals: in Medicaid expansion states, rural hospitals improved their operating margins more than those in non-expansion states.[37]

COVERAGE GAINS IMPROVE LIVES

The ERP attempts to downplay the importance of having health care coverage and the importance of the ACA and Medicaid. Health coverage increases access to care and improves health outcomes. This has borne out recently in several studies evaluating health outcomes after health care expansions. A study of Massachusetts' 2006 health care expansion found significant reductions in mortality compared to similar counties nationwide.[38] A study of Medicaid expansions in Maine, Arizona, and New York found that expansions were associated with a reduction of 6.1 percent in mortality and decreased rates of delayed care due to costs by 21.3 percent.[39] A study conducted in Oregon demonstrated greater access to preventative screening and treatment via increases in diabetes diagnoses and use of diabetes medications as well as improvements in depression cases—although it did not provide a large enough sample to make a definitive conclusion on the impact to mortality.

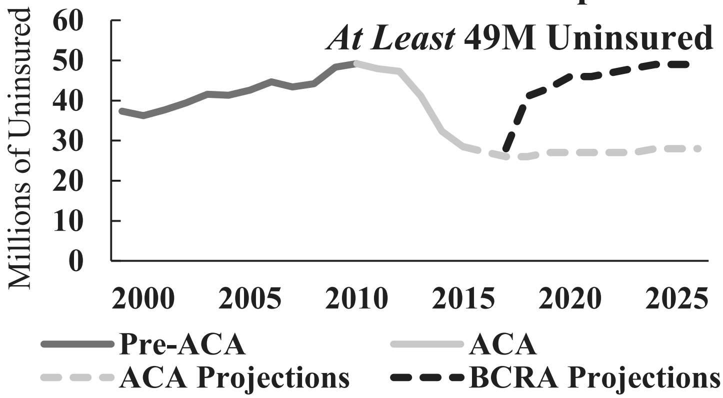
Health insurance also provides families greater financial security by protecting against the risk of insurmountable debt due to unexpected medical bills. In a study of Medicaid's effects in Oregon, insured families had a $390 average decrease in medical bills sent to collection after gaining coverage.[40] Another study found that those who gained coverage through Medicaid expansion decreased their debt in third-party collection by $1,140.[41] When families are able to better manage their finances, they maintain upward economic mobility.

Access to adequate health care should be a right for all people. Returning to a broken system where the uninsured can depend only on emergency care and families must file for medical bankruptcy is untenable for both patients and providers. This cost can be borne through emergency visits and rising debt or, more effectively, through an integrated health system that balances costs and care equitably across patients. Instead of working with Democrats to build upon the ACA's successes, however, Republicans continue to try to throw away all progress.

WORKING TO TAKE INSURANCE FROM MILLIONS

Republicans' attempts at repealing the ACA would have taken away health care from over 20 million people across the country, forced consumers in the individual market to pay more for less, and gutted the Medicaid program.[42] If passed, TrumpCare would have allowed insurers to discriminate against those with pre-existing conditions again, increased the cost of maternity care, and unraveled efforts to combat the opioid epidemic.

Uninsured Projected to Skyrocket To Pre-ACA Levels Under TrumpCare



Source: Congressional Budget Office (CBO), Kaiser Family Foundation and CPS ASEC
Note: Number of individuals without health coverage under age 65; 1999-2015 data from CPS; 2016 data from Kaiser Family Foundation; 2017-2026 data from 2017 CBO projections; BCRA is Republican Senate Plan and ACA is Affordable Care Act

Under TrumpCare, states would have been allowed to let insurers charge more for people with pre-existing conditions, including cancer patients.[43] A 40-year-old with metastatic cancer could have seen a premium increase of $142,650.[44] Unravelling essential health benefits would have removed guaranteed coverage of maternity care and mental health and substance use disorder services. Hospitals across America would have faced greater uncompensated costs, threatening vulnerable rural hospitals in particular.

Sabotaging Health Care Markets

Although Republicans failed to pass TrumpCare, they have taken multiple steps to undermine health care in America. They started off by filling administration positions with officials actively hostile to the ACA, such as former Health and Human Services

Secretary Tom Price and current Centers of Medicare and Medicaid Services Administrator Seema Verma, who have sabotaged the ACA by rolling back provisions that keep markets working and costs down.

