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106th CONGRESS } SENATE { REPORT
1st Session 106-169

THE 1999 JOINT ECONOMIC REPORT

REPORT

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ON THE

1999 ECONOMIC REPORT
OF THE PRESIDENT

together with

MINORITY VIEWS

October 4, 1999.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON: 1999

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[Created pursuant to Sec. 5(a) of Public Law 304, 79th Congress]

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LETTER OF TRANSMITTAL

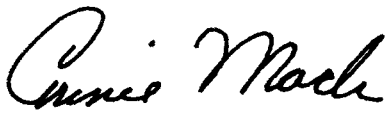
October 1, 1999

HON. TRENT LOTT
Majority Leader, U.S. Senate
Washington, DC

DEAR MR. LEADER:

Pursuant to the requirements of the Employment Act of 1946, as amended, I hereby transmit the 1999 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,



CONNIE MACK
Chairman

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106TH CONGRESS } SENATE { REPORT
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THE 1999 JOINT ECONOMIC REPORT

Mr. MACK, from the Joint Economic Committee, submitted the following

REPORT

together with

MINORITY VIEWS

OVERVIEW OF THE ECONOMY

The performance of the U.S. economy continues to be impressive. During the last 16½ years, the United States has experienced only eight months of recession. While growth is lower than it was during the 25 years following World War II, there is evidence that this too may be changing. In summary, the U.S. economy is healthy and strong.

The current economic expansion, which began in the second quarter of 1991, has lasted for 102 months. It is expected to surpass the record 106-month expansion of 1961-69. The current expansion appears to be highly resilient. Compared with previous expansions, it has featured low and stable inflation, unusually strong growth in investment, and an unexpected recent upturn in the growth of productivity.

Most observers agree that this extended run of good performance has occurred in large part because the United States has made no major macroeconomic policy errors in recent years. In particular, the Federal Reserve has gradually but steadfastly reduced inflation. If current projections hold, inflation will be below 2 percent this year for the third consecutive year. The United States has not achieved this degree of price stability since the early 1960s. Lower inflation has translated into lower interest rates. Although the Federal Reserve recently acted to nudge short-term rates higher, long-term rates are generally lower than they have been during the last three decades.

Lower inflation and interest rates have fostered economic growth. Real gross domestic product (GDP) has grown an average of 3.85 percent over the last six quarters. For 1999 as a whole, the

Congressional Budget Office forecasts real GDP growth in excess of 4 percent — the best rate since 1984.

Economic growth has produced impressive gains in both employment and productivity. During the first eight months of this year, the rate of unemployment fluctuated between 4.2 percent and 4.4 percent, rates not seen since the 1960s. Unlike previous economic expansions, productivity has not suffered as the expansion has aged. In fact, the growth of productivity has accelerated in recent years. Productivity in manufacturing grew 5.3 percent in the past year. Overall productivity grew a healthy 3 percent from the second quarter of 1998 to the second quarter of 1999. Because productivity in the service sector is especially difficult to measure, overall productivity growth may actually be higher than the official figure.

Forward momentum in productivity, employment, and economic activity has led to a sizable increase in federal tax revenue. Consequently, the federal government ran its first budget surplus in a generation last year. The Congressional Budget Office projects an even larger surplus for 1999. The federal government has not run back-to-back budget surpluses since 1956-57. If current projections hold, the budget will remain in surplus throughout the next decade.

In the last few years, the United States has been one of the few consistent bright spots in the world economy. It is important for the rest of the world, as well as for ourselves, that the U.S. economy continue to grow. It is also important that we better understand the sources of growth and prosperity so we can follow policies that encourage them. The majority staff report focuses on the topic of maximum sustainable economic growth and analyzes the factors that contribute to it. We believe that the staff report will enhance understanding of why some economies succeed while others fail. Through its hearings and staff reports, the Joint Economic Committee endeavors to shed light on the important economic issues facing the United States. Additional information is available on our Web sites (for the office of the chairman, <http://jec.senate.gov>; for the office of the vice chairman, <http://www.house.gov/jec>).

SENATOR CONNIE MACK
Chairman
REPRESENTATIVE JIM SAXTON
Vice Chairman

MAJORITY STAFF REPORT

INTRODUCTION

The U.S. economy is healthy. Both inflation and unemployment are low. The economic stability the United States has experienced since 1982 is unprecedented. The current expansion is already the second longest on record, and is on course to become the longest. Even though most of Asia and Latin America are in recession (or beginning recovery), the U.S. economy continues to grow.

This report focuses on the long-term growth of the U.S. economy, and examines how it compares both to rates of growth in other countries today and rates of growth that the United States itself has experienced in previous periods. It addresses such questions as: What accounts for the movement of the U.S. economy from stagflation in the late 1970s to low inflation and almost continuous growth since 1982? How does the growth of the recent period compare with that of the 1950s and 1960s? What lessons can be learned from the experience of other economies? What are the economic prospects for the future and what steps might be taken to improve our future rate of growth?

The emphasis of this report is on achieving the maximum sustainable rate of economic growth. Both "sustainable" and "growth" are key words. Reports of this type often focus on current conditions rather than the underlying factors that determine long-term economic performance. Yet over the long term, seemingly small differences in annual growth rates exert a huge impact on living standards.

Growth is a complex phenomenon resulting from the interaction of institutions, incentives, and individual preferences. While there is no precise recipe for economic growth, we do have a good idea of the main ingredients. They include monetary stability, competitive markets, secure property rights, and an appropriate size of government. Government policies strongly influence economic growth. Unsound policies can lead to stagnation or even a shrinking economy, while sound policies can increase the rate of growth. The United States has recently had faster growth than other large industrialized countries, but growth in the 1990s has been slower than in many previous decades. Current international experience and historical experience suggest that there is nothing inevitable about slower growth. This leads us to conclude that the U.S. economy could achieve a higher rate of sustainable growth.

It is important to distinguish between economic stability and economic growth. An economy can be stable even though its growth rate is well below its potential. Stability is necessary but not sufficient for fast growth. Section 1 explains the all-important connection between monetary policy and economic stability. Sections 2 to 5 analyze the primary ingredients of long-term growth. Sections 6 to 8

explain how changes to the federal budget and tax policy can increase economic growth. Section 9 describes how the United States can help promote stability in international financial markets. Section 10 summarizes our recommendations for growth.

In the next few years, policy makers will confront issues that will influence the growth rate of the U.S. economy and the living standards of Americans for decades to come. This report explains the issues and presents a blueprint for achieving maximum future prosperity.

1. ECONOMIC STABILITY AND MONETARY POLICY

If nothing else, the experience of the last decade has reinforced earlier evidence that a necessary condition for maximum sustainable economic growth is price stability.

Alan Greenspan
Testimony to the House Committee on
Banking and Financial Services
July 22, 1999

Three decades ago, policy makers and economists alike generally thought that monetary policy could be used to smooth ups and downs in the business cycle and keep unemployment low. However, efforts to use monetary policy in this manner led to inflation and economic instability during the 1970s. People do not act mechanically, as the models of three decades ago assumed; they change their expectations and behavior in response to policies. Once this became better understood, the limitations of monetary policy became more evident. During the last fifteen years, monetary policy has focused on a more narrow objective—price stability. The closer monetary policy has come to achieving price stability, the more stable the economy has been and the lower the rate of unemployment has fallen.

When policy makers sought to achieve more than monetary policy could deliver, they created instability. In contrast, when they focused on the objective that monetary policy could deliver, they enhanced the overall performance of the economy.

I. The Importance of Price Stability

The high standard of living that Americans enjoy is the result of gains from specialization, division of labor, and mass production processes. To realize those gains, trade and a smoothly functioning price system are necessary. High and variable rates of inflation generate uncertainty and reduce the efficiency of a market economy. Price stability contributes to economic growth and the efficient use of resources in several ways.

1. Price stability reduces the uncertainty accompanying decisions, such as saving and investing, that involve transactions across time. When the general level of prices is constantly changing from year to year, no one knows what to expect. Unanticipated changes of even 3 percent or 4 percent in the rate of inflation can turn an otherwise profitable venture into an unprofitable one. The uncertainty generated by inflation reduces the attractiveness of both saving and

investing. As a result, both will be lower than they would be under price stability.

2. When the price level is stable, relative prices direct resources more consistently toward the most productive uses. Prices communicate important information about the relative scarcity of goods and resources. Inflation distorts this information. Some prices can be easily and regularly changed, but that is not true for other prices, particularly those set by long-term contracts. There will be delays before the prices for rental agreements, items sold in catalogs, mortgage interest rates, and collective bargaining contracts can be modified. Because some prices respond more quickly than others, unanticipated changes in inflation affect *relative prices* as well as the *general price level.* As a result, prices become a less reliable indicator of relative scarcity. Producers and resource suppliers then make mistakes they would not make under stable prices, and the allocation of resources is less efficient.

3. People respond to high and variable inflation by spending less time producing and more time protecting themselves from inflation. Because failure to anticipate the rate of inflation can have a substantial effect on one's wealth, individuals divert scarce resources from production toward speculation. Funds flow into speculative investments such as gold, silver, and art objects rather than into productive investments, such as buildings, machines, and technological research, that expand the economy's potential output and generate economic growth.

II. Inflation and the Tax Code

Inflation can also hurt economic growth through interaction with the tax code. Even modest rates of inflation can alter the effective tax rate on savings and investment, making it substantially higher than the statutory tax rate. That is true even if the overall tax structure is indexed. There are two major areas where such inequities are particularly important.

1. Inflation and capital gains taxes. Inflation increases the effective tax on capital gains. If someone buys an asset for $1,000 and sells it for $2,000, the gain is $1,000. If the statutory tax rate on capital gains is 20 percent, the tax liability is $200. If the general price level was stable during the years the asset was held, the 20 percent rate is the effective tax rate. So, when prices are stable, the effective and statutory tax rates are the same.

In contrast, consider what happens when inflation pushes the price level up by 50 percent during the holding period of the asset, so that $1,000 at the start of the period is equal to $1,500 at the end. If the

asset is sold for $2,000, the real (inflation-adjusted) capital gain, measured in current dollars, is only $500. Nonetheless, under current law, the capital gains tax is still $200 because the 20 percent rate does not adjust for the effect of inflation. The statutory capital gains rate is only 20 percent, but the real, effective tax rate is 40 percent—$200 divided by the real capital gain of $500. When assets are held for lengthy periods, even low inflation can drastically alter the effective tax rate on capital gains, forcing people to pay taxes even when they suffer real capital losses. This increases the cost of capital, thereby deterring investment and retarding economic growth.

2. Inflation and taxes on interest. Inflation also increases the effective tax on interest and thereby reduces the incentive to save. Suppose prices are stable and an individual in the 28 percent tax bracket earns 5 percent interest on $100 of savings. After taxes, the individual ends up with $3.60. Because prices are stable, the after-tax, inflation-adjusted interest rate is 3.6 percent.

Now consider what happens when persistent inflation of 5 percent pushes nominal interest rates up to 10 percent. After taxes the individual ends up with $7.20 ($10 less the 28 percent tax liability). But $5 of this is due to inflation, leaving the individual with an after-tax, inflation-adjusted interest return of only $2.20 (2.2 percent). The effective tax rate is 56 percent, twice the statutory rate.

These examples highlight one benefit of price stability: it keeps effective tax rates on capital gains and interest in line with statutory rates. Inflation pushes effective tax rates on capital gains and interest to exceedingly high levels.[1]

III. Two Key Propositions of Monetary Policy

It is crucial to understand two things about monetary policy.

1. Persistent increases in the general level of prices are always the result of excessive growth in the money supply. Inflation is a monetary phenomenon. Inflation is the result of too much money chasing too few goods. When the money supply expands more rapidly than goods and services, the additional money is used to bid up the general level of prices. Viewed from another perspective, when the supply of money exceeds the quantity that people are willing to hold at the existing price level, they spend more, putting upward pressure on the price level. If the increase in the money supply was unanticipated, the additional spending may stimulate output and employment in the

[1]Inflation also reduces the value of depreciation allowances. This results in an overstatement of the net income derived from depreciable assets, which increases the effective tax rate imposed on them. It also causes the effective tax rate on the return from depreciable assets to exceed the statutory rate.

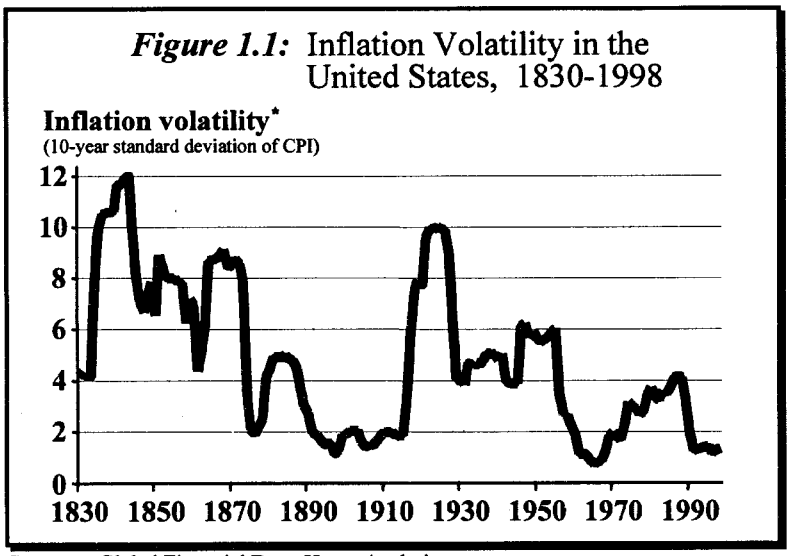


Figure 1.1: Inflation Volatility in the United States, 1830-1998

Sources: Global Financial Data; Haver Analytics.
Note: *Based on December-to-December changes in Consumer Price Index.

short run. However, sustained expansion of the money supply at an overly rapid rate soon pushes the price level upward, causing inflation.

The experience of the United States and other countries is consistent with this view. Low rates of growth in the money supply are associated with low inflation, while high rates are associated with high inflation. The long-term link between growth in the money supply and inflation is one of the most consistent empirical relations in economics.

2. Monetary policy can achieve price stability. When it does, it has done its part to promote maximum growth and employment. When the general level of prices shows signs of rising, monetary restraint can bring it back under control. The Federal Reserve can drain reserves from the banking system and increase the federal funds rate (the rate banks pay to borrow from each other the deposits they hold as reserves at the Federal Reserve). By shifting to a more restrictive monetary policy, the Federal Reserve reduces total spending, which places downward pressure on the price level. Correspondingly, the Federal Reserve can combat deflation—a decline in the general level of prices—by shifting to a more expansionary monetary policy.

The level of prices reflects monetary policy. Monetary policy should focus on attaining price stability. Price stability reduces uncertainty, improves the efficiency of markets, and promotes full employment.

How should price stability be defined? Federal Reserve Chairman Alan Greenspan has testified on several occasions that price stability is the point at which changes in the general price level are no longer a significant consideration when people make economic decisions. Implicit in this definition is the element of credibility. If prices are stable today but people believe they will rise in the future, long-term interest rates will stay higher than necessary, limiting the investment needed to raise living standards. When monetary policy achieves stable prices and convinces the public that the price stability will continue in the future, it has done its part to promote economic growth and prosperity.

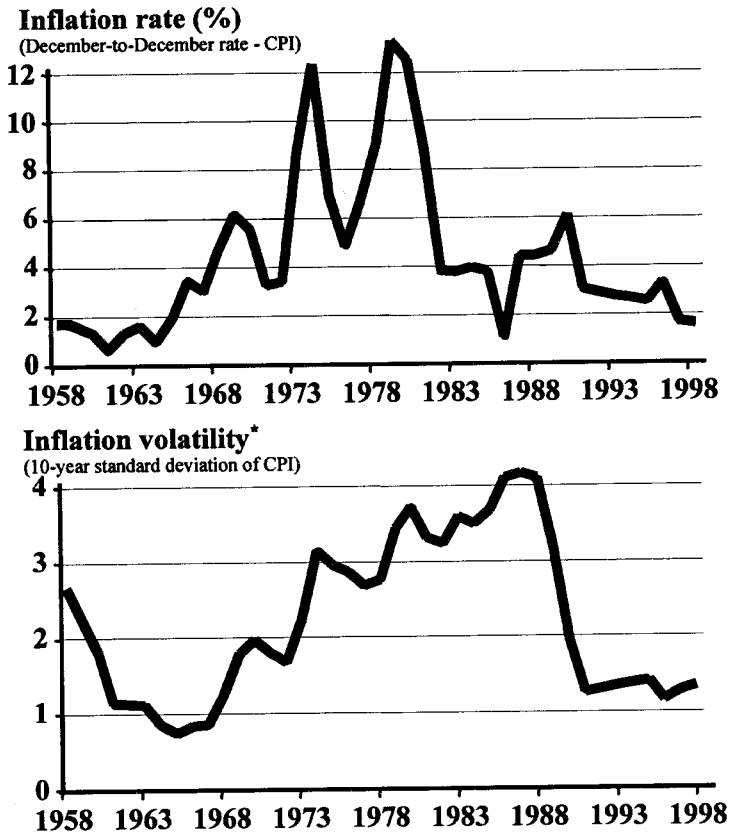
IV. The Remarkable Record of the Last Two Decades

Since the double-digit inflation of the 1970s, policy makers and economists alike have become increasingly aware of the importance of price stability. Under the chairmanships of Paul Volcker and Alan Greenspan, the focus of the Federal Reserve has been to reduce inflation and move toward price stability.

This policy has been highly effective. It is informative to place the current policy in historical perspective. Figure 1.1 shows the ten-year moving standard deviation of inflation from 1830 to 1998. A low standard deviation indicates little volatility in year-to-year changes in inflation. When inflation is low and steady over a lengthy period, people come to anticipate it and adjust their choices accordingly. Long-term interest rates tend to be low and do not change much in response to unanticipated blips in the price level. Because the figure measures volatility over ten-year moving periods, it indicates credibility—the extent to which people can count on the continuation of the policy. The lower the standard deviation, the closer the economy comes to long-term price stability. As the figure shows, inflation was steadiest in the two decades prior to World War I, the 1960s, and the last ten years. It was more volatile from 1830 to 1870, 1915 to 1950, and from the 1970s to the early 1980s.

Figure 1.2 takes a closer look at inflation and its volatility during the last four decades. As the top frame shows, inflation rose from 1965 to 1980, and was particularly high and variable in the 1970s. It fell abruptly during the recession of 1982 and has been on a gradual downward trend since. The bottom frame illustrates that after falling during the first half of the 1960s, the ten-year volatility of inflation rose persistently throughout the next two decades. It fell sharply in the late 1980s and early 1990s, following a decade of relative price stability, and since 1991 has remained below 1.5 percent. If inflation

Figure 1.2: Inflation and Inflation Volatility in the United States, 1958-1998



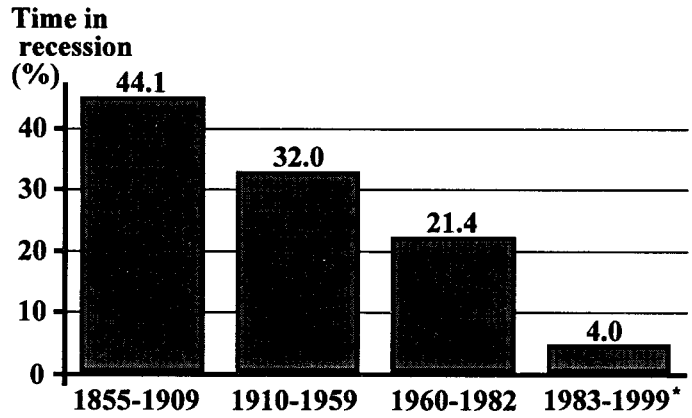
Sources: Global Financial Data; Haver Analytics.
Note: *Based on December-to-December changes in Consumer Price Index.

can be maintained in the 1 percent to 2 percent range during the next few years, the ten-year volatility of inflation may reach an all-time low.

Many economists argue that monetary shocks have been a major source of economic instability.[2] If they are correct, periods of price

[2]Milton Friedman summarized this position when he stated, "Every major contraction in this country has been either produced by monetary disorder or greatly exacerbated by monetary disorder. Every major inflation has been produced by monetary expansion." Milton Friedman, "The Role of Monetary Policy," *American Economic Review,* v. 58 (March 1968), p. 12.

Figure 1.3: Increased Stability of U.S. Economy



Source: Carl Walsh, Federal Reserve Bank of San Francisco *Economic Letter* 99-16, May 14, 1999.
Note: *Final period ends with June 1999.

stability should also be associated with stable growth and a high level of employment. This has indeed been the case. Not only has inflation been low and relatively stable during the last 16 years, but the overall stability of the economy has been unprecedented. As Figure 1.3 shows, the amount of time the U.S. economy has spent in recession has declined from 44 percent during 1855-1909 to only 4 percent since 1982. The current era has had the least amount of recession of any comparable period in American history.

Monetary policy deserves most of the credit for the remarkable stability of the U.S. economy since 1982. From 1983 to 1998, the year-to-year change in inflation never exceeded 1.2 percentage points. The Federal Reserve followed policies consistent with low and stable inflation and its policies led to economic stability. This experience provides strong evidence that monetary policy consistent with price stability is a key, perhaps the key, to stable growth and an environment that permits unemployment to fall.

V. The Limitations of Monetary Policy

While monetary policy can achieve price stability, several important economic objectives are beyond its reach. Efforts to use

monetary policy to achieve these objectives will not only fail; they will lead to economic instability.

1. Stop-go monetary policy cannot smooth the ups and downs of the business cycle. Rather, it increases economic instability. In the 1960s and 1970s it was widely believed that monetary policy could be used to smooth the ups and downs of the business cycle. The proponents of this view argued that monetary policy could stimulate the economy during recessions and restrain it during booms, promoting higher average growth, more stable output, and lower unemployment.

As the experience of the 1970s shows, monetary policy makers lack sufficient information to adjust policy to smooth the business cycle. There is a lag between when a policy change is instituted and when it begins to affect output and employment. Studies indicate that the lag is lengthy and unpredictable, generally ranging from 6 to 18 months. Furthermore, changes in economic conditions are often the result of unforeseen economic shocks such as droughts, wars, political revolutions, and financial crises. Our ability to forecast such shocks is limited. Proper timing would require monetary policy to change an unknown and variable number of months before a recession or boom that itself is unlikely to be foreseen. That is beyond the capability of economics.

Incorrectly timed attempts to stabilize the economy through monetary policy have destabilizing effects. Accordingly, most economists now believe that monetary policy should follow a stable and transparent course focused on price stability. If it achieves price stability, output and employment will also be relatively stable.

2. Expansionary monetary policy cannot enhance the long-term growth of output and employment. Attempts to use monetary policy in expansionary fashion lead to inflation. Once people come to expect inflation, it no longer spurs output and employment. While economists continue to debate how quickly people alter their expectations in response to a change in the rate of inflation, the controversy is about whether there may be some temporary impact. Almost all economists now agree that in the long run, trying to stimulate employment through expansionary monetary policy causes inflation and destabilizes the economy.

3. Expansionary monetary policy cannot reduce the unemployment rate. In the 1960s and 1970s, many economists thought there was a tradeoff between inflation and unemployment. They believed that the unemployment rate could be reduced if we were willing to tolerate a little more inflation. This view was incorporated into policy. The Full Employment and Balanced Growth Act of 1978

implicitly assigned the Federal Reserve System responsibility for reducing unemployment to no more than 4 percent.[3]

An unanticipated shift to a more expansionary policy may temporarily reduce the unemployment rate. However, any reduction will be short-lived. As soon as decision makers anticipate the higher rate of inflation and adjust their decisions accordingly, unemployment will return to its normal level—the sustainable rate consistent with the composition of the labor force and structure of the labor market. Even high rates of inflation will fail to reduce unemployment once people anticipate them. There is no permanent tradeoff between inflation and unemployment.

4. Expansionary monetary policy cannot permanently reduce interest rates. Expansionary policy leads to high rather than low interest rates. Political leaders often suggest that the Federal Reserve follow a more expansionary monetary policy to reduce interest rates. The Federal Reserve can use its control over bank reserves to influence short-term interest rates. However, the Federal Reserve's control over long-term interest rates is far more limited. Furthermore, while monetary expansion may reduce short-term interest rates, if it persists it will increase long-term rates. Persistent monetary expansion leads to inflation. Once people begin to anticipate higher inflation, long-term interest rates rise.

High interest rates do not necessarily mean that monetary policy is too restrictive. In the United States, interest rates were high during the 1970s, a period of expansionary monetary policy and inflation. On the other hand, low interest rates do not necessarily signal that monetary policy is expansionary. Interest rates in the United States were relatively low during the 1960s and 1990s, periods of more restrictive

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[3]Economists refer to the relationship between inflation and unemployment as the Phillips Curve. Paul Samuelson and Robert Solow, who later won Nobel Prizes in economics, claimed, "In order to achieve the nonperfectionist's goal of high enough output to give us no more than 3 percent unemployment, the price index might have to rise by as much as 4 to 5 percent per year. That much price rise [inflation] would seem to be the necessary cost of high employment and production in the years immediately ahead." Paul A. Samuelson and Robert Solow, "Analytical Aspects of Anti-Inflation Policy," *American Economic Review,* v. 50 (May 1960), p. 192. The alleged inflation-unemployment tradeoff was even incorporated into the *Economic Report of the President* for 1969 (p. 95).

Today, the dominant view among economists is that economic stability and the highest sustainable rate of economic growth are goals best achieved by maintaining long-term price stability. Senator Connie Mack (R-Florida) has introduced the Economic Growth and Price Stability Act of 1999, which would make long-term price stability the primary goal of Federal Reserve policy.

monetary policy. During the Great Depression, interest rates fell to less than 1 percent. Rather than reflecting an expansionary monetary policy, low interest rates reflected a highly restrictive monetary policy that was causing deflation and the expectation of a falling price level.

Internationally, the picture is the same. The highest interest rates in the world have occurred in countries experiencing hyperinflation—Argentina and Brazil in the 1980s and Russia in the 1990s, for example. In the late 1990s, interest rates in Japan fell below 1 percent. As with the United States during the Great Depression, low interest rates in Japan today reflect a highly restrictive monetary policy that has led to a falling price level and the expectation of deflation.

VI. Conclusion

The experience of the last two decades highlights the importance of monetary policy. Monetary policy helps the economy most when it focuses on providing price stability. Price stability enables people to make more accurate economic decisions, enabling them to employ labor and other resources to the fullest extent under existing conditions.

2. Why Economic Growth Matters and How to Achieve It

I. The Importance of Economic Growth

Good monetary policy is necessary but not sufficient for economic growth. A country can have economic stability yet lack dynamism because excessive taxes and regulation hinder growth.

Economic growth is the key to higher living standards. Output and income are closely linked; in fact, output must grow for income to grow. Expansion in output per person is vitally important because it makes higher living standards possible.

Over long periods, seemingly small differences in growth rates have big effects on income. The "rule of 70"[4] helps to illustrate this point. Dividing 70 by a country's average growth rate approximates the number of years required for income to double. At an average annual growth rate of 2 percent, income doubles in 35 years (70 divided by 2). In contrast, at a 4 percent annual growth rate, income doubles in only 17.5 years (70 divided by 4). If two countries have the same initial income level, after 35 years the income of the country growing at 4 percent will be twice that of the country growing at 2 percent.

Sustained reductions in annual rates of growth can cause major problems, while sustained increases can help resolve them. The budget deficits of the U.S. during the last ten years illustrate this point. From 1990 to 1992, real GDP grew only 0.9 percent a year. Largely as a result, the federal budget deficit ballooned from $152 billion (2.8 percent of GDP) in 1989 to $290 billion (4.7 percent of GDP) in 1992. In contrast, from 1994 to 1998, real GDP grew 3.4 percent a year and the large budget deficit of 1992 became a $69 billion surplus by 1998.

The most important problem currently confronting the U.S. economy is planning for the increased burden of retirement and health care benefits as the "baby boom" generation starts to retire beginning around 2010. The weight of the burden will depend on the growth of the U.S. economy in the years immediately ahead. If the economy grows at a 3.5 percent annual rate during the next two decades, real GDP will be 100 percent above the current level 20 years from now. That will substantially increase the economy's ability to support the baby boomers in retirement. On the other hand, if the economy grows at only 2.4 percent a year, as it did from 1986 to 1995, real GDP 20 years from now will be only 60 percent above the current level. Clearly, the burden of Social Security and Medicare will be much

[4] Also known as the rule of 72. For lower numbers, using 70 provides more accurate results; for higher numbers, using 72 provides more accurate results.

Figure 2.1: Key Determinants of Economic Growth

1. Investment in physical and human capital
2. Technological improvements
3. Efficiency of institutions and policies
   - (A) Secure property rights and political stability
   - (B) Competitive markets
   - (C) Monetary stability
   - (D) Freedom to trade with foreigners
   - (E) Size of government and level of taxes

greater if growth is slower. As these and other programs are modified, it is vitally important for policy makers to focus on how the changes will affect future economic growth.

II. Determinants of Economic Growth

Economic growth is complex. Several factors play important roles, and they are often related. Weakness in one or two key areas can undermine growth. Although economics does not provide a precise recipe for economic growth, it does highlight several ingredients that are important.[5]

Figure 2.1 lists the major factors that influence economic growth. Building on the work of Robert Solow, many economists stressed the importance of inputs and technology as sources of economic growth during the three decades following World War II.[6] The Solow model indicates that growth results from expansion in the resource base and improvements in technology. Several researchers sought to measure the growth of the stock of physical and human capital and use these figures to estimate their contribution to the growth of output. The unexplained residual was thought to be the result of advancements in technology.

Inputs are vitally important for economic growth, but they are not created and used in a vacuum. The economic environment influences

[5]There is nothing automatic about economic growth. Of the 152 countries for which data are available, 45 (about 30 percent) experienced reductions in real GDP per person from 1990 to 1997.

[6]Robert Solow, "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics,* v. 70 (February 1956), pp. 65-94.

the incentives to supply inputs and the efficiency with which they are used. Reflecting this point, recent work on economic growth integrates the quality of the economic environment—property rights, monetary stability, taxation, government spending, and regulation—into the analysis of growth. In many ways, this "new growth theory" is a return to the approach of Adam Smith, who also stressed the importance of the economic environment.[7] The new approach has several strands.

1. Investment in physical and human capital. Investment in physical capital (tools, structures, and machines) and human capital (education and training) can increase the productivity of workers. When workers make more goods and services valued by others, they can increase their incomes. Other things being equal, countries using a larger share of their resources to produce tools, machines, and factories tend to grow more rapidly. Spending more on education and training also tends to enhance economic growth.

Investment is not a free lunch. As more is spent to increase physical and human capital, less is available to spend on goods and services for current consumption. Furthermore, if investment is to expand output and income, it must be channeled into productive projects. High rates of investment do not always lead to more rapid growth, as the centrally planned economies of Eastern Europe and the former Soviet Union illustrate. They had high rates of investment but unimpressive rates of growth, because they invested so much in unproductive projects.

2. Technological advancements. Research and brain power can be used to discover lower-cost methods of production and to produce valuable new products. During the last 250 years, science and technology have exerted a remarkable impact on living standards. The steam engine and later the internal combustion engine, electricity, and nuclear energy have vastly altered our sources of power. The railroad, automobile, and airplane have dramatically changed both the cost and speed of transportation.

Science and technology continue to transform our lives. During the last 30 years, life-saving drugs, heart transplants, MRI and CAT scans, and laser surgery have transformed health care. Word processing equipment, fax machines, and electronic mail have vastly improved the speed and accuracy of communications. In the home, new technologies

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[7]The new approach builds on the work of Peter Bauer and Douglass North. See P. T. Bauer, *Dissent on Development: Studies and Debates in Development Economics* (Cambridge, Massachusetts: Harvard University Press, 1972) and D. C. North, *Institutions, Institutional Change, and Economic Performance* (Cambridge: Cambridge University Press, 1990). Other leading contributors to the new approach include Robert Barro, Arnold Harberger, and Gerald Scully.

ranging from microwave ovens to personal computers have improved the quality of our lives. If anything, the speed of technological development appears to be accelerating as we head into the next century.

However, technology alone does not produce economic growth. Developing countries are in a position to emulate (or import at low cost) technologies that have been successful in developed countries. If technology were the primary factor limiting the creation of wealth, most developing countries would rapidly be catching up to developed countries. However, many developing countries have fallen farther behind even though modern technology is readily available to them.

3. Economic environment. Investment and technology are important for economic growth. But they are influenced by a country's institutional structure and the policy environment. Countries with a sound economic environment tend to attract investors willing to supply resources and adopt technological improvements. It is vitally important to incorporate the institutional and policy structure of countries into the analysis of economic growth. Models of economic growth that fail to incorporate the economic environment may well be omitting the key factor underpinning sustainable growth. The key difference between a centrally planned economy and a market economy is the economic environment.

III. Institutions and Policies for Economic Growth

Economic theory suggests several key institutions and policy factors that are important for the achievement of maximum economic growth. Figure 2.1 lists them.

1. Secure property rights and political stability. A legal system committed to protecting individuals and their property is a minimal prerequisite for sustained economic growth. Private ownership protects property and property owners against those seeking to acquire wealth by violence, theft, or fraud. Without well-defined and well-enforced property rights, investors will not be willing to buy equipment and other fixed assets that fuel economic growth.

The most important thing about private ownership is the incentives it provides. Private ownership holds people accountable for their actions. Under private ownership, people get ahead by providing things that other people value and by engaging in actions that increase the value of resources. To use a good or resource, you must buy or lease it from the owner. Each economic participant faces the cost of using scarce resources. To succeed in business, you must bid resources away from other potential users and provide customers with goods and services more valuable than the cost of production. There is therefore a

strong incentive to use resources productively—to discover and undertake actions that generate economic growth.[8]

A volatile political climate undermines the security of property rights. Some governments have confiscated physical and financial assets, imposed punitive taxes, and used regulations to punish their political enemies. Countries with this kind of history find it difficult to guarantee the security of property rights and gain the confidence of potential investors.

2. Competitive markets. Competition is the disciplining force of a market economy. As Adam Smith stressed long ago, when competition is present, even self-interested individuals engage in actions that promote the general welfare. In a competitive environment, producers must woo the dollar "votes" of consumers away from other suppliers. To do so, they must produce goods efficiently and provide consumers with worthwhile products. Sellers who cannot provide quality goods at competitive prices are driven from the market. This process leads to improvement in both products and production methods, while directing resources toward projects where they are able to produce more value. It is a powerful stimulus for economic growth.

Such policies as unhampered entry into business and freedom of exchange with foreigners enhance competition and thereby help to promote economic progress. In contrast, business subsidies, price controls, entry restraints, and trade restrictions stifle competition and retard economic growth.

3. Stable money and prices. A stable monetary environment provides the foundation for the efficient operation of a market economy. In contrast, monetary and price instability generate uncertainty and undermine the security of contracts. When prices increase 10 percent one year, 30 percent the next year, 15 percent the year after that, and so on, individuals and businesses are unable to develop sensible long-term plans. In response, people save less, and businesses move their activities to countries with a more stable monetary environment. Foreigners invest elsewhere, and citizens often go to great lengths to get their savings out of the country. As a result, potential gains from capital formation and business activities are lost.

4. Freedom to trade with foreigners. International trade makes it possible for people to specialize in making the things they are best at—those they produce most efficiently. Trade also enables people to use

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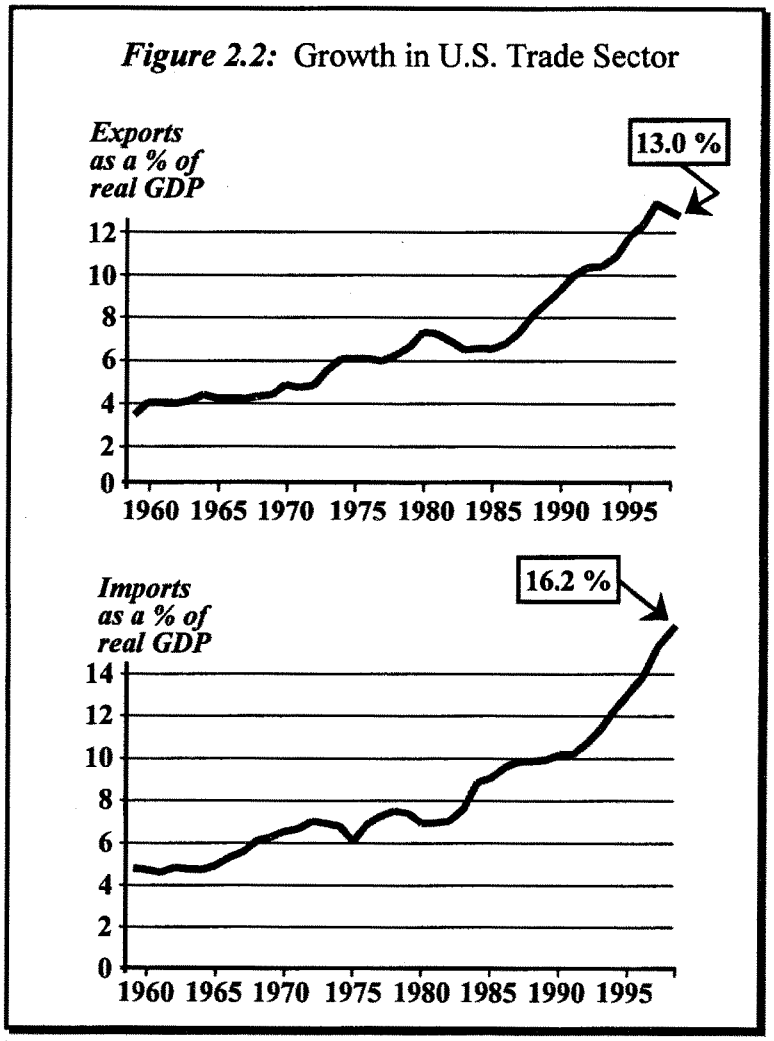
[8]For evidence that a legal system that protects property rights, enforces contracts, and relies on the rule of law to settle disputes promotes economic growth, see Stephen Knack and Philip Keefer, "Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures," *Economics and Politics,* v. 7 (1995), pp. 207-27. See also Tom Bethell, *The Noblest Triumph* (New York: St. Martin's Press, 1998).