The Trump administration's decision to end cost-sharing reduction (CSR) payments will hike 2018 premiums by 20 percent, or $2,289 for a family of three.[45] Republicans refuse to take sensible, bipartisan steps, including restoring CSRs, to stop further cost increases. Unable to repeal the Affordable Care Act, the Republican tax bill repealed the ACA individual shared responsibility provision, effectively cutting coverage for 13 million people over the next decade and hiking individual market premiums by 10 percent.[46]

In addition, in its attempt to curb enrollment, the administration has undermined individual market stability by cutting the open enrollment period in half and slashing the ACA outreach budget by 90 percent.[47] Although federal signups during open enrollment for 2018 were fairly robust—11.7 million signups despite these issues—enrollment across states varied. States with their own marketplaces saw enrollment increase by 0.2 percent, while states where the federal government administers the marketplace through healthcare.gov saw enrollment decrease by 5.3 percent.[48]

These actions, along with continued ACA repeal efforts, produce uncertainty for insurers, providers, and consumers. Without certainty, businesses weigh the risks of the worst-case scenario, leaving consumers with higher prices and no insurers in some high-risk areas.[49]

On top of this, the Trump administration and Republican leadership have refused to adopt a bipartisan solution to stabilize markets. Analysis from Blue Cross Blue Shield shows that passing a stabilization measure would reduce premiums in 2019 by 27 percent, providing much relief to American families.[50] If this applied across all insurers, people insured through the marketplaces would save an average of $1,772 in 2019.[51]

In addition, the Trump administration has continued to erode the ACA's consumer protections through its executive orders on Association Health Plans and short term limited duration plans, which allow for skimpier junk plans to be sold. These orders allow insurers to once again discriminate against people with pre-existing conditions and allow plans that exclude coverage for maternity care, prescription drugs, mental health, and substance use disorder services. If these junk plans substantially cut into marketplace enrollment, they could cause a death spiral where sicker people are left in the marketplaces while healthy people leave, causing more insurers to pull out and premiums to skyrocket.

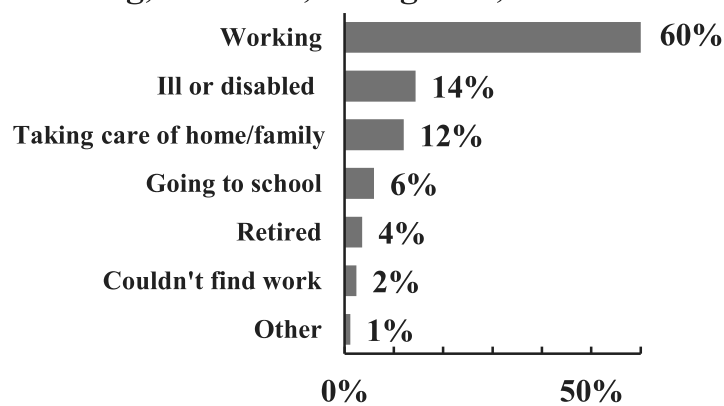
Sabotage of Medicaid

While the ERP's thematic shift from insurance to health behaviors reflects Republican attempts to deflect attention from the success of the ACA and importance of insurance, the ERP is noticeably silent on its actions to undermine Medicaid and Medicare. Medicaid and Medicare, two programs millions of American families rely on, continue to be sabotaged as part of this effort.

TrumpCare would have slashed Medicaid by 35 percent in the long term. This reduction would end Medicaid as we know it.[52] Severe cuts to Medicaid would force states to make tough choices between maintaining Medicaid coverage and cutting important programs such as education or infrastructure. Despite the failure of TrumpCare in Congress, the administration has continued to trumpet replacing Medicaid with draconian caps and block grants, including it in its FY 2019 proposed budget. In fact, the White House FY 2019 budget cuts Medicaid and related health spending by $675 billion.[53]

Despite the failure of TrumpCare, the Trump administration is sabotaging Medicaid by giving states the green light to implement work requirements and other disastrous policies through waivers. Evidence from other programs show that work requirements simply do not work—they fail to increase employment in the long run and instead kick off the people who need it the most. Most people who can work already do; in fact, more than 90 percent of adult Medicaid recipients are working, ill or disabled, taking care of home or family, or going to school.[54]

Vast Majority of Medicaid Recipients are Working, Disabled, Caregivers, or in School



Source: JEC calculations based on Kaiser Family Foundation analysis
Note: Includes non-elderly, non-SSI recipients

Other waiver provisions that are currently under review have similarly devastating effects. Some proposals request the authority to charge premiums, when research shows even small increases in cost-sharing can disincentivize coverage.[55] Others add more bureaucratic red tape by locking enrollees out of coverage for missing paperwork and other deadlines or forcing enrollees to take a health or financial literacy course to re-enroll. Other proposals include dropping coverage of non-emergency transportation—especially difficult for those in rural America who lack a car—or imposing drug tests even though enrollees heavily rely on Medicaid to seek treatment for substance use disorders such as opioid addiction. Altogether, these proposals run counter to the purpose of the Medicaid program and would only impose larger barriers to people getting the health care they need.