Sources: *Economic Report of the President,* 1999; Haver Analytics.

the revenue from selling the things they produce for goods that are produced most efficiently abroad. Specialization and trade are mutually advantageous. Each trading partner produces more and earns more income than would otherwise be possible. Economists call this the law of comparative advantage.[9]

[9]The impact of international trade on the level and growth of income is an area where economic fallacies abound. See Joint Economic Committee, Office of

Both reductions in trade barriers and lower transport costs lead to more international trade. As a country shifts more and more of its resources toward economic activities that it performs well, it achieves higher levels of output and income. Increased openness and lower transport costs have helped expand international trade during the last several decades. Approximately 21 percent of the world's total volume of output is now sold in a different country from where it was originally produced—double the proportion of 1960.

As Figure 2.2 shows, the exports and imports of the United States have grown rapidly in recent decades. Exports increased from 7 percent of GDP in 1980 to 13 percent in 1998. Imports rose even faster, from 7 percent of GDP in 1980 to 16 percent in 1998. The expansion in the trade sector has contributed to the health of the U.S. economy.

5. Appropriate size of government. Governments can enhance growth by providing an infrastructure for the smooth operation of markets. Important functions in this area include a legal system capable of protecting people and property, and a monetary system that provides price stability. In addition, governments may enhance growth by providing a limited set of goods—which economists call public goods—that are troublesome to supply through markets because of the difficulties of making all who enjoy the goods pay for them. Examples include national defense, flood control, and air and water quality. Government spending that expands educational opportunity and the development of human capital may also stimulate economic growth.

However, a government that grows too large retards economic growth in a number of ways. First, as government grows relative to the market sector, the returns to government activity diminish. The larger the government, the greater is its involvement in activities it does poorly.

Second, more government means higher taxes. As taxes take more earnings from citizens, the incentive to invest, develop resources, and engage in productive activities declines.

Third, compared to the market sector, government is less innovative and less responsive to change. Growth is a discovery process. In the market sector, entrepreneurs have strong incentives to discover new and improved technologies, better methods of doing things, and opportunities that were previously overlooked. Also, they are in a position to act quickly, as new opportunities arise.[10] In

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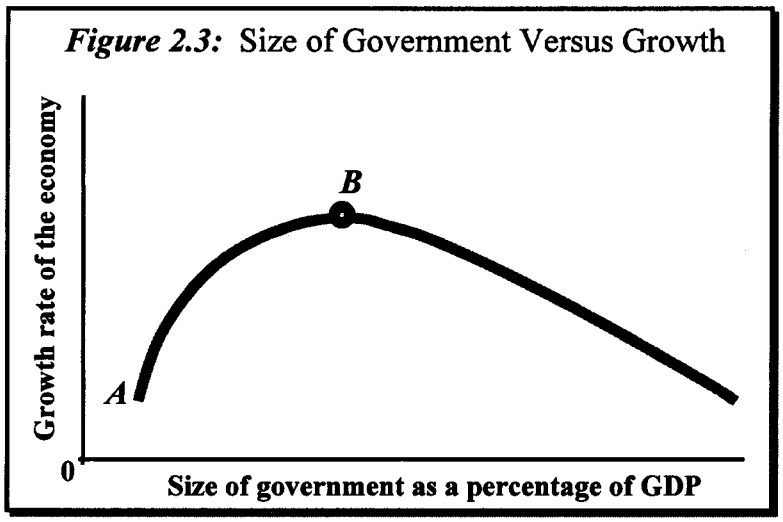
the Chairman, "12 Myths of International Trade," July 1999, available online at <http://www.senate.gov/~jec/trade1.html>.

[10]The writings of Israel Kirzner and Joseph Schumpeter highlight this point. See Israel M. Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973); and Joseph A. Schumpeter, *The Theory of*



government, the nature of the political process lengthens the time required to modify bad choices (such as ending ineffective programs) and adjust to changing circumstances. As the size of government expands, the sphere of innovative behavior shrinks.

Finally, as government grows, it becomes more heavily involved in redistributing income and in regulatory activism. That induces people to spend more time seeking favors from the government and less time producing goods and services for consumers.[11]

Government provision of certain core goods and services can enhance economic growth. However, as government grows larger it eventually retards growth as it undertakes more and more activities for which it is ill suited. Figure 2.3 illustrates the expected relationship between the size of government and economic growth, *assuming that government undertakes the most beneficial activities first.* As the size of government (horizontal axis) expands from zero, initially the growth rate of the economy—measured on the vertical axis—increases. The part of the curve from point A to point B shows the initial positive impact of more government on economic growth. However, as government becomes increasingly large, it spends increasingly more on

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Economic Development, trans. Redvers Opie (Cambridge, Massachusetts: Harvard University Press, 1934—original German-language publication 1912).

[11]Gordon Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft," *Western Economic Journal,* v. 5 (1967), pp. 224-32; and Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," *American Economic Review,* v. 64 (1974), pp. 291-303.

activities that yield few or even negative benefits. The rate of economic growth falls, as shown by the part of the curve to the right of point B.[12] A government that engages in appropriate activities and is not too large maximizes economic growth. Expanding government beyond the optimal size retards growth.

[12]For a formal model with the characteristics outlined here, see Robert J. Barro, "Government Spending in a Simple Model of Endogenous Growth," *Journal of Political Economy,* v. 98 (1990), pp. S103-S125.

3. WHY HAS THE UNITED STATES GROWN FASTER THAN OTHER LARGE ECONOMIES?

Compared to other large industrial nations, the recent performance of the United States is quite impressive. As Figure 3.1 shows, during the 1990s the United States has been the fastest-growing of the seven largest industrial economies. The U.S. growth rate has been twice that of Italy and significantly higher than those of Japan, the United Kingdom, France, and Canada. Only Germany has achieved similar growth during the decade, and during the past six years even its growth has been sluggish—just 1.5 percent a year.

The strong performance of the U.S. economy is surprising given that the United States is a high-income country. There is some tendency for lower-income countries to grow faster because they can profit from technologies whose costs of development have been borne by higher-income countries. But the United States already had the highest income of the large industrial nations in 1990, so the U.S. economy grew fastest despite the costs of technological leadership.

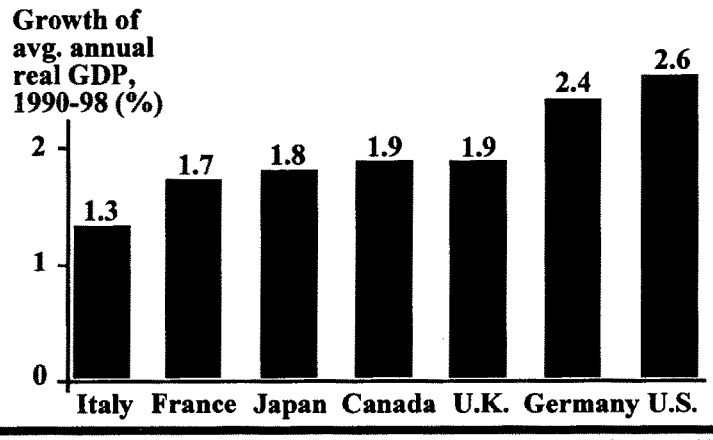
Why has the United States grown faster than other large industrial economies? The previous section explained how the economic environment makes a difference. In many respects, the institutions and policies of the seven largest industrial economies are similar. All are stable democracies with mature legal systems capable of protecting property rights. During the 1990s, inflation in all has been low and relatively stable. With the possible exception of Japan, all are relatively open economies with similar trade policies. Each has a well-educated labor force. These characteristics also apply to the other long-time members of the Organisation for Economic Co-operation and Development (OECD), a sort of "rich countries club."

The economic environments of the large industrial countries do, however, differ in three major areas that influence economic growth: size and growth of government, regulation of labor markets, and attractiveness of the economy to entrepreneurs.

I. Size of Government and Economic Growth

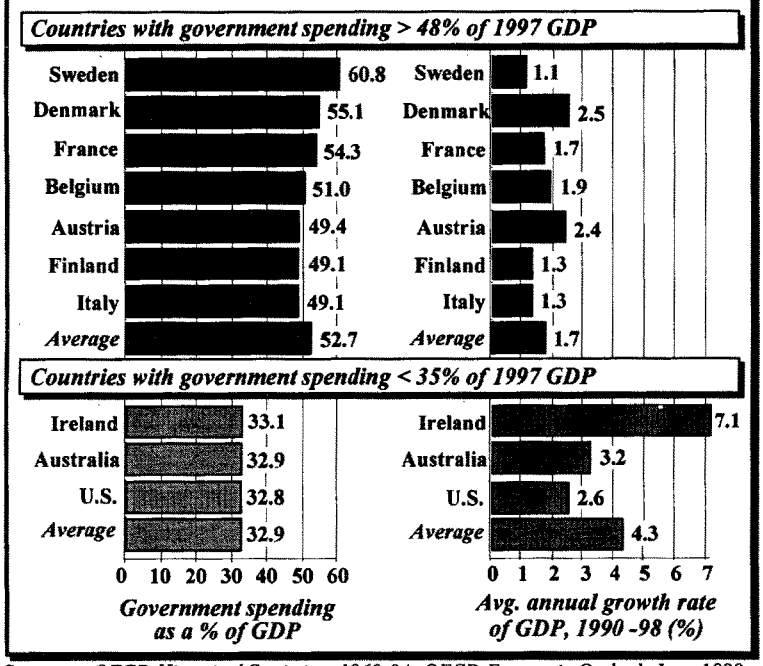
The size of government is smaller and its growth has been more modest in the United States than in other high-income countries. Consider the evidence on the link between size of government and economic growth. As the upper part of Figure 3.2 indicates, seven long-time OECD members—Sweden, Denmark, France, Belgium, Austria, Finland, and Italy—had total government expenditures of 48 percent or more of GDP in 1998. Annual economic growth during the 1990s in these "big government" economies ranged from Sweden's 1.1

Figure 3.1: Growth of the 7 Largest Industrial Economies During the 1990s



Sources: *OECD Historical Statistics: 1960-94; OECD Economic Outlook,* June 1999.

Figure 3.2: Economic Growth of OECD Countries, Big Government Versus Small Government



Sources: *OECD Historical Statistics: 1960-94; OECD Economic Outlook,* June 1999.

percent to Denmark's 2.5 percent. The average growth of the seven nations was 1.7 percent. By way of comparison, three long-time OECD members—Ireland, Australia, and the U.S.—had total government expenditures of less than 35 percent of GDP in 1998. Annual economic growth in these "smaller government" economies ranged from 2.6 percent in the United States to 7.1 percent in Ireland. Their group average was 4.3 percent, more than twice the average for the big government group. The highest growth rate among the big government group—Denmark's 2.5 percent—was slightly below the lowest rate among the small government group.

Figure 3.3 looks at the relationship between the size of government and growth over a longer period—the last four decades. The size of government *at the beginning of a decade* is measured on the horizontal axis, while the growth of real GDP *during that decade* is measured on the vertical axis. The graph contains four dots for each of the 21 OECD members on which data were available. The plot shows a clear relationship: slower growth is associated with more government spending.[13]

In the 1960s and 1970s, government spending as a share of GDP ranged from a low of around 15 percent to a high of more than 60 percent. The dots representing low levels of government—less than 20 percent of GDP—are either almost on the regression line or well above it. There is therefore no evidence that government expenditures were too small to maximize growth in any of these countries. Put another way, the evidence indicates that all of these countries were to the right of point B on the curve in Figure 2.3.[14]

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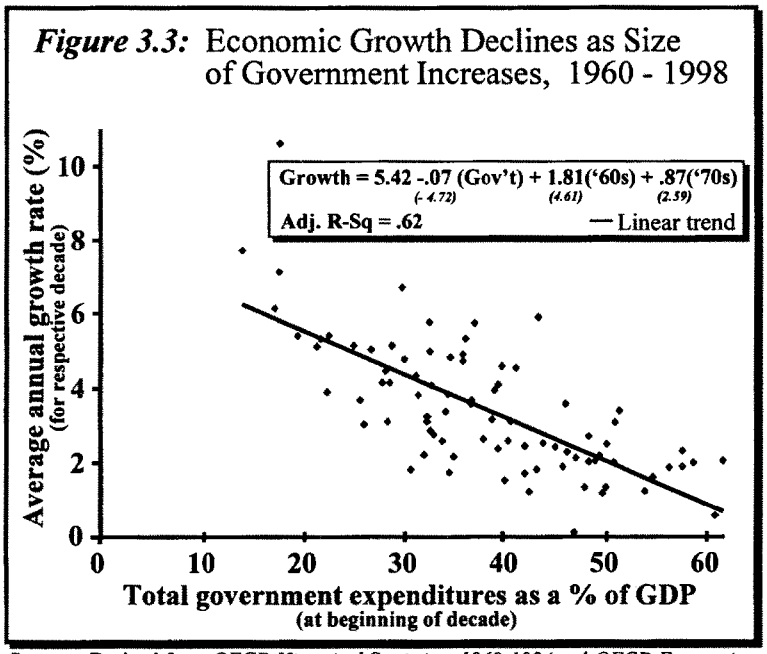
[13]The equation in Figure 3.3, known as a regression equation, expresses the relationship numerically. The equation includes "dummy variables" (adjustment factors) for the data points in the 1960s and 1970s to take into account that growth rates then were significantly different than during other decades. The variable for the size of government is significant at the 99 percent level, meaning that there is only a 1 percent possibility that such a result could have been generated purely by chance. The coefficient is -.07, meaning that a 10 percentage point increase in size of government as a share of GDP reduces the long-term annual growth rate of real GDP by seven-tenths of a percent. The R^2 statistic indicates that the variable for the size of government and the dummy variables for the 1960s and 1970s "explain" 62 percent of the variation in growth among the 21 countries involved.

[14]For additional details, see James Gwartney, Robert Lawson, and Randall Holcombe, "The Size and Functions of Government and Economic Growth," Joint Economic Committee, April 1998, available online at <http://www.house.gov/jec/growth/function/function.htm>; Edgar Peden, "Productivity in the United States and Its Relationship to Government Activity: An Analysis of 57 Years, 1929-1986," *Public Choice,* v. 69 (1991), pp. 153-73; and Gerald Scully, *What Is the Optimal Size of Government in the*



Source: Derived from *OECD Historical Statistics: 1960-1994* and *OECD Economic Outlook*, June 1999. This analysis is based upon 84 observations (21 OECD countries for which data were available times 4 decades).

During the last four decades, the size of government has expanded in every OECD country, while the rate of growth in every country, with the exception of Ireland, has fallen. However, there has been considerable variation in the magnitude of government expansion. If big government retards long-term growth, as Figures 3.2 and 3.3 imply, the countries with the largest *increases* in government should experience the sharpest *reductions* in growth.

Since 1960, the size of government as a share of GDP has increased 20 percentage points or more in six long-time OECD countries: Denmark, Finland, Greece, Portugal, Spain, and Sweden. On the other hand, it has increased 10 percentage points or less in four long-time OECD countries: Iceland, Ireland, the United Kingdom, and the United States. Figure 3.4 presents data on the growth rates of these two groups, along with the average for OECD countries (bottom line of the table). Among the "rapid expansion in government" group, the

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United States? (Dallas: National Center for Policy Analysis, 1994). While the methods employed by each study were different, all found that the growth-maximizing size of government was considerably smaller than the actual size of government in all OECD countries.

Figure 3.4: Economic Growth in OECD Countries with Most and Least Expansion in Size of Government

Countries with least growth in size of gov't as a share of GDP (< 10%)	Gov't as a % of GDP 1960 (1)	1998 (2)	Change (3)	Growth rate of real GDP (% per year) '60-'65 (4)	'90-'98 (5)	Change (6)
Iceland	28.2	36.2	*8.0*	4.5	2.3	*-2.2*
Ireland	28.0	33.1	*5.1*	4.1	7.1	*3.0*
United Kingdom	32.2	40.2	*8.0*	3.5	1.9	*-1.6*
United States	28.4	32.8	*4.4*	4.4	2.6	*-1.8*
Average	*29.2*	*35.6*	*6.4*	*4.1*	*3.5*	*-0.6*
Countries with most growth in size of gov't as a share of GDP (> 20%)						
Denmark	24.8	55.1	*30.3*	5.9	2.5	*-3.4*
Finland	26.6	49.1	*22.5*	5.6	1.3	*-4.3*
Greece	17.4	41.8	*24.4*	7.2	1.7	*-5.5*
Portugal	17.0	43.6	*26.6*	6.5	2.7	*-3.8*
Spain	13.7	41.8	*28.1*	8.5	2.2	*-6.3*
Sweden	31.0	60.8	*29.8*	4.9	1.1	*-3.8*
Average	*21.8*	*48.7*	*27.0*	*6.4*	*1.9*	*-4.5*
*Average for 21 OECD countries**	*27.3*	*44.3*	*17.0*	*5.6*	*2.4*	*-3.2*

Sources: Derived from *OECD Historical Statistics* and *OECD Economic Outlook* (various issues).

Note: *All countries for which data were available in the sample period were included. The countries are U.S., Japan, Germany, France, Italy, U.K., Canada, Australia, Austria, Belgium, Denmark, Finland, Greece, Iceland, Ireland, Netherlands, New Zealand, Norway, Portugal, Spain, and Sweden.

average annual growth of real GDP fell from 6.4 percent in 1960-65 to 1.9 percent in the 1990s, a drop of 4.5 percentage points. Among the "slower expansion in government" group, the average annual growth of real GDP fell from 4.1 percent in 1960-65 to 3.5 percent in the 1990s, a drop of only 0.6 percentage points. The best country in the "rapid expansion in government" group experienced a greater drop in growth

than the worst country in the "slower expansion in government" group.[15]

In 1960 government expenditures as a share of GDP for every country in the top part of Figure 3.4 exceeded the OECD average (bottom line of table) of 27.3 percent. At the same time, their average GDP growth rate of 4.1 percent was below the OECD average of 5.6 percent during the 1960s. The situation was exactly the opposite *for this same set of countries* in the 1990s. After their ratios of government expenditures to GDP dropped below the OECD average, their growth rates rose above the average.

The reverse happened to the nations in the bottom part of Figure 3.4. In 1960 their government expenditures as a share of GDP were below the OECD average, and their average GDP growth rates were higher than the OECD average. By 1998 their government expenditures had risen above the OECD average and their average growth rates had fallen below it. Because these statistics are for the same countries and country groupings, they are particularly revealing.

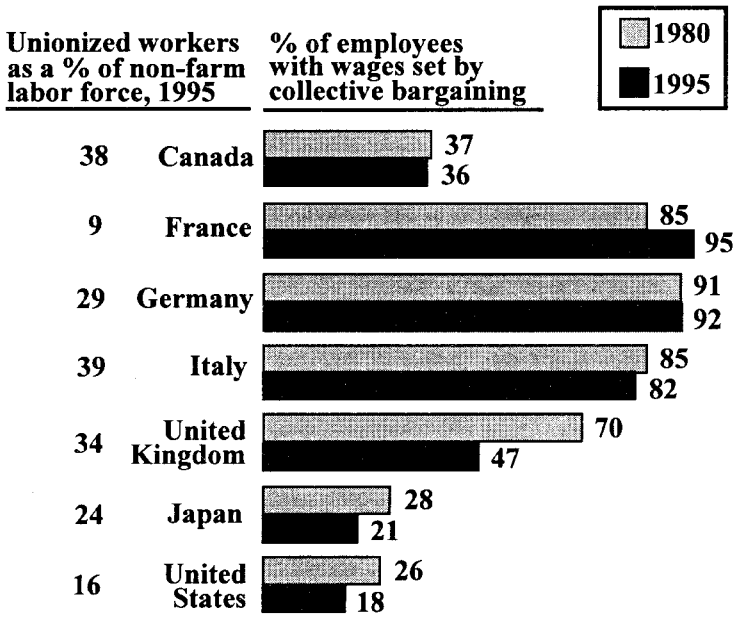
II. Labor Market Flexibility and Growth

Compared to other high-income countries, the United States has a labor market with less regulation and more wage flexibility. That makes it easier for employees to move among industries and occupations in response to changing conditions.