ATTACKS ON WOMEN, CHILDREN, AND RURAL COMMUNITIES

Republicans continue to undermine the health coverage and consumer protections that millions of families depend on. For months, congressional Republicans endangered children's health coverage by delaying reauthorization of funding for the Children's Health Insurance Program (CHIP), allowing the program to remain in limbo for months and leaving states scrambling to prevent dropping children from coverage.

The administration also rolled back protections guaranteeing access to no-cost contraception for 62 million women, which could increase annual contraceptive costs by $600 per person.[56] In addition, women are disproportionately threatened by Medicaid work requirements, as women—who comprised over 60 percent of non-elderly Medicaid enrollees who were not working in 2016—are more likely to be taking care of children or aging parents and more likely to have a disability, two of the most common reasons Medicaid enrollees do not work outside the home.[57]

Republicans' attempts to repeal the ACA would have disproportionately harmful impacts on rural communities. Medicaid covers one out of every four rural residents under the age of 65. Further, rural hospitals often have operating margins of less than 1 percent, with Medicaid making up more than 10 percent of net revenue for rural hospitals. Gutting Medicaid would put rural hospitals at risk of closure, endangering quality of care, good-paying jobs, and the economic sustainability of rural communities.[58]

LACK OF ACTION ON THE OPIOID EPIDEMIC

Although the ERP correctly identifies the opioid epidemic as a key challenge for the nation—estimating that the country lost $504 billion in economic activity in 2015 alone—the Trump administration has done little to help struggling families and communities.[59] In fact, the administration has made matters worse: after the president's opioid commission fizzled out with very little impact, and his public emergency announcement led to very little additional funds, the administration continues to threaten states' best tool against the epidemic, Medicaid.

One estimate shows that the total cost of coverage for people receiving treatment for opioids could reach $220 billion over the next decade.[60] The bipartisan budget deal passed in February 2018 took an important step in the right direction—including $6 billion for addressing the epidemic—but there is much more to be done.

TrumpCare would have set our nation many steps back on combatting the opioid crisis through its drastic Medicaid cuts, reversal of Medicaid expansion, and removal of guaranteed coverage of mental health and substance abuse disorders. Medicaid covers about a quarter of life-saving medication-assisted treatment for people with opioid and heroin addictions.[61] Repealing the ACA could put 1.3 million people at risk of losing their behavioral health coverage. Medicaid expansion also reduced the unmet need for substance use disorder treatment among low-income adults by 18 percent.[62] Rolling back funding for those impacted by the opioid and heroin epidemic to get treatment steers this nation in the exact opposite direction.

Medicaid state waiver requirements would especially threaten coverage for those that rely on Medicaid for treatment. Some states have submitted waivers that would implement drug screening and testing, a clear impediment for those struggling with addiction. For those who have had trouble going to work due to their addiction or chronic pain, work requirements can be especially onerous.[63] Evidence from work requirements in the Temporary Assistance for Needy Families program have been shown to particularly negatively impact people struggling with mental health and substance abuse.[64]

FAILING TO LOWER DRUG PRICES FOR EVERYDAY AMERICANS

The ERP also accurately diagnoses the importance of reducing the costs of prescription drugs for both consumers and taxpayers. List prices for drugs in other developed countries are 41 percent lower on average for the 15 companies that sell the 20 top-selling drugs in the U.S.[65]

In order to achieve a reduction in drug prices, the ERP suggests we should primarily rely on an unrestrained free market that will increase corporate profits, crossing its fingers that such profits will result in greater innovation. Experience, however, shows that companies overwhelmingly distribute their profits to shareholders instead of reinvesting those funds into innovative research. From 2006-2015, U.S. pharmaceutical companies distributed 99 percent of their profits to shareholders through buybacks and dividends.[66] Just since the GOP tax bill passed, pharmaceutical companies have announced $50 billion in buybacks.[67]

The administration would also exacerbate a key market failure. The ERP suggests that consumers make their choices for prescription drugs largely on the basis of price and that consumers have perfect information about the prices and effectiveness of drugs. Relying upon this premise, the ERP argues that altering government reimbursement structures can shift pricing decisions and therefore potentially costs of drugs onto consumers and providers, driving prices down. For the ERP's conclusions to hold, health care consumers would need to have access to clear, complete information about medication costs, evaluate how different medications lead to different outcomes, and weigh the costs against the outcomes—all the while in the midst of a personal medical crisis or while managing the medical crisis of a loved one. Policymakers should be helping consumers afford the medicines that best meet their health needs, not making their decisions more costly and difficult.