Several factors contribute to this flexibility. First, collective bargaining in the United States, Canada, and Japan is decentralized—it takes place at the company or plant level. In contrast, wage-setting is highly centralized in Western Europe, where negotiations between a union (or federation of unions) and an association of employers set wages in various industries, occupations, or regions. Even the wages paid to nonunion employees by nonassociation employers are determined by these negotiations. Therefore, as Figure 3.5 indicates, the number of workers whose wages are set by collective bargaining is far greater than union membership in France, Germany, and Italy.

[15]While the growth of government in Japan was slightly less than 20 percentage points, it is revealing nonetheless. At the beginning of the 1960s, government spending was only 17.5 percent of GDP, and it averaged only 22 percent of GDP during the decade. With small government, the Japanese economy registered an average annual growth rate of 10.4 percent in the 1960s. Over the next three decades, the Japanese government grew steadily; by 1998 government spending was 36.9 percent of GDP. Average annual economic growth fell to 5.3 percent in the 1970s, 3.8 percent in the 1980s, and 1.6 percent in the 1990s.

Figure 3.5: Share of Employees with Wages Set by Collective Bargaining



Sources: OECD, *Employment Outlook*, July 1994, Table 5.7; OECD, *Employment Outlook*, July 1997, Table 3.3; and OECD, *Country Surveys* (various issues).

Nationwide wage-setting reduces the flexibility of wages across occupations, industries, and regions.

Second, Western European countries have regulations mandating lengthy periods of prior notification or months of severance pay for dismissing workers. Firms are often required to obtain approval from the government to dismiss workers. While the stated objective of these regulations is to enhance job security, they make entry into the labor force more difficult. Because it is more costly to dismiss workers, it is more costly to hire them. When dismissal is costly, employers are reluctant to add workers even during periods of strong demand. Countries with highly restrictive dismissal regulations also have high rates of unemployment, particularly among young workers seeking to enter the labor force.

Finally, generous unemployment benefits and other transfers to the able-bodied unemployed reduce the cost of being unemployed. People

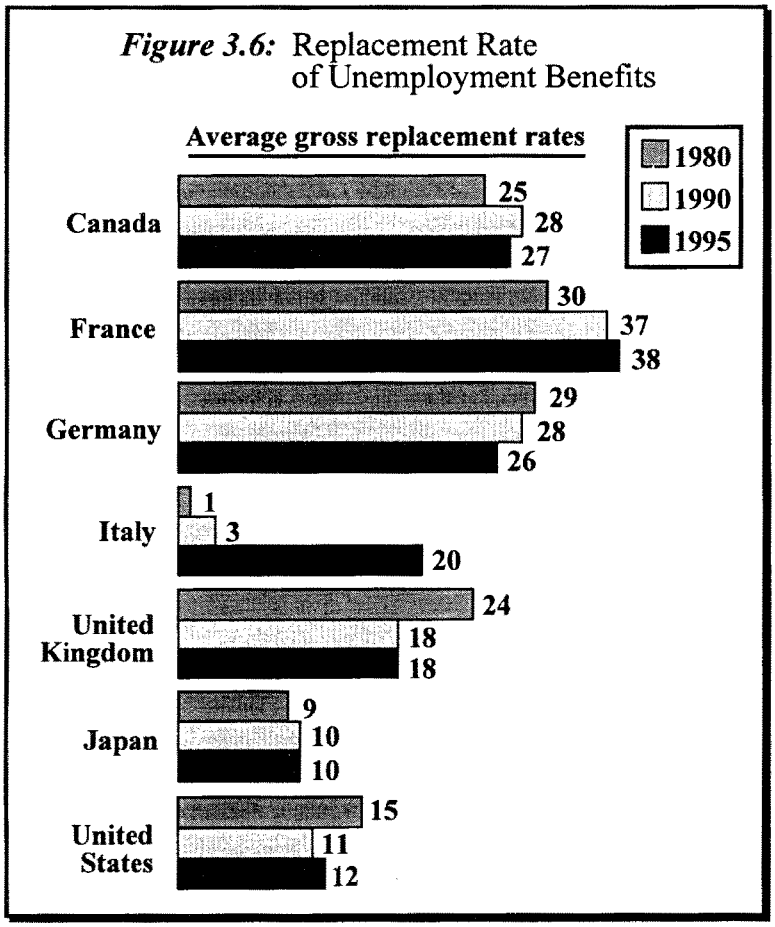


Figure 3.6: Replacement Rate of Unemployment Benefits

Sources: OECD, *OECD Jobs Strategy: Making Work Pay* (1997), Figure 2; OECD, *Implementing the OECD Jobs Strategy: Member Countries' Experience*, Table 5.

respond with longer periods of job search, causing the unemployment rate to rise. Overly generous benefits offer an alternative to work, reducing output by idling workers.

Figure 3.6 shows the replacement rate, which is the size of the average unemployment benefit expressed as a percentage of the wages a person earned when employed. Unemployment benefits in Western Europe and Canada are far more generous than in Japan and the United States. Throughout the 1990s, unemployment in France, Germany, Italy, and Canada has been 4 to 8 percentage points higher than in Japan and United States. High unemployment in those countries is not

due to cyclical factors; rather, it reflects the structure of their labor markets.[16]

The United Kingdom illustrates what labor market reform can do to unemployment. During the 1980s, various reforms made labor markets more competitive. At the same time, unemployment benefits were scaled back. Increasingly, the unemployment rate in the United Kingdom resembles that of the United States rather than other Western European countries.[17]

III. Entrepreneurship and Growth

The United States has a business climate that is relatively favorable to entrepreneurship. As we will discuss later, taxation on savings and capital formation are high. In other respects, however, the U.S. economy provides opportunity for entrepreneurs. In particular, the capital markets in the United States are more open than in most other countries. The U.S. capital market is the largest in the world. It provides entrepreneurs with a wide variety of sources for financial capital. A number of financiers specialize in providing venture capital—start-up funds for high-risk but potentially high-reward business activities. For companies that wish to tap investment from the public directly, U.S. stock markets offer well developed channels for doing so. The practice of offering stock options to employees, as a way of encouraging entrepreneurial behavior within companies, is more highly developed in the U.S. than in other countries. The encouragement of aggressive entrepreneurial behavior has been an important source of recent economic growth, particularly in the high-technology sector.

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[16]For additional details, see Edward Bierhanzl and James Gwartney, "Regulation, Unions, and Labor Markets," *Regulation*, v. 21 (Summer 1998), pp. 40-53.

Unemployment benefit systems are complex. Initial replacement rates among the large industrial economies are quite similar. However, Western European countries generally permit workers to draw benefits for longer than the United States does. Replacement rates often vary with the previous level of earnings, family size and situation, the previous length of employment, and the duration of unemployment. The OECD has calculated the replacement rates in member countries for recipients at two different income levels, three family situations, and three time periods of unemployment. The average replacement rates for these 18 different categories provide a reasonably good estimate of cross-country variations in the average replacement rate. The replacement rates of Figure 3.6 were derived by this method.

[17]In the summer of 1999, unemployment in the United Kingdom was 6.1 percent, versus 10.5 percent in Germany, 11 percent in France, and 12 percent in Italy. Figures are OECD standardized measures of unemployment.

IV. Conclusion

There is abundant evidence that secure property rights, competitive markets, price stability, openness to international trade, and smaller government enhance economic growth. If the United States is to achieve its full potential, it must diligently pursue these objectives. The experience of Western Europe is that big government—high government expenditures and extensive regulation—leads to sluggish growth.

4. A CASE STUDY IN RAPID GROWTH: IRELAND

The experience of Ireland in the last four decades offers a case study in how much difference the right policies can make to economic growth .

I. Ireland's U-Turn

From the early 1960s to the mid 1980s, the Irish government followed policies that hampered economic growth. Government spending rose from 28 percent of GDP in 1960 to 43 percent in 1974 and 52.3 percent in 1986.[18] Taxes were high, monetary policy was unstable, and trade restraints limited international exchange. By the mid 1980s, Ireland was on the verge of collapse. Real growth had fallen sharply. Unemployment soared to more than 17 percent during 1985-87. People were leaving the country in search of opportunity.

Out of desperation, the Irish government began to shift policy. Government spending was sliced, tax rates were lowered, monetary policy became more stable, and trade became more open.

1. Smaller government. By the mid 1980s, government spending was out of control and the size of the government debt was expanding rapidly, peaking at 120 percent of GDP in 1986. An attempt in 1983 to balance the budget by raising taxes had failed, throwing the economy into recession and leading to even higher levels of government debt. Finally, in 1987, the Irish government decided to try the alternative approach of reducing government spending. Government employment was cut by about 10 percent between 1986 and 1989.[19] As Figure 4.1 shows, total government outlays fell from 50 percent of GDP in 1986 to less than 40 percent in 1989. They have continued to recede in the 1990s, reaching 33.1 percent of GDP in 1998. The improvement in the budget situation reduced interest rates and led to increased confidence in the Irish economy, which created more investment.

2. Lower tax rates. As the size of government shrank, the tax burden on both individuals and businesses was systematically reduced. As Figure 4.2 shows, the top marginal rate imposed on personal income was sliced from 65 percent in 1984 to 58 percent in 1986 to 48 percent in 1992. Most recently, it has been reduced to 46 percent. Corporate tax rates have also been reduced sharply, from the top rate of

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[18]Figures are from *OECD Historical Statistics: 1960-1994* (Paris: Organisation for Economic Co-Operation and Development, 1996), Table 6.5.

[19]Alberto Alesina and Roberto Perotti, "Fiscal Adjustments in OECD Countries: Composition and Macroeconomic Effects," National Bureau of Economic Research Working Paper W5730 (1996), p. 25.

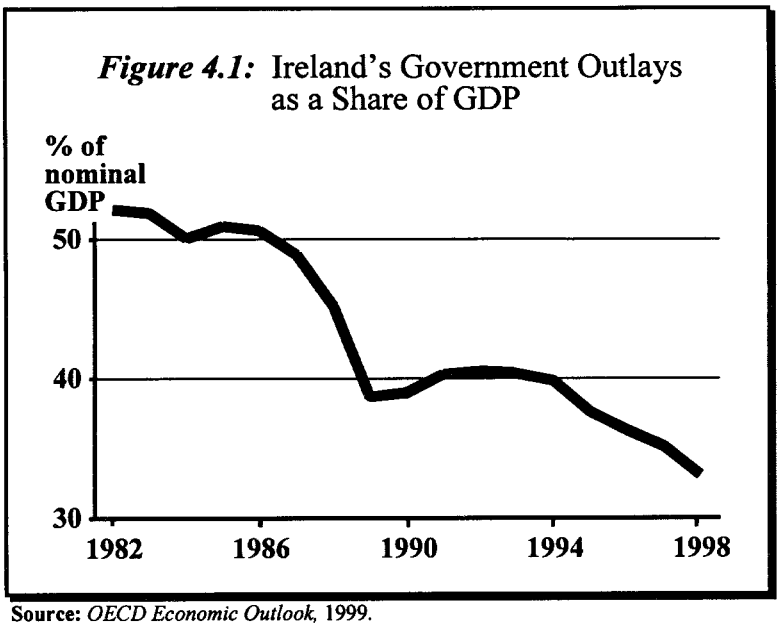


Figure 4.1: Ireland's Government Outlays as a Share of GDP

Source: *OECD Economic Outlook,* 1999.

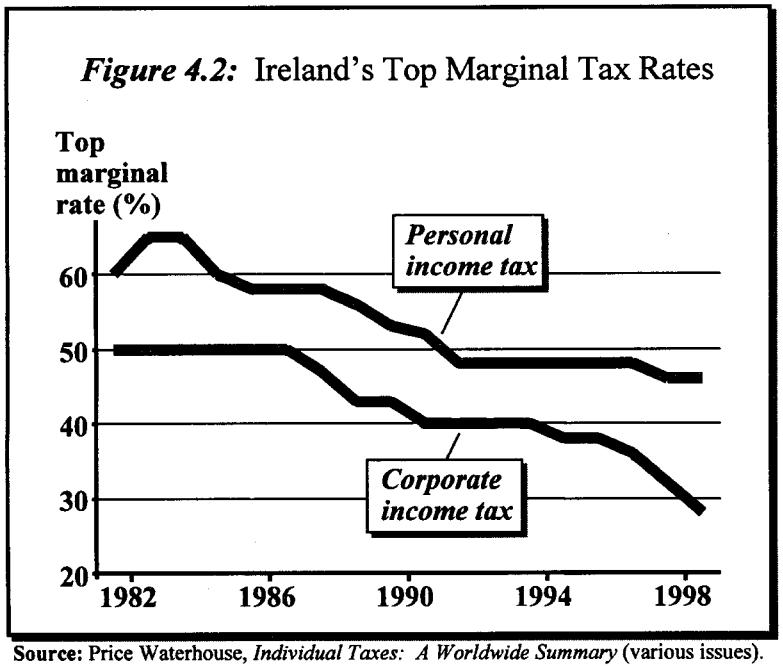


Figure 4.2: Ireland's Top Marginal Tax Rates

Source: Price Waterhouse, *Individual Taxes: A Worldwide Summary* (various issues).

50 percent in 1987 to the current rate of less than 30 percent. The reductions have increased incentives to work, invest, and innovate.

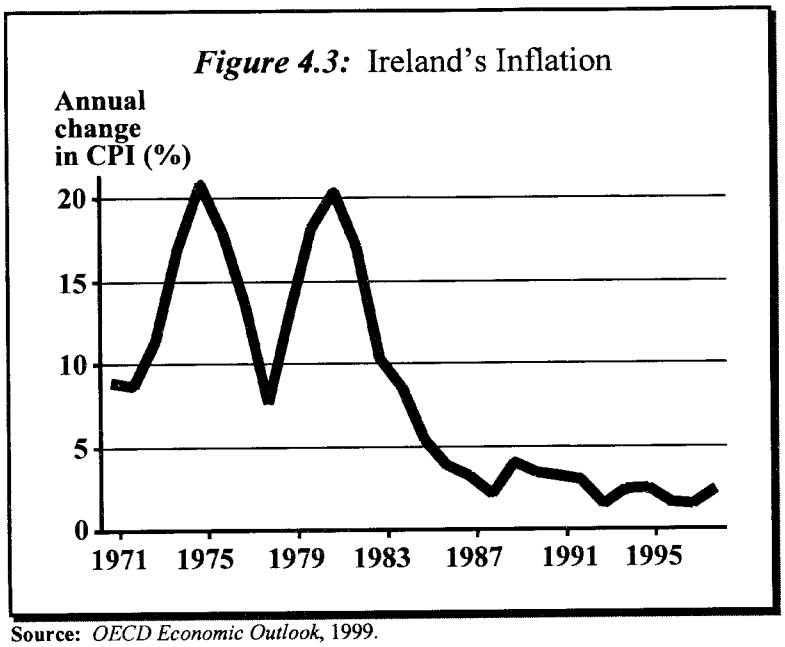
3. Sound monetary policy. Monetary policy has improved substantially since the late 1980s. Ireland's annual rate of inflation has fallen and become more stable (Figure 4.3). Since 1987, inflation has averaged 2.5 percent a year, down from an average of 12.7 percent a year from 1970 to 1986.

4. Openness to international trade. When Ireland joined the European Union (EU) in 1973, it was required to harmonize its trade policy with that of the EU over the next decade. Ireland benefitted from free trade within the EU and from EU tariff rates being lower than the rates previously imposed by the Irish government. The increased openness of the Irish economy propelled exports from 50 percent of GDP in 1980 to 60 percent in 1990 and 84 percent in 1997. Once heavily dependent upon neighboring Britain as a trading partner, Ireland's trade is now more diversified. Britain now accounts for only 27 percent of Irish exports, down from 47 percent in 1979.

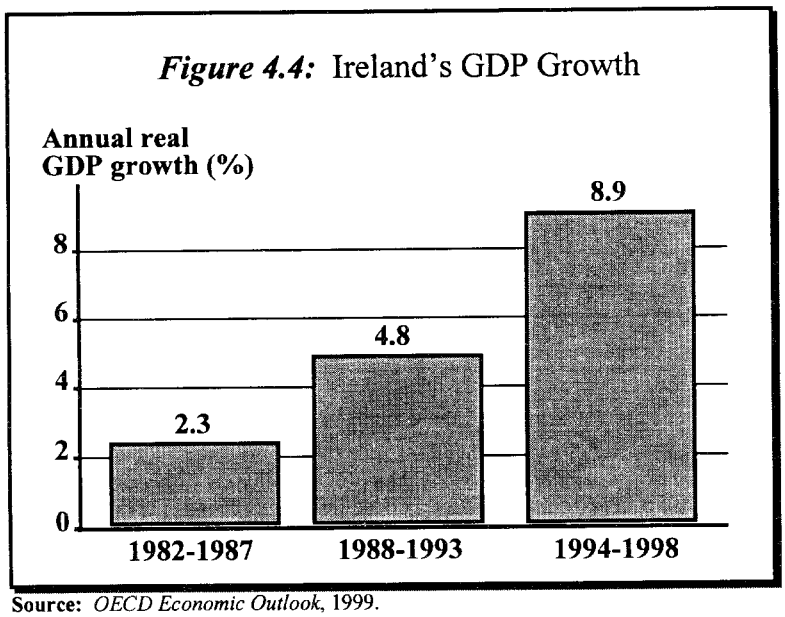
II. The Impact of the Policy Changes

What impact have these policies had on the Irish economy? The turnaround since the late 1980s has been remarkable. As Figure 4.4 shows, the annual growth rate of real GDP rose from 2.3 percent in 1982-87 to 4.8 percent in 1988-93. From 1994 to 1998 the Irish economy grew 8.9 percent a year. Ireland's growth rate has been the strongest by far in Europe during the 1990s. Certainly, the Irish experiment reinforces the view that open and competitive markets, reduction in the size of government, lower tax rates, and stable monetary policy matter—indeed, they matter a great deal.

The lone blemish on Ireland's economic record is unemployment. Ireland's unemployment rate has fallen from its 17 percent rate in the late 1980s to 6.6 percent today. This compares favorably with the EU average of 10.2 percent, but it is still about half again as high as the rate of the United States. Irish unemployment benefits are still quite generous and the labor market would profit from additional deregulation. Nonetheless, the overall picture is a remarkable success story.



Source: *OECD Economic Outlook*, 1999.



Source: *OECD Economic Outlook*, 1999.

5. RECORD AND PROSPECTS OF THE U.S. ECONOMY

I. Growth of the U.S. Economy Since 1945

Compared to other large industrial nations, the United States has had impressive economic growth during the 1990s. However, the growth is much less impressive when compared with the 25 years following World War II. Growth during the 1950s and 1960s was considerably more robust than it has been during the 1990s.[20] Moreover, the case of Ireland suggests that the 1990s have no special characteristics that have made it inevitably a period of slower growth. Faster growth is achievable if the right policies are in place.

Figure 5.1 presents data on the growth rates of real GDP, productivity, and real hourly compensation. To highlight long-term growth rather than short-term cyclical movements, the data are 32-quarter moving averages: each observation shows the average growth rate over the previous eight years.

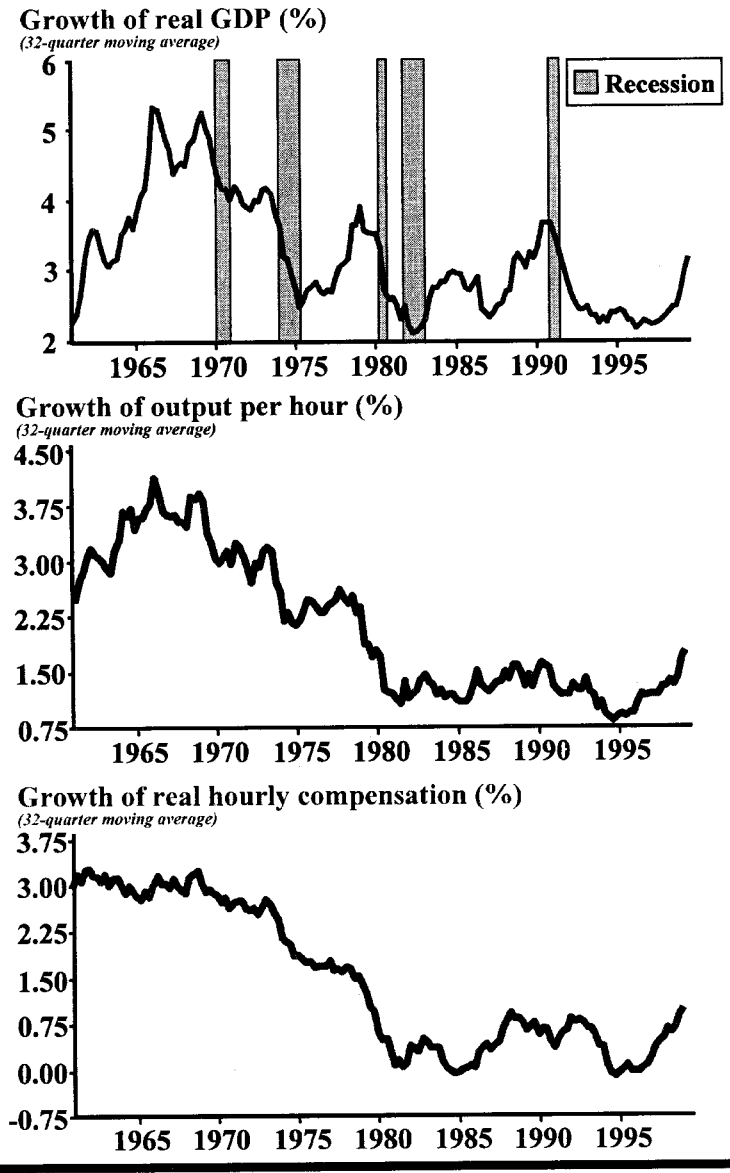
The growth rates of real GDP, productivity, and hourly compensation tend to move together, as one would expect. Real GDP measures total output, while productivity measures output per hour. When productivity changes, real GDP tends to change in the same direction. Productivity growth provides the basis for increases in compensation. Therefore, when productivity rises or falls, so does hourly compensation.

The growth rates of real GDP, productivity, and hourly compensation were all higher in the 1960s and early 1970s than during the last 25 years. The long-term growth rates of productivity and hourly compensation fell in the 1970s and have remained on a lower plateau since. All three indicators have been rising during the last few years, but remain well below the rates of the 1960s and early 1970s.

All of this raises a question that is crucial for the U.S. economy and for the federal government: Is the increase in the long-term growth rate since 1995 merely a temporary phenomenon, or is it a more permanent movement?

[20]During the 25-year period 1949 to 1973, the average annual growth rate of real GDP was 3.9 percent. During the last 25 years (1974 to 1998) the average growth rate was 2.7 percent. Growth rates of real GDP in recent decades have been as follows: 1960-69—4.4 percent; 1970-79—3.2 percent; 1980-89—2.7 percent; 1990-98—2.6 percent.

Figure 5.1: Growth of Real GDP, Productivity, and Hourly Compensation



Sources: Haver Analytics; *Economic Report of the President*, 1999.

II. Demographic Changes and Economic Growth

Changes in the age profile of the population affect both the level of income and its growth. Most people spend their twenties and early thirties developing skills through higher education, training, and job experience. During this phase, their productivity and earnings are generally below average. When people approach retirement, their productivity often declines because of worsening health and because their job skills may not be as up-to-date as they once were. Thus, the productivity and earnings of people over 60 are also generally below average. People 35 to 59 generally have the combination of education, experience, and health that results in the highest levels of productivity. Earnings figures confirm that the average real earnings of individuals reach a peak during these years.

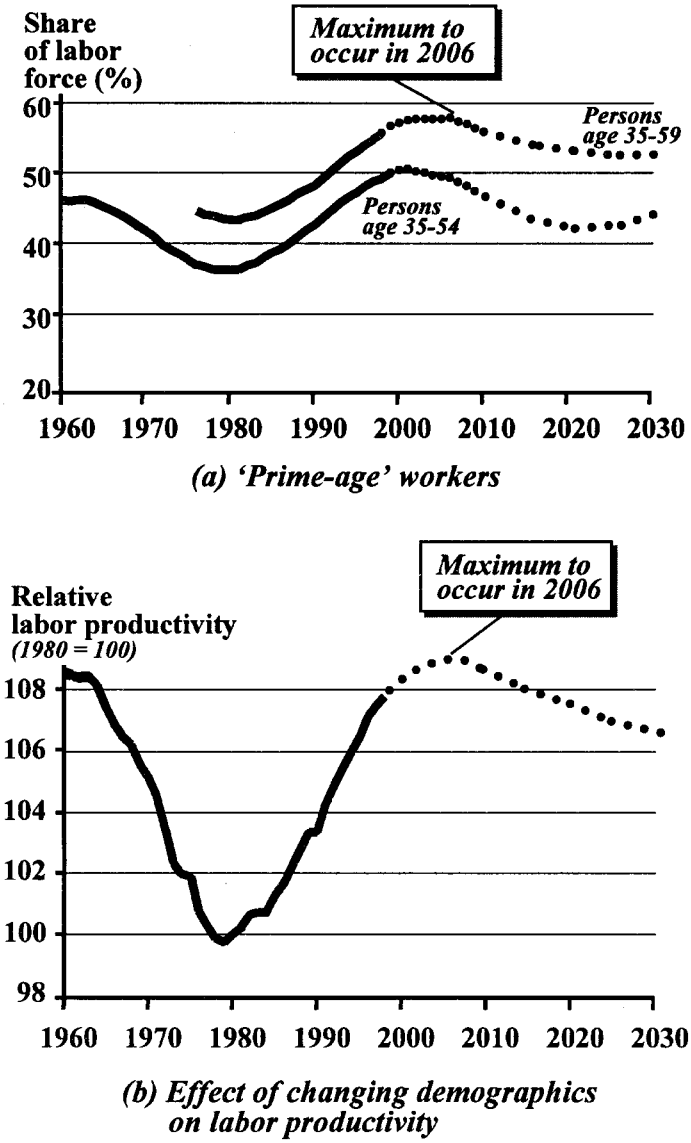
An increase in the share of the population 35 to 59 years old tends to push average productivity and earnings upward. When workers 35 to 59 are expanding as a share of the labor force, it enhances the growth of productivity and output. In contrast, an increase in the share of the population younger or older tends to retard growth.

The top frame of Figure 5.2 shows the percentage of the labor force ages 35 to 54 since 1960, and ages 35 to 59 from 1977 forward. The share of these groups fell by almost 10 percentage points from 1965 to 1980. This trend reversed during the 1980s as the "baby boom" generation entered its prime working years. During the last decade, the percentage of the labor force ages 35 to 54 rose from 40 percent to 50 percent. Currently, approximately half of the U.S. labor force is 35 to 54 years old, up from only 36 percent in 1980. The share of the labor force in the prime-age category will not change much during the next decade, but in about 15 years it will begin to shrink, and by 2020 it will return to the levels of the late 1980s.

What do these demographic trends have to do with economic growth? The bottom frame of Figure 5.2 shows how the changing age composition of the labor force during the last several decades has influenced average productivity. The influx of youthful, inexperienced workers accompanying the entry of the baby boom generation into the labor force between 1960 and 1980 reduced average productivity by about eight percentage points. This negative impact on productivity — and its growth—was particularly sharp during the 1970s.

The impact reversed during the 1980s, and in the 1990s the rapid growth of prime-age workers has boosted both productivity and its growth. Between 1991 and 1998, the growth of prime-age workers as a share of the labor force increased average productivity by a total of four percentage points. On an annual basis, this factor alone added

Figure 5.2: Impact of Demographics on Labor Productivity and Growth



Sources: Bureau of Labor Statistics; U.S. Census Bureau.

approximately one-half of a percentage point to the growth rate of productivity from 1991 to 1998.[21]

Prime-age workers will continue to comprise a large share of the labor force during the decade ahead. However, when the baby boom generation starts retiring around 2010, the situation will change dramatically. During the decade following 2010, the number of retirees will increase sharply, while the share of the prime-age workers will fall.[22] This combination will be a drag on the growth of the economy during the second and third decades of the next century.

III. The Slowdown of Growth During the 1970s

The growth rates of real GDP, productivity, and hourly compensation fell sharply in the 1970s. Demographic changes—specifically the entry of numerous youthful, inexperienced workers into the labor force—adversely affected productivity. Sharp increases in the price of oil in 1973 and 1981 also contributed to the slowdown,

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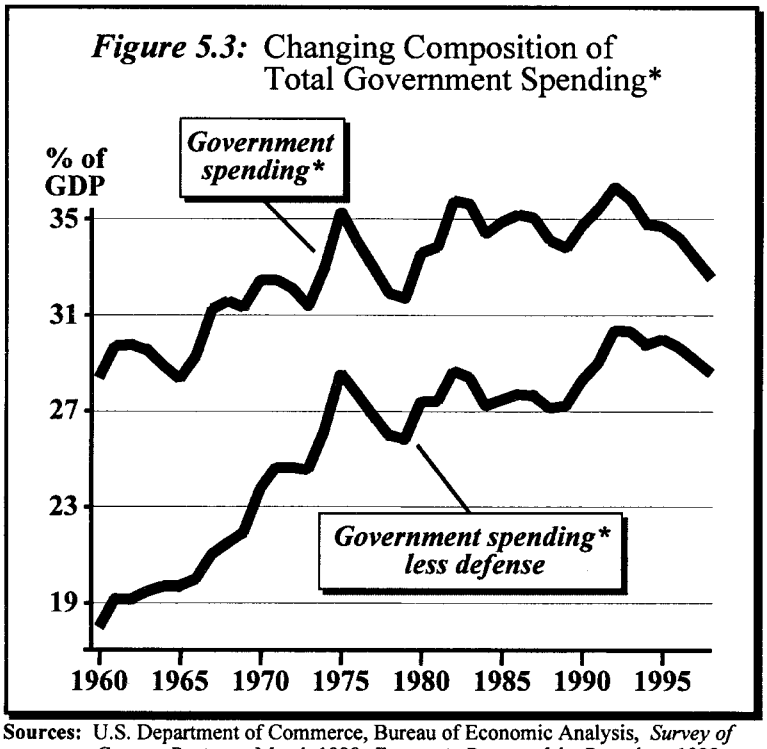
[21]The productivity index in the bottom frame of Figure 5.2 was derived by weighting the age-earnings profile for males in 1998 by the percent of the labor force in each age category for each year in the data set. Mathematically, the ratio for each of the "i" years is equal to the sum of (P_{a98} x A_{ai}) divided by the sum of (P_{a98} x A_{a80}), where P_{a98} is equal to the 1998 annual earnings within each of the "a" age categories (e.g. 20-24, 25-29, and so on), A_{ai} is the percent of the labor force in each age cell during the ith year, and A_{a80} is the percent of the labor force in each age cell during the 1980 base year. The ratio was derived for each year.

For 1960 to 1998, the number of persons with earnings in each age cell was used to derive the share of the labor force in the age cell. For years beyond 1998, the representation in each age cell is based on population projections. Our projections (based upon U.S. Census Bureau forecasts of population growth) assume that the rate of labor force participation in each age category will remain the same as it was in 1998. When the share of the labor force in the high-earnings (productivity) age categories is large relative to the 1980 base year, the ratio will be greater than 100. Increases (reductions) in the share of the labor force in the prime-earnings age groupings will cause the ratio to rise (fall). The index estimates the amount by which earnings, and thus productivity, differ from the 1980 base year as the result of changes in the age composition of the labor force. Data before 1976 use ten-year age categories instead of the five-year categories present in the rest of the data.

[22]The number of Americans over age 70 is projected to increase from 27.3 million in 2010 to 34.8 million in 2020 and 47.8 million in 2030. *Bipartisan Commission on Entitlement and Tax Reform, Final Report to the President* (Washington: Government Printing Office, 1995), p. 13; *1995 Annual Report of the Board of Trustees of the Federal Old Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington: Government Printing Office, 1995), p. 21.



Sources: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, March 1998; *Economic Report of the President*, 1999.
Note: *Government spending is composed of federal, state, and local expenditures and investment.

by reducing the efficiency of vast amounts of capital. Many machines and structures designed for cost effectiveness at pre-1973 energy prices were too costly to operate at higher prices. Energy prices fell throughout most of the 1980s, but initially people were not sure whether lower energy prices were temporary or more permanent. It took time to adjust to the new situation, so growth did not immediately rebound.

In addition to the unfavorable impact of demographic changes and higher energy prices, inappropriate policies also contributed to the fall in the growth rate during the 1970s. Monetary policy was unstable: both the rate and volatility of inflation rose throughout the decade. It takes time to regain lost credibility, and even though inflation declined during the 1980s, the adverse consequences of the earlier monetary and price instability lingered. The growth of government also played a role in the slowdown. As Figure 5.3 shows, total government expenditures (federal, state, and local) rose from less than 29 percent of GDP in

1965 to more than 35 percent in 1975. They fluctuated around this high level from 1975 to 1990.[23]

IV. The Underpinnings of Growth During the 1990s

While the long-term growth rate of the U.S. economy remains below the levels achieved during the 25 years following World War II, there are signs that it is increasing. The 32-quarter average annual growth rates of real GDP, productivity, and hourly compensation have all increased sharply during the last few years. Just as the slowdown of the 1970s reflected several negative factors, the improved performance of the U.S. economy during the 1990s is the culmination of several positive developments.

1. Monetary and price stability. Monetary policy since 1982 has achieved low, stable inflation. As the Federal Reserve has kept the inflation rate low and stable, it has regained credibility it lost in the 1970s. People are now more confident that the Federal Reserve will follow policies consistent with price stability. That helps keep interest rates low and reduces the uncertainties accompanying investment and other choices that involve income and costs across time periods.

2. Lower defense spending and smaller government. During the 1990s, there has been a modest reduction in government spending as a share of the economy. It has fallen from approximately 35 percent of GDP in 1991-1993 to less than 33 percent in 1998. As Figure 5.4 shows, federal spending fell from 25 percent of GDP in 1992 to less than 22 percent in 1998. The primary factor responsible for the decline has been lower defense spending now that the Cold War has been won. Defense spending fell from 7.5 percent of GDP in 1986-1987 to 4 percent in 1998. Had it not fallen, government spending as a share of the economy would have remained virtually unchanged during the 1990s.

3. Lower trade barriers. Numerous countries have reduced their trade barriers during the last 15 years. The United States has modestly reduced barriers, particularly those that apply to trade with Canada and Mexico. Following on the heels of the U.S.-Canadian Free Trade Agreement of 1988, the North American Free Trade Agreement (NAFTA) took effect in 1994. As the result of these two agreements, trade now flows more freely among the three largest North American nations. By 2004, tariffs on most products among these three countries

[23]The data of Figure 5.3 on government expenditures include capital expenditures as well as government consumption and transfer payments. Government investment is often omitted from data purporting to give "total government expenditures."

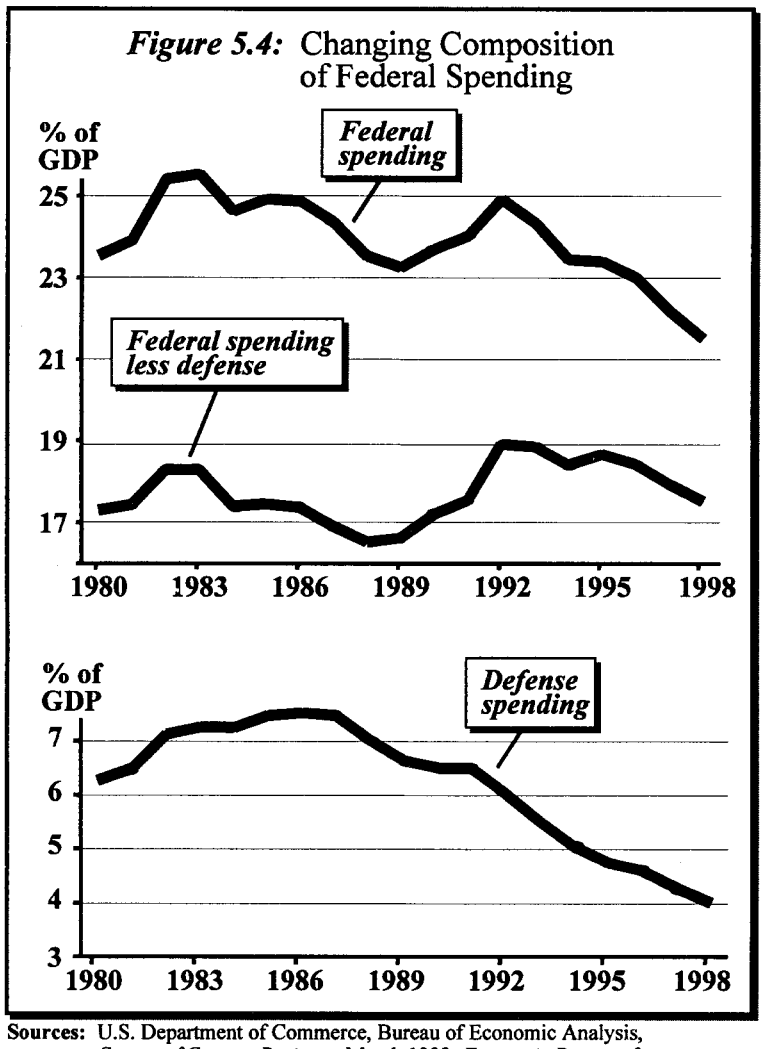


Figure 5.4: Changing Composition of Federal Spending

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business,* March 1998; *Economic Report of the President*, 1999.

will be phased out. Restrictions on financial investments and trade in services such as banking are also being removed.

Responding to lower trade barriers and reductions in transport and communications costs, the U.S. trade sector has grown sharply. Since 1990, imports have risen from 10 percent of GDP to 16 percent. During the same period, exports have expanded from 9 percent of GDP to 14 percent. Trade is a positive-sum activity: both parties gain from it.

4. Favorable demographics. The sharp increase in the share of the labor force in the prime-age, high-productivity categories during the 1990s has enhanced productivity per worker. An increased share of the population in their peak earning years has also boosted government revenue. People 35 to 59 pay considerable taxes from their relatively high incomes but consume relatively few government services. In contrast, rapid growth in the number of young people increases government spending for education, while rapid growth in the number of the elderly increases government spending for Social Security and health care. In the 1970s, the presence of more children and young adults pushed government, particularly state and local governments, toward more spending. The presence of more people in their peak earning years in the 1990s has helped generate budget surpluses at all levels of government.