Chapter 3: Republicans Shift Responsibility to States and Private Sector

The ERP's chapter on infrastructure aligns closely with the administration's recently released infrastructure plan. The administration's long-awaited plan, finally announced on February 12, 2018, shifts responsibility for funding infrastructure onto the private sector and cash-strapped state and local governments.[68] It fails to make the necessary investments, is counteracted by proposed cuts to existing infrastructure programs in the president's budget, and will not fix our nation's crumbling infrastructure.

The administration plan rests on top of the ERP framework, which argues that the fundamental source of the nation's infrastructure problem is a mismatch between supply and demand, since the United States has not relied enough on price signals to moderate the consumption and provision of infrastructure. Infrastructure is often underpriced, or even free, the argument goes, which leads to excess demand and under supply.

The ERP stipulates that relying more on price signals and the private sector to provide a greater share of infrastructure, in response to these signals, will allocate resources to where infrastructure needs are greatest. However, this assumes a massive and unrealistic increase in the private provision of infrastructure. It also ignores the reality that some projects and communities will not be able to attract private investments despite great need, due to small populations, limited traffic, and other constraints that will limit private returns. Even residents in communities lucky enough to attract new infrastructure projects, in the Trump scheme, will likely face new tolls and other user fees that eat into family earnings.

Despite the administration characterizing its plan as a $1.5 trillion investment, a figure which is used throughout the ERP, it invests just $200 billion in federal dollars and proposes in its FY 2019 budget to offset these investments with cuts to existing infrastructure programs, including Community Development Block Grants, the Army Corp of Engineers, and the Highway Trust Fund.[69] The administration counts on the private sector and state and local governments to do the actual investing. Even assuming the $200 billion represents additional federal infrastructure spending—a generous assumption—the Penn Wharton Budget Model estimates that the administration's plan will result in net new infrastructure investment of between $20 billion and $230 billion, nowhere the $1.5 trillion promised.[70]

In addition, the plan rolls back environmental protections, shifting environmental review away from the Environmental Protection Agency to other agencies, and gives the private sector unprecedented control over the process.[71] Finally, by ignoring climate change, the administration's infrastructure plan risks building infrastructure that will not withstand the increased demands of a changing climate, which will lead to higher costs down the road.[72]

NEED FOR FEDERAL INVESTMENT IS CLEAR

Each day, Americans feel the effects of the nation's aging infrastructure. Congestion on the nation's roads and highways is wasting people's time, costing money, and harming the environment.[73] Households lose $3,400 a year in disposable income due to the impact of deteriorating infrastructure on productivity and economic growth.[74] Unsafe drinking water from aging water systems jeopardizes the health of millions.[75] And outdated schools fail to provide students with a modern learning environment.[76]

There is near universal agreement that the nation needs a major investment in upgrading and maintaining our infrastructure, and that current funding levels are not sufficient to meet the need. The United States invests less than it used to and less than its competitors. Public infrastructure investment has declined as a share of GDP – from 3.0 percent in 1959 to 2.4 percent in 2014.[77] Our nation's competitors now spend a much greater share of GDP on infrastructure, with China investing more than four times as much as the United States.[78]

Overall, more than $2 trillion above current spending levels is needed to restore our nation's infrastructure to good condition by 2025.[79] Surface transportation alone requires more than $1 trillion in investment.[80]

BENEFITS OF INVESTING IN INFRASTRUCTURE

There are significant economic benefits from investing in infrastructure, from lower transportation costs for businesses and consumers, to the creation of good-paying jobs and increased economic growth. In rural areas which are still recovering from the recession, the short-term positive economic impacts of infrastructure investments could help close gaps with the large cities that have been prospering.

Reduced transportation costs

The principal direct benefit of an effective transportation system is that it reduces transport costs for businesses and consumers. Those reduced costs, in turn, allow firms easier access to new markets, foster competition, spur innovation, raise productivity, relieve price pressures, and lead to increases in living standards.[81] The benefits from infrastructure investment are particularly pronounced for the manufacturing sector, which relies heavily on transportation networks for both raw material supply lines and distribution networks to get products to customers.[82] Allowing transportation infrastructure to continue to fall into disrepair, on the other hand, in addition to harming businesses, places a significant debt on future generations through a backlog of deferred maintenance.[83]

Good-paying jobs

Investments in infrastructure create new jobs in manufacturing and construction, sectors that pay good wages and which were hit especially hard during the recent recession. Nearly 70 percent of jobs created from infrastructure investment are in construction, according to one analysis.[84] These jobs are governed by the Davis-Bacon Act, which ensures fair wages on federal construction contracts. It should be noted, however, that the administration's plan would exempt projects from Davis-Bacon, eroding wages on infrastructure projects.[85]

The 6.0 percent annual unemployment rate in construction in 2017 remains above the overall national rate of 4.4 percent, suggesting there is more room to increase jobs in the sector.[86] Creating jobs that pay good wages—the typical hourly wage for a construction worker is $30—would help both the employed workers and their local communities, as those wages will be plowed back into their local economy.[87] The ERP backs this up, noting that workers in occupations most likely to be involved in infrastructure projects have an unemployment rate well above the national rate.

Stimulating economic activity

Infrastructure investments can stimulate activity elsewhere in the economy. A survey of recent econometric estimates finds that infrastructure investments generate $1.40 to $1.80 in additional economic activity for every dollar invested.[88] The stimulative effect on the economy would be especially important in rural communities, many of which are still recovering from the recession. The Center for American Progress estimates that increasing infrastructure spending by a total of $500 billion over 10 years would add 3.6 million new jobs, lower the unemployment rate by 1 percentage point, and increase the size of the economy by 3 percent.[89] However, the plan detailed by the administration would have "little to no impact on GDP," according to the Penn Wharton Budget Model, due to its negligible impact on total infrastructure investment.[90]

IT IS UNREALISTIC TO EXPECT STATES AND CITIES TO FOOT THE BILL

Despite the well-established benefits from federal investment in infrastructure, the Trump administration is seeking to shift the burden of investing in and maintaining infrastructure onto state and local governments.[91] On the one hand, the ERP acknowledges the investment and spending challenges facing state and local governments, reporting that state and local investment remains 20 percent below its peak in 2003.[92] On the other hand, the administration's plan assigns most of the responsibility for new infrastructure investments to these same state and local governments.

State and local governments are resource-constrained

State and local governments will be hard pressed to take on more infrastructure responsibilities. Already, state and local governments account for more than three-fourths of all transportation and water infrastructure spending.[93] And states are not awash in cash. Twenty-two states faced revenues shortfalls in 2017, partly a result of declining oil prices in energy-producing states and tax cuts in others.[94]

States also face about $1.1 trillion in unfunded pension liabilities, including three states with net liabilities exceeding $100 billion. This gap between assets in state pension funds and benefits owed to workers is expected to increase by $350 billion over two years.[95] States which face growing pension funding gaps may find it harder to issue debt to finance a range of projects, including infrastructure.[96]

The Republican tax bill adds new fiscal pressures

The Republican tax legislation will present new fiscal challenges for states in 2018, as deductions for state and local sales, income, and property taxes are capped at $10,000 in the new tax law. This will make it difficult for states to levy new taxes for increased infrastructure investments.

In addition, the Republican legislation increases the costs on states and municipalities of raising money for infrastructure through tax-exempt municipal bonds. By lowering the tax rate for wealthy individuals and corporations, both of whom are large investors in municipal bonds used to finance infrastructure projects, the legislation reduces the value of these tax-exempt bonds. States will have to pay higher rates to attract the same investment.[97]

Federal investment is key to modernizing infrastructure

Some states and communities are still recovering from the recent recession and are not well- positioned, by themselves, to make needed infrastructure investments. This is especially true in rural, less populated regions that have neither the resources nor the traffic to boost infrastructure investments.[98] As the economic gap between large and small communities continues to widen, relying on state and local governments to fund the overwhelming majority of infrastructure may contribute to these communities falling further behind.

At the same time, all states face difficulties funding infrastructure during economic downturns because of balanced budget requirements and other fiscal constraints. Even if a state is able to increase funding for infrastructure when the economy is going well, this funding is often at risk during recessions when tax revenues fall and spending needs, such as unemployment insurance, increase.[99] Revenue fluctuations are especially challenging for the 22 states that fund infrastructure on a pay-as-you go basis rather than using a separate capital account that is exempt from balanced budget requirements.[100]

States and localities would underinvest because they do not capture all infrastructure benefits

Relying on state and local governments to drive investment could result in fewer interstate projects and investments that have broad regional benefits. The positive effects of an infrastructure project, including less congestion, more economic development, and higher tax revenues, often extend beyond municipal and state lines. One study found that only 20 percent of the total effects of public investment in U.S. highways occur in the state where the highway is located.[101] States and municipalities may be unwilling to foot the majority of the bill on a project where the benefits accrue mostly to other areas' residents, leaving many important projects unfunded in the Trump plan.