5. Welfare reform. In 1996, the federal government enacted sweeping welfare reforms. It ended the "entitlement" status of welfare, whereby anyone with children who had a sufficiently low income automatically qualified for federal benefits. States were given much greater latitude in setting eligibility requirements and time limits for those receiving benefits. Since 1994, the share of the U.S. population on welfare has fallen by almost half, a substantially larger reduction than can be attributed to the general strength of the economy.[24]

For the economy as a whole, the cost of hiring workers includes transfer payments as well as compensation directly paid to workers. By making work less attractive for those who face entering the labor force in low-paying jobs, transfer payments to the able-bodied unemployed tend to increase the unemployment rate. By reducing transfer payments to the able-bodied unemployed, welfare reform reduces the cost of hiring, thereby increasing private-sector hiring and economic growth. Once in the labor force, workers in low-paying jobs acquire skills that help them stay employed and move into higher-paying jobs, whereas if they remain unemployed they never acquire the skills. At least one study suggests welfare reform alone is responsible for a reduction in the unemployment rate of one percentage point.[25]

Considering the favorable factors that emerged during the last few years — a sustained period of low inflation, increased trade, an increase in the relative number of persons in their prime earning years,

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[24]General economic growth only accounts for about 20 percent of the reduction in welfare caseloads since 1994, and less since 1996. *Economic Report of the President,* 1999 (Washington: Government Printing Office, 1999), p. 119.

[25]John Mueller, "The Answer to Three Puzzles: Welfare Reform Lowered Unemployment," *LBMC Report* (Lehrman Bell Mueller Cannon, Inc., Arlington, Virginia), July 23, 1999.

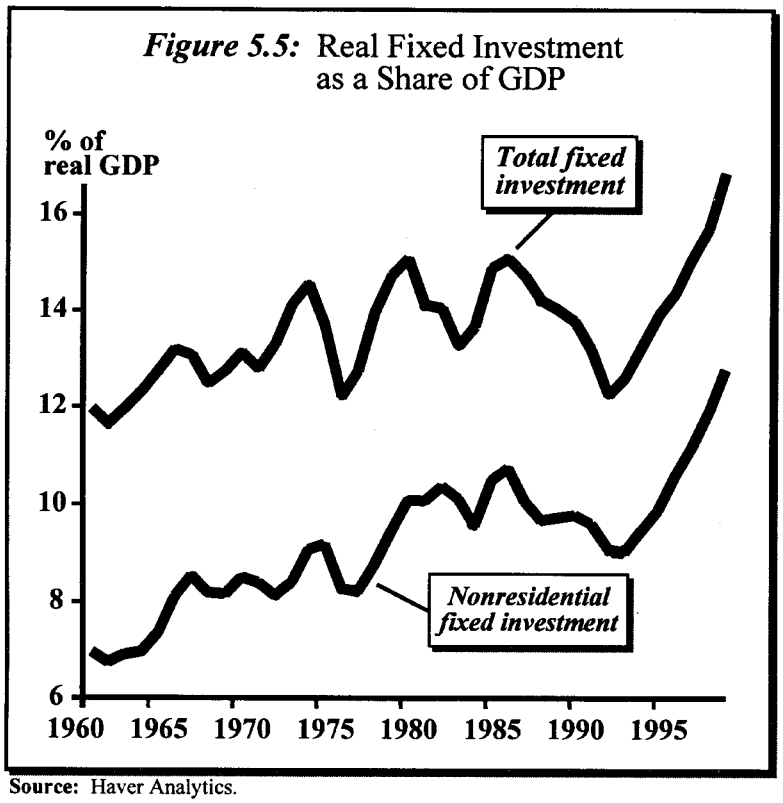

Figure 5.5: Real Fixed Investment as a Share of GDP

Source: Haver Analytics.

and smaller government in the post-Cold War era — it would have been surprising if there had not been an increase in growth and productivity.

V. Future Prospects for the U.S. Economy

The U.S. economy expanded at an annual rate of 2.7 percent during the 1980s and 2.6 percent during the 1990s. This is less than the rates of the 1960s and 1970s. During the last five years, real GDP has grown at a 3.4 percent annual rate. Does the recent higher growth reflect primarily short-term cyclical factors or is it the beginning of more robust long-term growth? Two factors are emerging that should enhance the future growth of the U.S. economy: strong investment and leadership in high-technology industries.

1. Growth of real fixed investment. Figure 5.5 presents data on both total real fixed investment and nonresidential real fixed investment as a share of GDP during the last four decades. The

interesting thing is the recent strength of these numbers, particularly the figures for nonresidential fixed investment. During the current expansion, nonresidential fixed investment has risen from 8.9 percent to 12.7 percent of GDP. The latter figure is two percentage points higher than during any recent expansion.

Purchases of durable equipment, such as machines, have been the driving force underlying the rapid growth of investment. Real purchases of producers' durable equipment rose from $389 billion in 1992 to $770 billion in 1998—an unprecedented rate of growth (Figure 5.6). The investment trend of the 1990s is important because capital—more and better equipment—enhances the future productivity of workers. In turn, higher productivity per worker provides the basis for rapid growth of income.

2. Growth of the high-technology sector. Evidence is mounting that the United States is in the midst of a boom in high technology. Striking increases in growth have occurred in semiconductors, software, the Internet, and biotechnology. The size of the high-tech sector rose from 4.9 percent of GDP in 1985 to 6.1 percent in 1990 and 8.2 percent in 1998 (Figure 5.7). According to the U.S. Department of Commerce, information technology industries have generated about one-third of the recent growth of the U.S. economy.[26]

The United States occupies a position of world leadership in high technology. As Figure 5.8 shows, personal computer usage in the United States is substantially greater, both absolutely and per person, than in Western Europe and Japan. The U.S. has over half of the world's Internet users and more than 60 percent of the world's Internet host computers.[27]

Consumer applications of the World Wide Web such as book selling and stock trading are well known, but business-to-business electronic commerce on the Web is much larger and potentially more important for economic growth. Web connections to suppliers and customers are promoting faster, more accurate, and lower-cost transactions throughout the economy.[28]

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[26]See *The Emerging Digital Economy* (Washington: U.S. Department of Commerce, 1998).

[27]In the United States, 48 percent of the population uses personal computers, versus 26 percent in Japan and 22.5 percent in Western Europe. In the United States, 29 percent of the population uses the Internet, versus 8 percent in Japan and 7 percent in Western Europe. (These calculations are based on figures from *Computer Industry Almanac.*)

[28]For additional evidence on the size and importance of Internet commerce in the United States, see *The Internet Economy Indicators* (Austin: University of Texas Center for Research in Electronic Commerce, 1999).

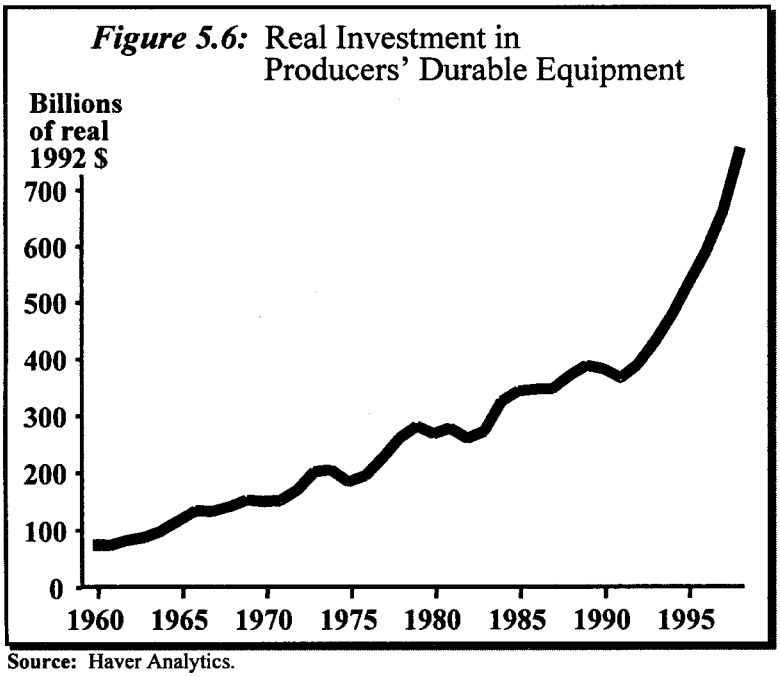


Figure 5.6: Real Investment in Producers' Durable Equipment

Source: Haver Analytics.

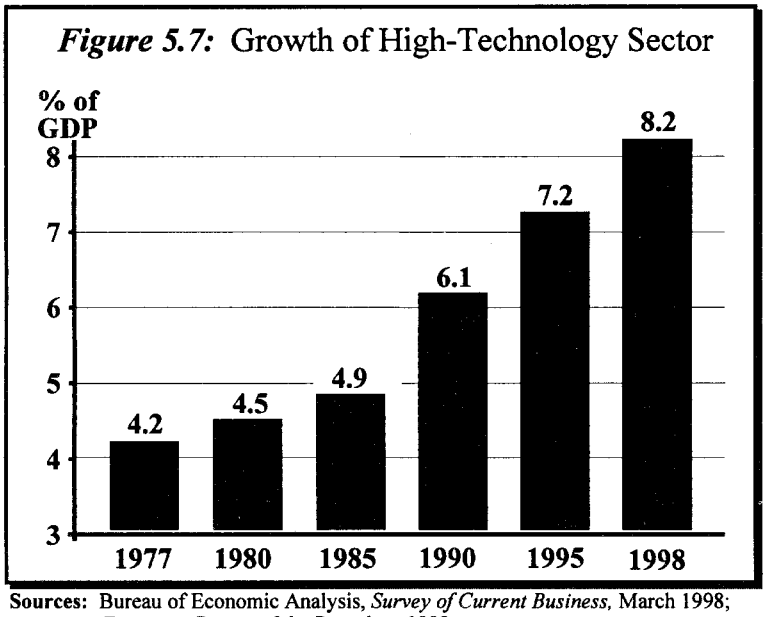
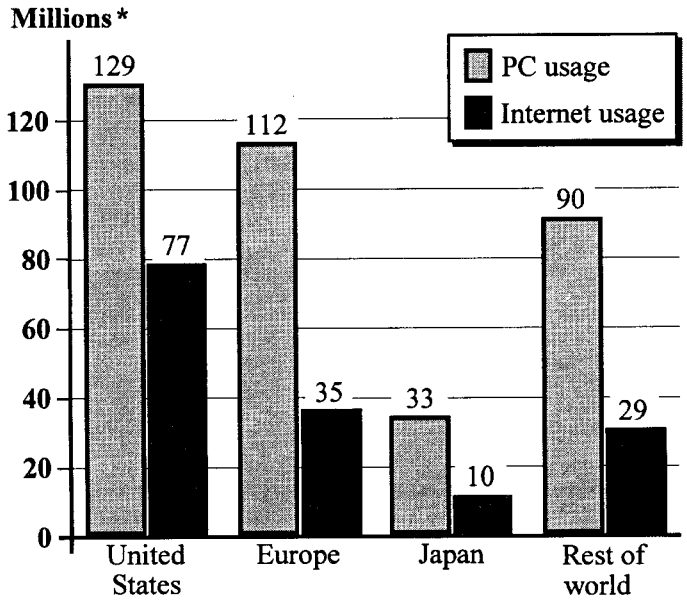


Figure 5.7: Growth of High-Technology Sector

Sources: Bureau of Economic Analysis, *Survey of Current Business,* March 1998; *Economic Report of the President,* 1999.

Figure 5.8: U.S. Leadership in Personal Computer and Internet Usage



Source: *Computer Industry Almanac.*
Note: *Millions of personal computers in use / millions of weekly Internet users.

Increasingly, we live in a world where growth is driven by brain power and entrepreneurship. The economic structure of the U.S.—the legal structure, dynamic venture capital market, recent record of price stability, openness of the economy, and reliance on markets—provides a favorable environment for success in this new world.

Besides the growth of fixed investment and of the high-technology sector, other factors influencing growth also appear positive or at least neutral. If the Federal Reserve continues to remain vigilant, there is no reason why the relative price stability of recent years cannot be maintained. The positive effects on growth from the trade sector will also continue. While the demographic changes in the decade ahead will not be as favorable as they have been during the 1990s, they will still be quite positive. Therefore the evidence points to a robust rate of growth being sustainable at least for the next decade.

VI. The U.S. Economy Is at a Crossroads

The prospects for the U.S. economy are bright. If we continue to follow a stable monetary course and expand the openness of the economy, economic growth in the decade ahead is likely to be the most robust since the 1960s. Sustaining the recent annual growth of 3.5 percent is not only possible, it is likely. However, to achieve robust growth, we must control the size of government. Big government means slow growth, and rapid growth in government leads to economic stagnation. The recent history of the major Western European economies, Japan, and even Canada illustrate this point (see Figures 3.3 to 3.5).

Because of the favorable demographics resulting from the unusually large share of the population in their prime earning years, tax revenue will be high and, if new programs are not adopted, government spending will decline as a share of GDP in the near future. In addition, both major political parties support the use of the Social Security surplus to pay down outstanding federal debt. This will reduce future interest costs, which will also help reduce the relative size of government. Post-Cold War defense cuts facilitated reductions in the size of government as a share of the economy in the 1990s. In turn, smaller government contributed to recent economic growth. Favorable demographic trends can play the same role in the decade ahead.

However, dangers lurk beneath the favorable demographics and projected revenue growth. New spending initiatives will be tempting. It would be short-sighted to adopt them. As the baby boomers begin to retire, the impact of demographics on the budget will change dramatically. If we are not sensitive to this situation, the combination of new spending commitments and current obligations to future retirees will cause the U.S. to become a stagnating "big government" economy sometime after 2010.

The United States is at a crossroads. We can use the revenue increases accompanying the current favorable demographics to undertake new spending initiatives. If we choose this route, government spending will rise sharply when the baby boomers retire. Between 2010 and 2030, persons age 65 and over will increase from 12 percent to 18 percent of the population. Given current commitments, this change alone will increase government spending as a share of the economy by 4 to 6 percentage points. Should we undertake additional commitments, particularly to the elderly, the U.S. will be "Europeanized" when the baby boomers retire. The big-government European nations have been surpassed by others following more sensible policies. The United States will experience the same fate if we allow our government to get too big.

The alternative is to control government spending and allow the favorable demographics of the upcoming decade to reduce the relative size of government. It would also be helpful to reform the pay-as-you-go Social Security and health care programs in a manner that encourages private saving and economizing behavior. If we choose this alternative, the future of the U.S. economy is exceedingly bright. The budget choices in the years immediately ahead will determine which route we will take. The following section addresses this topic.

6. THE FEDERAL BUDGET

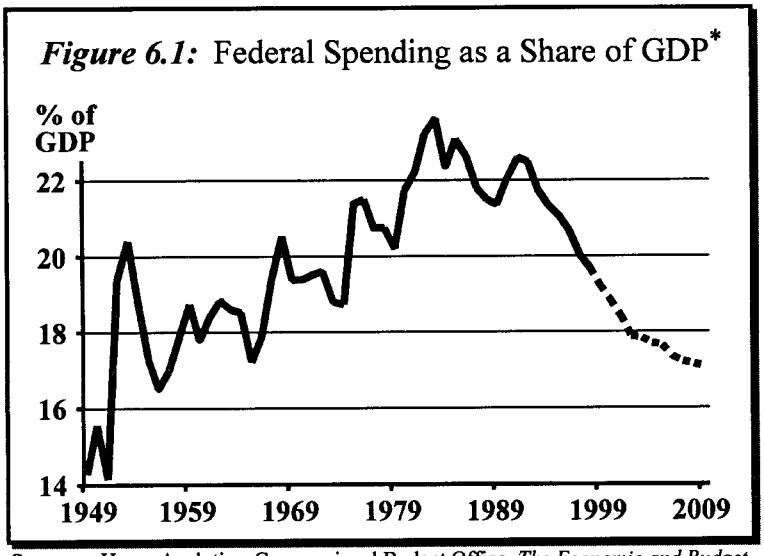
From 1961 to 1997, the federal government ran a budget deficit every year except 1969. The era of persistent deficits gave way to surpluses starting in 1998. If there are no major changes in fiscal policy, budget surpluses are projected throughout the next decade even if the average growth rate of real GDP is only 2.3 percent to 2.5 percent, which is lower than the current rate. If the growth of the economy is stronger, the surpluses will be exceedingly large, particularly if there is no major reduction in taxes.[29]

Both more rapid growth of revenue and slower growth of spending have helped bring about the fiscal turnaround of the 1990s. Pushed along by favorable demographics—the increasing share of the population in prime-age earning years—income has grown rapidly during the last five years (see Figure 5.2). With progressive taxation, federal tax revenue rises as a share of the economy as real income grows. During the current expansion, it has risen to a peacetime high of 20.6 percent of GDP. In the aftermath of the Cold War, certain expenditures, particularly those for defense, have fallen as a share of the economy. In 1997, the Congress and the President agreed to limits on discretionary spending (roughly speaking, the portion of the federal budget that does not consist of income-transfer programs such as Social Security and Medicare). At present the limits are due to expire after fiscal 2002. If they are adjusted for inflation after 2002, government spending is projected to fall to 17.1 percent of GDP by 2009. That would be the lowest level since the mid 1950s, when Dwight Eisenhower was president.

I. Federal Spending Over the Last Two Decades

As Figure 6.1 shows, there was an upward trend in federal spending as a share of GDP from 1950 to 1983. In 1983, federal spending reached 23.6 percent of GDP, its highest level since World

[29]During the 1960s and 1970s, the fiscal policy ideas of John Maynard Keynes and his followers exerted a major impact. Keynesians believed that fiscal policy exerted a strong effect on total demand and that budget deficits could be used to stimulate output and employment. During the 1970s, expectations and the crowding out of private spending as the result of higher interest rates accompanying budget deficits were integrated more fully into macroeconomics. As economists became more aware of the offsetting effects accompanying budget deficits (and surpluses), the popularity of the deficits and the Keynesian view waned. The almost total absence of criticisms of the large budget surpluses projected for the upcoming decade is a reflection of the change in views among economists concerning the potency of fiscal policy.

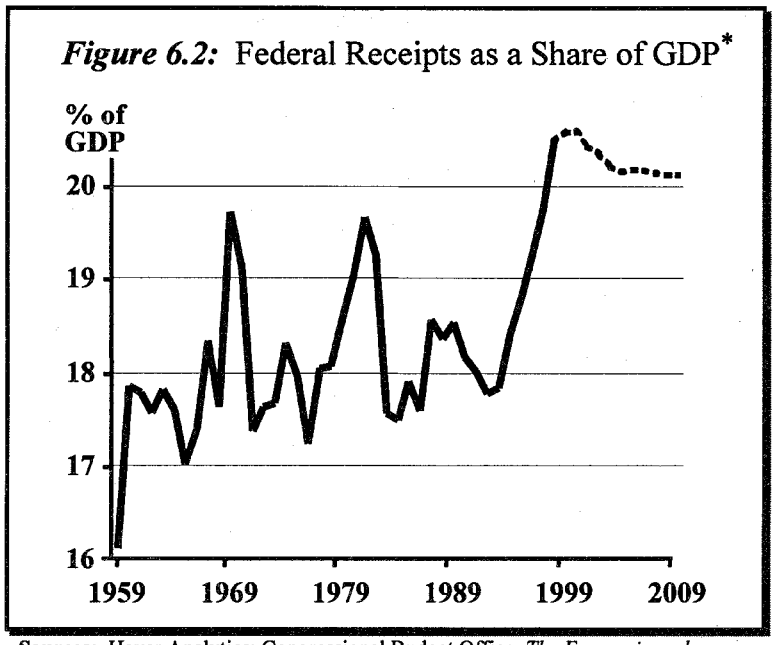


Sources: Haver Analytics; Congressional Budget Office, *The Economic and Budget Outlook: An Update* (July 1999); *Budget of the United States Government, F.Y. 2000, Historical Tables.*

Notes: *Data are nominal figures for fiscal years. Federal spending is outlays. Years beyond 1998 are projections from the Congressional Budget Office.