States and local governments are already investing heavily in infrastructure

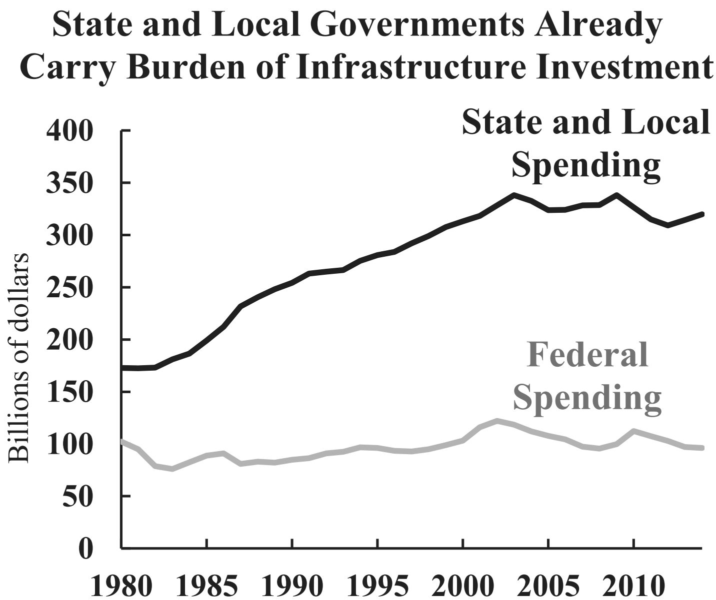
State and local governments accounted for 77 percent of spending on transportation and water infrastructure in 2014, as noted in the

ERP, with the federal government's share of spending at 23 percent. State and local governments fund the overwhelming majority of operations and maintenance—88 percent in 2014—and their operations/maintenance spending was almost twice as great as their capital spending: $208 billion vs. $112 billion.[102]

The federal government's investments are concentrated in capital investments (investment in new equipment and structures or rehabilitation of existing structures/equipment). In 2014, the federal government spent more than twice as much on capital expenditures ($69 billion) as it did on operations and maintenance ($27 billion). Overall, the federal government accounted for 38 percent of capital investment in infrastructure in 2014.[103]

As infrastructure needs have grown over the past 35 years, federal investment in infrastructure has barely budged while state and local spending has nearly doubled. If the federal government invested the same amount as a share of GDP in 2014 as it did in 1980, it would have invested an additional $158 billion.[104]

Spending on infrastructure has also started to decline at the state and local levels over the past decade. From 2003 to 2014, state and local spending on infrastructure, after adjusting for inflation, declined by 5 percent and federal investment fell by 19 percent.[105] Reversing the federal decline, rather than asking the states to do more, should be a top priority.



Source: Congressional Budget Office
Note: 2014 dollars. Includes investment in water and transportation infrastructure

PUBLIC-PRIVATE PARTNERSHIPS

The Trump infrastructure plan relies heavily on public-private partnerships (P3s). Relying on a massive influx of new P3s is risky and ignores the significant gap between investors' motivations in financing infrastructure projects and the public interest. Even President Trump recently expressed reservations about relying on P3s according to a White House official who said, "He doesn't think they will work."[106]

P3s can make available additional resources to finance infrastructure, which is especially important when state and local budgets are strained. But there is a tension between the government's interests and those of private investors or operators.

The government wants to provide good transportation options, reduce congestion, and ensure that its infrastructure supports economic development, among other objectives. The private entity wants to maximize its profit. These interests sometimes overlap, but not always. And often, as seen in examples below, it is taxpayers who end up squeezed, paying new tolls, higher fees, and other charges levied by private companies.

There has been limited P3 success in United States

While the ERP highlighted a few P3s which have met their objectives, it's a small universe. Only 14 highway projects were completed using public-private partnerships between 1990 and 2014, according to the Congressional Budget Office. Three of the 14 declared bankruptcy.[107] One of the other completed projects, the Dulles Greenway, failed to meet revenue projections when fewer cars used the new road than had been projected. The contract had to be renegotiated.[108] Including all P3 highway projects either completed or underway during the past 25 years accounts for less than one percent spent on highways during this period, according to CBO.[109]

Previous analysis by JEC Democrats shows that financing infrastructure through tax credits to private investors can also cost nearly 55 percent more than traditional infrastructure financing.[110] In fact, because states are able to finance infrastructure projects relatively inexpensively through tax-exempt municipal bonds, the P3 market has been slower to develop in the United States than in other countries.

While there may be room to increase the usage of P3s in the United States, it is unrealistic to expect a large enough increase in projects to account for the level of investment that the economy needs or the administration is promising. It takes time for state and local agencies to develop expertise and processes for bidding out, selecting, implementing, and operating a partnership.[111] As the ERP notes, about one-third of states do not even have legislation on the books authorizing the use of P3s for transportation infrastructure. As past projects have demonstrated, they are only successful in particular circumstances, as well.