War II. Much of the growth of federal spending in the early 1980s resulted from the Reagan Administration's buildup of the U.S. military. Defense spending rose from 5.2 percent of GDP in 1981, the last budget of the Carter Administration, to 6.1 percent in 1983. When the Reagan Administration took office, the tide of Communism was at its high-water mark. Soviet troops were occupying Afghanistan, and Soviet-supported regimes in Nicaragua, Angola, and Mozambique threatened neighboring countries. In Europe, France and Italy had large, powerful Communist parties; Soviet propaganda had briefly threatened the stability of the North Atlantic Treaty Organization (NATO); and the suppression of Poland's Solidarity movement made it seem that Communism's grip on Eastern Europe was unyielding. The Reagan Administration's response was decisive in turning the tide of the Cold War, ending the threat of Soviet Communism and making it possible to reduce defense spending as a share of the economy in the 1990s.[30]

[30]The explosion in nondefense spending, which began in the 1970s, was not so easily contained. Falling inflation also contributed to high levels of federal spending in the 1980s. As inflation fell from 13.5 percent in 1980 to 3.2 percent in 1983, spending was often based on projections of inflation that proved too high.



Sources: Haver Analytics; Congressional Budget Office, *The Economic and Budget Outlook: An Update* (July 1999); *Budget of the United States Government, F.Y. 2000, Historical Tables.*

Notes: *Data are nominal figures for fiscal years. Years beyond 1998 are projections from the Congressional Budget Office.

II. Federal Taxes Over the Last Two Decades

When President Reagan and the 97th Congress took office, federal taxes were 19.7 percent of GDP, equalling the highest level since World War II.[31] Marginal tax rates as high as 70 percent and expansionary monetary policy combined to cause stagflation. President Reagan's tax cuts reduced marginal tax rates by 25 percent across the board. At a time when many in the West were losing confidence in capitalism, the Reagan tax cuts reaffirmed faith in the creative powers of a free people in a free economy. Lower tax rates restored incentives to work and invest, liberating the economy. Once fully implemented, the tax cuts reduced federal receipts to 17.5 percent of GDP, 2.2 percentage points lower than in 1981. Real GDP grew rapidly following the 1982 recession.

Figure 6.2 presents data on tax revenues as a share of the economy. During the last 40 years, taxes have generally ranged from 16.1 to 19.7

[31]This matched the 1969 level, under the Johnson Administration's last budget.

percent of GDP, usually falling below 18.5 percent. Prior to the current period, there were two peaks: 1969, due to the Vietnam War surcharges on income taxes; and 1981, just before the Reagan tax cuts. Within two years of each peak, the fiscal pendulum swung back and taxes were reduced by over 2 percentage points of GDP.

Under the Clinton Administration, taxes as a share of GDP have climbed each year, from 18.4 percent of GDP in 1994 (the year of the first Clinton budget) to the current peacetime record of 20.6 percent. This is partly a result of President Clinton's 1993 package of tax increases, which raised the top marginal rate from 31 percent to 39.6 percent. It is also a consequence of two other factors. First, as economic growth enables taxpayers in general to earn more, they are pushed into higher tax brackets ("real bracket creep"). Second, capital gains tax revenue is included in taxes even though the capital gains on which they are based are not included in GDP.

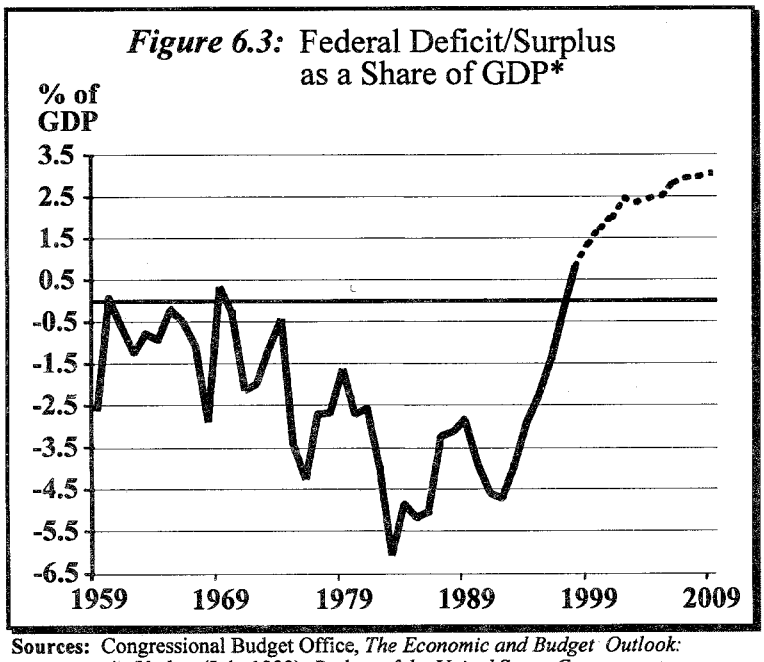


Figure 6.3: Federal Deficit/Surplus as a Share of GDP*

Sources: Congressional Budget Office, *The Economic and Budget Outlook: An Update* (July 1999); *Budget of the United States Government, F.Y. 2000, Historical Tables.*

Notes: *Data are nominal figures for fiscal years. Years beyond 1998 are projections from the Congressional Budget Office.

III. The Coming Decade: Cutting Taxes, Retiring Debt, and Bolstering Retirement Security

Figure 6.3 shows the pattern of budget deficits and surpluses as a share of GDP during the last 40 years. Deficits were present throughout the 1960s (except 1969), and increased in the 1970s and 1980s. Following the recovery from the 1990 recession and one-time expenditures due to the savings and loan crisis, the situation changed dramatically. The increase in economic growth of the last five years has accelerated the shrinkage of the deficit.

With taxes exceeding 20 percent of GDP, and spending below 20 percent of GDP and falling, budget surpluses are projected for the next ten years and beyond. If limits on discretionary spending are extended beyond fiscal 2002 and adjusted for inflation, revenues are on a path to exceed expenditures by a total of $2.9 trillion over the next ten years, with surpluses totaling $1.1 trillion during 2000-2004 and $1.8 trillion during 2005-2009.[32]

The budget for fiscal year 2000 passed by the 106th Congress provides for tax cuts totalling $792 billion over ten years, which will come from the $996 billion of on-budget surpluses.[33] The entire amount of the Social Security surpluses will be set aside in a "lockbox" to provide for greater retirement security. The surpluses in the lockbox will be used to retire publicly held debt by as much as $1.9 trillion.[34] The tax cut still leaves $254 billion of on-budget surpluses that can be used for further debt reduction or increased spending on Medicare reform, national defense, or other priorities.[35]

The Congress and the Clinton Administration have developed contrasting proposals for using the on-budget surpluses projected to

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[32]Congressional Budget Office, "The Economic and Budget Outlook: An Update," July 1, 1999.

[33] H. Con. Res. 68, conference report agreed to by the House of Representatives on April 14, 1999 and the Senate on April 15; H.R. 2488, the Taxpayer Relief and Refund Act of 1999, conference report adopted by both Houses of Congress on August 5, 1999.

[34] One method of strengthening Social Security would be to allow future recipients to invest a portion of their payroll tax in personal savings accounts in exchange for lower future benefits. This would have the twin virtues of increasing personal savings and reducing future demands on the Social Security system. However, a way must be found to shift toward an "investment-based" system without endangering the benefits promised to current and future retirees.

[35]This figure also takes into account the effect of the 1999 supplemental appropriations bill and contingent emergencies. Statement of Dan L. Crippen, director of the Congressional Budget Office, to the Senate Budget Committee, July 21, 1999.

accumulate over the next decade. Figure 6.4 compares the proposals. As the figure shows, *the federal government does not have to choose among significant tax cuts, deep debt reductions, or maintenance of entitlement spending levels. Under current budget projections, it can accomplish all of them.* Specifically,

- Taxes can be cut by $792 billion.
- Publicly held debt of $1.9 trillion can be retired.
- Mandatory entitlement spending can increase by 73 percent over 1999 levels, from $977 billion to $1.69 trillion.
- Discretionary spending can increase (as provided in the fiscal 2000 budget resolution) by $222 billion more than if the current limits were left in place and not adjusted for inflation.[36]
- Even with all these other activities, $254 billion will be left over for other purposes.[37]

In contrast, the Clinton Administration has proposed to raise taxes above the current all-time high-level, increase spending, and retire less of the outstanding debt. Over the next 10 years, President Clinton's proposals

- Increase taxes by $95 billion.
- Increase spending by $1.033 trillion.[38]
- Provide for on-budget surpluses totalling only $54 billion.

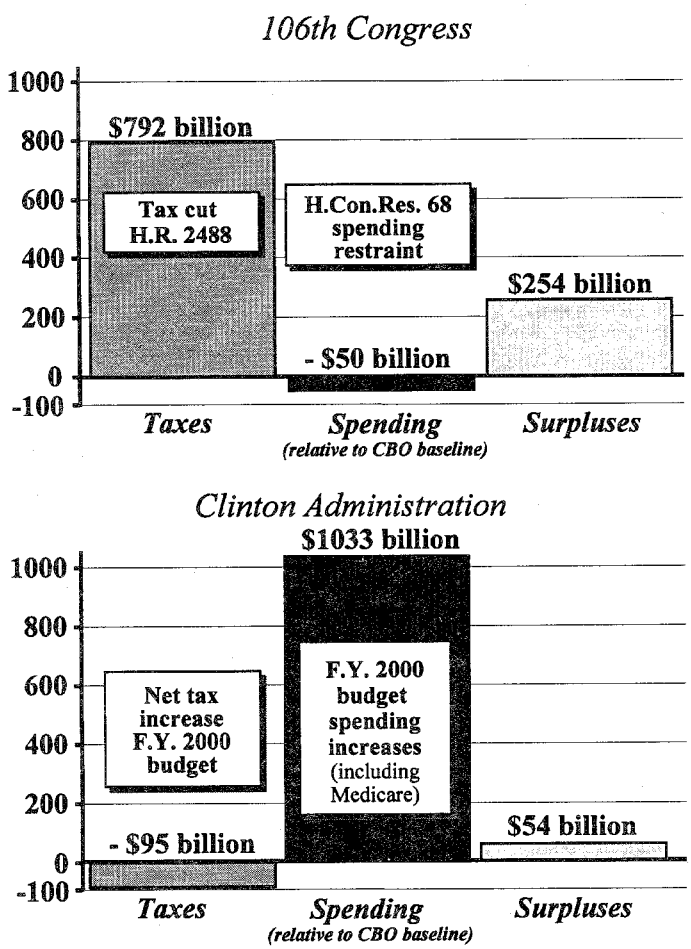
The Clinton Administration has endorsed the idea of a "lockbox" for off-budget surpluses, so both the Congress and the President would reduce publicly held debt by $1.9 trillion. As Figure 6.4 clearly illustrates, *the tax cut debate is not about taxes and debt retirement. It is about spending!* The President wants to use every penny of the $1 trillion in on-budget surpluses (plus a tax increase) to increase spending. The Congress would use these surpluses to reduce the tax

[36]All the figures here are calculated using the assumptions of the nonpartisan Congressional Budget Office. The figure of $222 billion is $197 billion below the CBO baseline, which assumes inflation adjustments from 2003 to 2009. Taking into account increased interest payments, and the net increase in mandatory spending under the budget resolution, total spending would be $50 billion less than the CBO baseline.

[37]If some of this remaining surplus is used to retire debt, there will be additional savings due to reduced interest payments.

[38]These numbers are from the CBO's analysis of the Mid-Session Review, contained in CBO Testimony, Statement of Dan L. Crippen to the Senate Budget Committee, July 21, 1999. They are relative to the CBO baseline, and include the proposed expenditures for Universal Savings Accounts.

Figure 6.4: Opposing Proposals for On-Budget Surpluses, 2000-2009



Sources: Congressional Budget Office, Joint Committee on Taxation, and Joint Economic Committee.
Note: F.Y. denotes fiscal year.

burden of the American people. There is little difference between the two with regard to the retirement of debt. In fact, the Congressional plan provides a slightly larger amount for this purpose.

IV. Does the CBO Underestimate Future Revenue?

If the spending caps are maintained through 2002 and thereafter adjusted for inflation, the Congressional Budget Office's revenue projections indicate that $2.9 trillion will be available for debt retirement, tax cuts, or spending increases. There are two major reasons to believe that the CBO's calculations underestimate the growth of federal revenue. First, the CBO assumes federal tax revenues will increase less rapidly than nominal income. Under a progressive tax structure, the opposite is true. According to CBO's projections, nominal GDP will increase by 53.1 percent during the next ten years but federal revenue will increase by only 49.6 percent. This implies that for every 10 percent of growth in nominal GDP, federal revenue grows only 9.4 percent. Under progressive taxation, this forecast does not make sense. While federal income tax brackets are indexed for inflation, they are not indexed for growth in real income. Thus, a larger and larger share of income will be taxed at higher rates as real income grows. Most observers agree that federal revenue grows 10 to 30 percent faster than nominal GDP, rather than 6 percent slower than nominal GDP as the CBO estimates. If federal revenue grows 10 percent faster than nominal GDP, during the next ten years it will be $966 billion more than the CBO forecast.

Second, the CBO assumes real GDP will grow an average of less than 2.5 percent a year during the next decade. This is exceedingly conservative. During the last five years, real GDP grew at an annual rate of 3.4 percent a year, and during the last 15 years it has averaged 3.1 percent a year. Given the high percentage of the work force that will be in its prime earning years in the decade ahead, the CBO's projection is too low. Even if real GDP growth is only 2.8 percent a year, federal revenues will exceed the CBO forecast by $385 billion over the ten-year period.

Thus, the CBO's projections underestimate federal revenues, and therefore budget surpluses. It is highly likely that federal revenues during the next ten years will be around $1.3 trillion more than the CBO forecast.[39] Attractive growth and favorable demographics will make it possible to initiate new programs and expand spending as the President proposes. But it would be a mistake to do so. Following such a plan during the next decade will plant the seeds of big government and slow growth when the baby boom generation retires during the subsequent decade.

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[39]For additional details, see the testimony of James Gwartney at the Joint Economic Committee Hearing on Tax Cuts and the Budget Surplus, September 13, 1999, online at <http://www.senate.gov/~jec/gwartney.htm>.

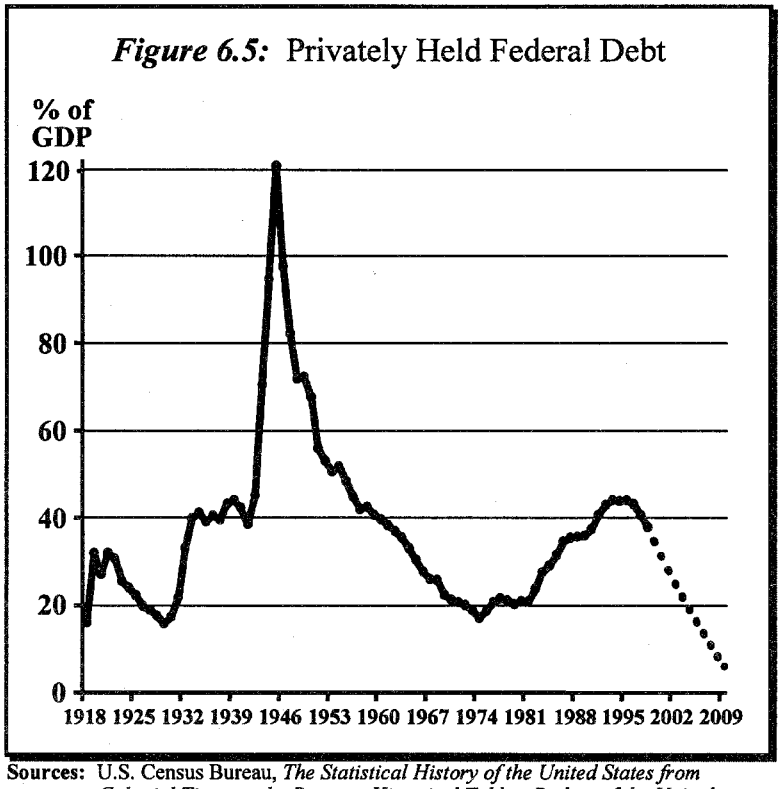
V. Why Tax Relief Is Necessary

Americans are not under-taxed. As Figure 6.2 shows, taxes are currently at a peacetime high. Without a major tax cut, they will remain at or near that level during the next decade. If anything, the tax cut proposed by Congress was too small. Of the $792 billion in tax reduction, only $156 billion would have taken effect during the first five years. The Congressional tax cut was only 0.7 percent of GDP during the ten year period—0.4 percent during the first 5 years and 1.0 percent during the last five years. After the tax cut was fully phased in, tax revenues would still have taken 18.8 percent of GDP—a level that is still higher than 40 of the last 50 years. There are several reasons why taxes should be reduced.

1. It will be tempting for Congress and the President (regardless of party) to spend the surpluses. Given the current structure of the U.S. economy and the favorable demographics that will continue until the baby boom generation starts retiring around 2010, economic growth is almost certain to generate sizeable surpluses. It will be tempting to spend the surpluses. President Clinton has already proposed $1.03 trillion in new spending initiatives. High levels of taxation that bring in more revenues will lead to more spending. But it would be a mistake to follow this course. Big government leads to slower growth, so spending increases financed by the surpluses of the next decade would retard future growth.

2. A tax cut is an insurance policy against a future recession. Critics of a tax cut argue that future surpluses will be sharply reduced or even eliminated if the economy goes into a recession. The projected surpluses are based on a modest long-term annual growth rate (2.5 percent a year), which is less than the decade average achieved during the 1960s, 1970s, 1980s, and the 1990s so far. The actual growth rate during the next decade is far more likely to exceed 2.5 percent than it is to fall short of it. However, suppose the economy does fall into a recession. Taxes reduce the efficiency of resource use and incentives to produce and generate income. Thus, a tax cut—particularly one that reduces the highest effective tax rates on investment income—will make a future recession both less likely to occur, and less severe if it does occur.