Many important projects would be ignored by the private sector

Relying on private investors to address the nation's growing infrastructure needs means that many important projects that do not deliver returns attractive to investors simply would not happen. For example, a highway serving rural areas with little traffic would not be able to generate the toll revenue needed to attract private investment. Urgent repairs and maintenance are also unlikely to satisfy investors' demand for high returns and would go unfunded. Yet, as CBO has reported and the ERP acknowledged, these repair projects often do best in cost/benefit analyses.[112] It is estimated that close to $200 billion annually is needed just to maintain the nation's road and bridges.[113] Adding tolls to existing roads in order to draw in private entities willing to repair and maintain them would be an unpopular approach.

In addition, P3s are not well suited to the smaller scale projects that states target as priorities. The average state project is less than $20 million and often is focused on repairs and fixes of existing infrastructure. For example, Arkansas's average cost of highway and transit projects is $5.6 million.[114]

P3s are often anti-competitive

The long terms of some P3 agreements, sometimes up to 99 years, can limit the options of policymakers well into the future. These agreements may include non-compete clauses which limit improvements to existing infrastructure near a P3-operated road or prohibit the construction of additional transportation options.[115] The lack of competition allows the operating company to raise toll rates substantially once the project is up and running. This has already played out in the relatively limited U.S. experience with P3s. For example, costs on the Indiana Toll Road, operated under a P3 agreement, jumped from $4.65 to $8.00 for a car travelling the whole road.[116] Federal taxpayers can also be exposed to risk. Since many P3s receive federal loans through the Transportation Infrastructure Finance and Innovation Act (TIFIA), federal taxpayers can be on the hook if the private entity is unable to service the loans.[117]

Despite the limited experience with P3s, challenges already encountered are instructive. To minimize risks, investors often negotiate deals that leave the public exposed to the costs of any hiccups, involve punitive non-compete clauses, or constrain the decision making of future elected officials. P3s have led to tolls and higher taxpayer expenses on projects in a number of states, including Illinois, California, Indiana and Virginia.[118]

Roll back of environmental protections

The Trump infrastructure plan also poses dangers for the environment. In fact, the ERP dismisses environmental reviews, as well as prevailing wage and Buy America provisions, as simply “potential costs.” It fails to consider the benefits of protecting the environment, paying workers a fair wage, and requiring that steel, iron, and other products used in infrastructure are made in the United States.

With its one-agency review proposal, the administration would eliminate the Environmental Protection Agency’s ability to review environmental impact statements from other agencies. The EPA has the knowledge in the federal government to protect water, wetlands and air quality but it won't be able to put that knowledge to work. In addition, the administration's plan makes it more difficult to file challenges to permitting decisions by limiting the statute of limitations to 150 days. Most egregiously, developers will be able to pay for the environmental review of their projects and select the firms that conduct those reviews.[119]

Chapter 4: Trump Regulatory Agenda Puts Special Interests Ahead of Workers

The ERP chapter "Deregulation that Frees the Economy" points out, correctly, that regulation can benefit the economy and the American people, but poorly designed or outdated regulation can cause harm, particularly when regulated industries gain control of the regulatory process and use it to discourage competition. Unfortunately, the chapter goes on to defend the administration's overly simplistic approach to deregulation, which seems more driven by the influence of special interests than by a proper consideration of costs and benefits to all Americans, often ignoring the interests of workers and consumers.

The ERP appears to agree with the findings of the previous administration's CEA on the detrimental impacts of overly restrictive local zoning laws and state occupational licensing, but bizarrely attempts to connect these problems with the current administration's haphazard dismantling of unrelated federal regulations. It also concedes that the evidence on regulation and jobs is ambiguous. The ERP also highlights a central issue facing the American economy, decreased competition, but it connects the problem to overregulation without presenting any robust evidence linking regulation and increased market concentration.

Strengthening existing policies to guarantee competitive markets and to mandate unbiased review of regulations will address the underlying problems in our economy in ways that a blind and corruptible process of arbitrary deregulation cannot.

THE ADMINISTRATION'S REGULATORY AGENDA HURTS WORKERS

Favored industries are clearly the winner in the Trump deregulation agenda. On the other side of the coin are working families, who are seeing protections erode in critical areas. For example, the administration worked to reverse an increase in the overtime threshold. With the increase, 4 million workers would have seen a collective $1.2 billion in additional wages per year—a raise that is sorely needed at a time when wages are barely rising.[120] More recently, the administration has proposed to end protections that ensure workers earning tips get to keep them, opening up the possibility for higher-paid management to take those tips.[121] The administration even withheld from the public a Department of Labor analysis that reportedly showed workers could lose billions of dollars as a result of the proposed rule change.[122]

Congressional Republicans and President Trump have also undone worker safety protections, including rules assuring miners of a safe workplace, allowing OSHA to cite employers for not tracking injuries, and preventing exposure to toxic chemicals.[123] The administration put a stop to a change that would have required large employers to provide information on pay by gender, race, and ethnicity, making it harder to combat illegal wage discrimination.[124]

THE ADMINISTRATION IS FAILING TO ENFORCE THE LAW OF THE LAND

In addition to trying to undo important protections for workers, the administration is failing to enforce regulations that are the law of the land. From the very beginning, the administration has filled key regulatory posts with individuals hostile to the agencies that they are now leading. For example, Jay Clayton was appointed as the chair of the Securities and Exchange Commission (SEC). His prior experience was as a Wall Street lawyer known for battling the SEC, and his appointment has stifled the enforcement and oversight action that historically has protected investors from reckless behavior.[125]

The appointment of White House Budget Director Mick Mulvaney to lead the Consumer Financial Protection Bureau at first created confusion at an agency he has consistently condemned and has quickly led to delayed implementation of rules, such as payday lending regulation, and a shift from the agency's stated mission in order to emphasize deregulation.[126] The appointment of Mulvaney, which bypasses the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act rules, undermines the Bureau's independence and hampers its supervisory authority and enforcement actions against predatory lending practices.

INCREASING MARKET CONCENTRATION IS A PROBLEM IN NEED OF REAL SOLUTIONS

The ERP frames the president's attacks on federal regulation in the past year as an attempt to solve a real problem of the American economy: the increase in market concentration since the 1980s. Increasing market concentration has been identified as one of the causes of the decades-long stagnation in business dynamism, productivity and wages.[127] The administration's regulatory actions are unlikely to solve this problem, though, and, more likely, will exacerbate it.

Without a doubt, the last few decades have witnessed an alarming rise in market concentration in the U.S. economy. Researchers have found that industries across the board are seeing less competition and increasingly are being dominated by just a few large companies. This is concerning because increased concentration allows firms to exercise monopolistic tendencies to capture economic rents, meaning that they can charge higher prices and pay workers less than they would in a competitive market.[128]

While many factors, including technological change, have contributed to the pervasive increase in market concentration, the most obvious culprit is the movement in the 1970s and 1980s away from using federal antitrust laws to prevent market concentration. Instead of focusing broadly on competition in a market, antitrust efforts moved towards a narrow view that homed in on impacts to consumers. Under this new approach, as long as firms could show that their market share would not result in higher consumer prices, they would generally avoid regulatory intervention. This allowed firms to gain substantial market share as long as they pledged to keep prices down, even if it hurt overall competition.[129]

ROBUST AND IMPARTIAL COST-BENEFIT ANALYSES ARE KEY TO SMART REGULATION

Fortunately, better solutions already exist, and can be further strengthened to deal with the challenges of today and tomorrow. The keys to efficient and fair regulatory policies are to weigh the costs and benefits of regulation in a complete and impartial way, and to maintain the flexibility necessary to learn from experience and adapt to changing economic conditions. One of the solutions to this challenge can be found in the Better Deal plan, which addresses the lessons of the last few decades of antitrust policy and outlines a proposal to restore the original emphasis on concentration rather than just consumer prices. The American people have interests not just as consumers, but also as workers and potential entrepreneurs, in the guarantee of free, fair, and competitive markets.

Another part of the solution is the previous administration's executive orders mandating regulatory review for all agencies and regulations. An impartial and standardized process for reviewing regulations in an unbiased manner is the only way that regulation or deregulation will result in a more efficient interaction between the federal government and the U.S. economy.

In addition to ex-ante analysis of proposed regulations, conducting a follow-up review on a specified timeframe to ensure that the regulation remains relevant and effective and that the costs and benefits have turned out to be as expected is a sensible solution. In this way, the process of minimizing compliance costs and avoiding duplication or outdated regulation could proceed on a continuous basis, without depending on the favoritism or political interests of the current executive branch.

By learning from the past and making reasonable assumptions about the future, the process of regulating and deregulating economic activity in the United States can be made to work in the interests of competition, efficiency, and the wellbeing of all Americans. Increased growth in an economy that is both freer and fairer can be achieved, and the way to get there is not through simply pursuing "more" or "less" regulation, but instead through an impartial and intelligent approach towards both proposed and existing regulatory actions which puts the interests of the American people first.

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