3. Even if only the Social Security surpluses are used to retire outstanding debt, the federal debt will fall rapidly–perhaps too rapidly. Even if just the funds in the Social Security lockbox are used to pay down debt, by the end of 2009, publicly held debt will fall from its current level of $3.6 trillion to $1.7 trillion. However, some of the publicly held debt is needed by the Federal Reserve to conduct



Sources: U.S. Census Bureau, *The Statistical History of the United States from Colonial Times to the Present; Historical Tables, Budget of the United States Government, Fiscal Year 2000;* Congressional Budget Office.

monetary policy. Assuming that the Federal Reserve's holdings of debt increase at the same rate as during the last decade, it will need $870 billion in national debt in 2009. That means that net *privately* held debt will fall from $3.1 trillion currently (40 percent of GDP) to just $826 billion in 2009.[40] Figure 6.5 shows the path of the privately held debt as a share of GDP during the last 80 years and projects the ratio for the next decade under these assumptions. *Privately held federal debt will fall to 6 percent of GDP in 2009, its lowest level since before World War I.*

Rapid retirement of debt could exert a destabilizing influence on financial markets and jeopardize the dollar's role as the world's

[40]Only privately held debt creates an interest liability for the federal government. The government both pays and receives the interest on debt held by government agencies and by the Federal Reserve (after the Federal Reserve deducts its operating expenses).

preferred reserve currency. Dollar-denominated, risk-free Treasury bills and bonds currently play an important role in financial markets. They are widely held by central banks and currency boards around the world. They are also widely held by state and local government pension funds and private funds seeking secure assets. Paying down the debt to very low levels would force holders of Treasury securities to search for other highly secure interest-earning assets, perhaps bonds denominated in euros or yen.

VI. Fiscal Policy and America's Future

With the bulk of the baby boomers in their peak earning years, income should grow rapidly and federal spending should decline as a share of the economy during the next decade. It will be important to restrain federal spending during this period because the situation will change dramatically starting around 2010. Currently, persons age 65 and over are approximately 12 percent of the U.S. population. Federal spending on health care, social security and other entitlements targeted toward the elderly consume roughly 8 percent of GDP. When the baby boomers retire between 2010 and 2025, persons 65 and over will increase to 18 percent of the total. Under current law, this factor alone will push federal spending up by more than 4 percentage points as a share of GDP by 2025.

The role of government in the provision of retirement security and health care needs to be re-evaluated. The current Social Security system discourages savings, investment, and work. It also promotes dependency. A system that placed less reliance on pay-as-you-go funding and more on investment could encourage both a higher rate of economic growth and greater financial security for elderly Americans. In recent years, Roth IRAs and similar modifications have moved us in this direction. Other options that would allow individuals to channel more of their earnings into personal retirement savings accounts should be pursued.

Currently, government involvement in health care reduces the incentive of individuals to choose among health care providers and shop for providers that supply the most value per dollar of expenditure. The current system also reduces the incentive of suppliers to economize. This perverse structure helps explain why costs of medical services have risen almost twice as fast as the general level of prices during the last three decades.

The favorable budgetary situation during the years immediately ahead may actually make it more difficult to undertake meaningful reforms in these two areas. The easy option will be to simply pour more funding into existing programs. Doing so, however, would be

shortsighted. Unless Social Security and health care are restructured, total government spending (federal, state, and local) will almost certainly rise to 40 percent of GDP when the baby boomers retire. No country has been able to sustain real growth above 2 percent a year with government spending of this magnitude. A European-style, big-government economy will lead to European-style growth, rates of just 1 percent to 1.5 percent per year. If, on the other hand, Social Security and health care are reformed in a sensible manner and government spending in other areas is restrained and reduced as a share of the economy in the decade ahead, the future of the U.S. economy is exceedingly bright.

7. Five Indefensible Features of the Tax System

As the U.S. economy heads into the next century, federal taxation will continue to be a dominant policy issue. It is not hard to understand why: the federal government will collect an enormous $1.9 trillion in taxes in 2000. Measured as a share of GDP, federal taxes now stand at a peacetime high of 21 percent, up from just 3 percent 100 years ago.

The extraction of $1.9 trillion each year from workers, retirees, business owners, consumers, savers, and investors imposes substantial costs on taxpayers over and above the revenue transferred to the government. In the long run, comprehensive tax reform could greatly reduce the harmful side effects caused by the federal tax system, benefitting taxpayers and encouraging economic growth.

Reforms can be made to both the *tax base* and *tax rates.* The tax base is the items and transactions that are taxed; the tax rate is the percentage of the tax base that the taxpayer has to pay the government. Much of the trouble with the tax code results from the overly complicated definitions of the tax base. The federal income tax code contains confusing rules regarding the "income" to be included on the numerous tax forms, while certain types of income face multiple layers of taxation. For example, corporate profits distributed to shareholders in the form of dividends are taxed at both the business level and the individual level, biasing taxpayers against investment and encouraging businesses to take on debt.

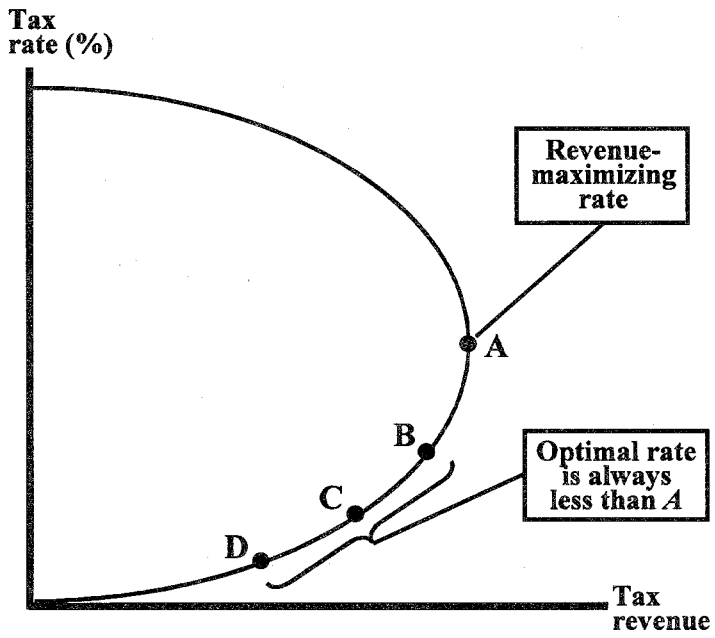
I. The Optimal and Revenue-Maximizing Tax Rates

In the case of each tax, it is important to recognize the distinction between the optimal tax rate and the revenue-maximizing rate. Taxes provide the government with revenue, but they also squeeze out productive activity. At the optimal tax rate, the government's use of the additional tax revenue provides net benefits to citizens that are sufficient to cover the cost of the productive activity squeezed out by the tax. The optimal tax rate balances the value of the lost output against the value of what might be provided with the additional revenue; it is the best rate for the economy.

In contrast, the revenue-maximizing rate ignores the cost of the lost output accompanying the higher tax rate. It focuses only on whether a higher rate will generate additional revenue.[41] The revenue derived from a tax is equal to the tax rate multiplied by the tax base. Higher tax

[41]The revenue-maximizing rate would be an optimal rate only if the government placed no value on the welfare of citizens. This may be the case for autocratic regimes.

Figure 7.1: Optimal and Revenue-Maximizing Tax Rates



rates cause the tax base to shrink. At the revenue-maximizing tax rate, the revenue reduction due to the shrinkage of the tax base exactly offsets the revenue gain due to the higher rate.

Figure 7.1 illustrates the revenue-maximizing tax rate and its relationship to the optimal tax rate. As the tax rate (measured on the vertical axis) increases, tax revenue (measured on the horizontal axis) initially expands. However, as the tax rate continues to increase, the tax base (productive activity) declines, causing revenue to increase less than proportionally. Eventually, at the revenue-maximizing rate (point A), the shrinkage in the tax base is so large that a higher tax rate fails to generate any additional revenue. Still higher rates actually reduce revenue.

Think of what is happening as higher tax rates eventually extract the maximum amount of revenue. As the revenue-maximizing rate is approached, output declines and the tax base shrinks by such a large amount that a higher rate fails to raise additional revenue. Economists refer to the loss of output accompanying the imposition of a tax as the "excess burden" of taxation. Because the excess burden is so large

relative to the revenue raised, tax rates at or near the revenue-maximizing point harm the economy. The optimal tax rate is always lower—generally substantially lower—than the revenue-maximizing rate. In Figure 7.1, the optimal rate is a point such as B, C, or D rather than point A.[42]

This analysis highlights the destructiveness of high marginal tax rates, which are the rates applicable to the additional earnings of a taxpayer. Even as high marginal rates distort prices, reduce production, and encourage wasteful tax avoidance, they also shrink the tax base so much that they generate little additional revenue. In some cases, the government would actually collect more revenue if the high marginal rates were lowered. Studies indicate marginal income tax rates greater than 40 percent fall into this category.[43] Given the destructive impact of high marginal rates on output and the efficient use of resources, governments should avoid imposing tax rates in the range above or even near the revenue-maximizing rate.

During the last 15 years, recognition of the effects of high marginal tax rates has caused many countries to reduce their highest marginal rates.[44] The United States lowered personal income tax rates during the 1980s, but has gone against the grain and pushed rates upward in the 1990s. The result has been that the tax burden has risen (see Figure 7.2). With the federal budget now running a sizeable surplus, and with much larger surpluses virtually certain in the years immediately ahead, it is an opportune time to reduce tax rates and eliminate the worst features of the current tax system.

With these basic principles in mind, the following reforms would substantially improve the fairness, economic efficiency, and simplicity of the federal tax code.

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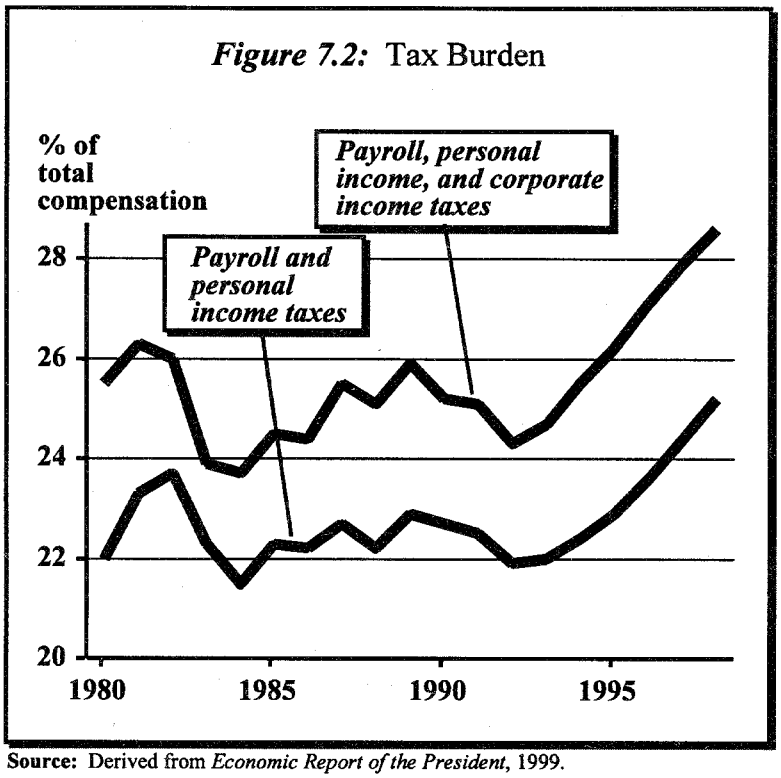
[42]For an in-depth discussion of the optimal tax rate and the revenue-maximizing rate, see James D. Gwartney and Randall G. Holcombe, *Optimal Capital Gains Policy: Lessons from the 1970s, 1980s and 1990s,* Joint Economic Committee, June 1997, especially pp. 7-8.

[43]See Dwight Lee, ed., *Taxation and the Deficit Economy* (San Francisco: Pacific Institute, 1986); Lawrence Lindsey, *The Growth Experiment: How the New Tax Policy is Transforming the U.S. Economy* (New York: Basic Books, 1989); and Martin Feldstein, *Tax Avoidance and the Deadweight Loss of the Income Tax* (Cambridge, Massachusetts: National Bureau of Economic Research, 1996). For certain types of taxes, the revenue-maximizing rate may be substantially less than 40 percent.

[44]Of 105 countries for which data were available, 59 cut their top marginal tax rates from 1990 to 1997, 28 raised them, and 18 left them unchanged. James Gwartney and Robert Lawson, *Economic Freedom of the World: 1998/1999 Interim Report* (Vancouver: Fraser Institute, 1998), pp. 54-8.



Source: Derived from *Economic Report of the President*, 1999.

II. Reform #1: Reduce the Double Taxation of Corporate Income

Corporations pay taxes on their profits. If they distribute some of the profits to shareholders in the form of dividends, the profits are subject to income tax. If corporations retain after-tax profits, the income increases their value and pushes their share prices upward. Shareholders again pay, not through the income tax but through the capital gains tax. Taxing profits at the corporate level and again at the individual level reduces the return on equity investment, constricting the pool of capital available for businesses. It also artificially biases businesses toward financing investments with debt, because interest is a deductible expense.

Consider the situation of Susan Shareholder, who owns a share in XYZ Corporation. If XYZ earns $1 per share, the amount Susan receives is reduced by the 35 percent federal tax on corporate income, leaving her with 65 cents. If XYZ distributes the remaining 65 cents in the form of a dividend, she may be taxed as much as 39.6 percent, leaving her with as little as 39 cents. In this case, the effective tax rate

on the $1 of earnings is 61 percent. Even if Susan's personal income is taxed at a 15 percent rate, the lowest rate, the effective marginal tax rate is still 45 percent (the 35 percent corporate rate plus 15 percent of the remaining 65 cents used to finance each dollar of dividends). If XYZ retains its after-tax profit and the stock price rises to reflect that, when Susan sells her share (after holding it for more than one year), her capital gain is taxed as much as 20 percent. This leaves her with 52 cents of every $1 of net income generated by XYZ. In this case, her effective tax rate is 48 percent (the 35 percent corporate rate plus 20 percent of the remaining 65 cents). Regardless of whether it was realized as dividends or capital gains, Susan's share of XYZ's profits has been taxed twice, leading to combined rates ranging from 45 percent to 61 percent. Tax rates this high could be substantially reduced without losing appreciable revenue. Lower tax rates would lead to higher rates of capital formation and faster economic growth, and may even increase tax revenue.

Taxes on dividends and capital gains at the individual level should be lowered or eliminated. Alternatively, corporations could be allowed to deduct dividends paid to shareholders just as they currently deduct interest costs. Either reform would reduce the excessive taxation of corporate income.[45]

III. Reform #2: Reduce Marginal Rates on Social Security Recipients

Americans in their 60s and 70s are increasingly healthy and energetic. Many would prefer to continue working so that they can earn more now and save more for the future.[46] Unfortunately, current tax laws strongly discourage them from doing so.

The income and payroll taxes imposed on older Americans are particularly burdensome when combined with the "earnings test," which automatically reduces Social Security benefits for recipients who earn more than a specified amount from working. Recipients age 62 to 64 lose $1 of benefits for every $2 they earn above $9,600 a year. Recipients age 65 to 69 lose $1 of benefits for every $3 they earn

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[45]Some people speak as if there is an entity called business that can be taxed independently of individuals. That is a myth; all taxes are paid by people. Even if a business collects the tax and writes the check to the government, the burden of the tax still falls on people in the form of higher product prices, lower wages, or lower returns on investments.

[46]Eugene Steuerle, Christopher Spiro, and Richard W. Johnson, "Can Americans Work Longer?" *Straight Talk on Social Security and Retirement Policy*, no. 5 (August 15, 1999), Urban Institute.

above $15,500 a year.[47] Like other workers, older workers are also subject to the payroll tax of 15.3 percent (divided equally between workers and employers), and federal, state, and local income taxes of 15 percent and up.

The combined effect of lost Social Security benefits plus payroll and income taxes means that for every $100 that persons age 62 to 64 earn, they get to keep only $25.[48] The situation is not much better for those age 65 to 69: for every $100 they earn, they keep only $41.[49]

Social Security recipients in their 60s face effective marginal tax rates of 59 to 75 percent even when their earnings are low.[50] Such high rates have no justification. The economy suffers because it is deprived of the knowledge and skills of productive workers. The elderly are harmed because the law discourages them from providing for themselves and, as a result, they become more dependent on the government. The earnings test applies only to income from work. A person can be a millionaire and still receive full Social Security

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[47]According to the Social Security Administration, Social Security recipients age 65 to 69 lost $3.9 billion in benefits in 1998 as the result of the earnings test. Eliminating the earnings test would substantially increase the supply of labor from older Americans at almost no cost to the federal budget. Leora Friedberg, "The Labor Supply Effects of the Social Security Earnings Test," National Bureau of Economic Research Working Paper W7200 (June 1999).

[48]Suppose that a Social Security recipient age 62 to 64 earns an additional $107.65 above the $9,600 threshold. Payroll taxes take $15.30, income taxes $15, and reductions in Social Security benefits $50. This is a marginal tax rate of 75 percent ($80.30 ÷ $107.65). People paying more than the 15 percent marginal income tax rate or living in areas with state and local income taxes face even higher rates. These calculations assume that the 7.65 percent of the payroll tax levied on the employer is both earned and paid by the employee. This is a valid assumption because it is a component of the employee's earnings. If the productivity of an employee is not worth the cost of direct compensation as well as the taxes accompanying employment, an employer will not hire the worker.

[49]Consider the situation for Social Security recipients age 65 to 69 with earnings above the $15,500 threshold. For each extra $107.65 they earn, payroll taxes take $15.30, income taxes $15.00 and reductions in Social Security benefits $33.33. The marginal tax rate is 59 percent ($63.63 ÷ $107.65). Those with higher incomes or living in areas with state and local income taxes face even higher rates.

[50]In some instances, the interaction of the earnings test, the payroll tax, federal income tax, and state and local income taxes leads to marginal tax rates of 100 percent or more. Such confiscatory rates completely remove the incentive to work.

benefits as long as earnings from work do not exceed the modest earnings ceilings.[51]

President Clinton persuaded the 103rd Congress to raise the tax on Social Security benefits for couples earning more than$44,000 a year and singles earning more than $34,000 a year.[52] Prior to 1993 only 50 percent of Social Security benefits were subject to income tax. This made sense because recipients had already paid income taxes on the "employee share" of the payroll tax.[53] Arguing that additional revenues were needed to balance the budget, the Clinton plan made 85 percent of Social Security benefits subject to tax. Even though the budget is now running a surplus, the tax has not been removed.

The current tax system deprives our economy of the knowledge and experience of many older workers. Two out of three Social Security recipients do not work. Of those who do work, two out of three earn less than would be the case if their earnings did not reduce their Social Security benefits.[54] As the health of older Americans continues to improve, the harmful side effects of the current system will worsen.

Several steps need to be taken to remove roadblocks limiting the economic participation of older Americans. First, the earnings test for Social Security benefits should be repealed. This might be done independently or as part of a comprehensive reform of Social Security designed to encourage personal savings, while providing recipients with greater flexibility and a more secure property right to benefits that they have earned. Second, the 1993 Clinton Social Security tax increase should be repealed. It is unfair to tax the income paid into the Social Security system and then tax the benefits funded by the payments. Third, consideration should be given to exempting workers drawing Social Security from at least the "employee share" of the payroll tax. This tax will not provide them with any additional benefits.

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[51]The structure of the current system reflects the "lump of labor" fallacy, the idea that the total number of jobs is fixed and therefore one person's employment deprives another of a job. This concept has no relevance in an economy that has created 33 million additional jobs during the last 16 years. Furthermore, as the baby boomers age, more older workers would help the economy continue to grow.

[52]The income thresholds are not indexed for inflation, so an increasing number of Social Security recipients pay income taxes on their benefits each year.

[53]This was consistent with the tax treatment of private pensions. Benefits from private plans are not subject to taxation if the beneficiaries have already paid income taxes on the premiums financing the plans.

[54]Gary and Aldona Robbins, "Retiring the Social Security Earnings Test," Institute for Policy Innovation, May 6, 1999.

Workers should be permitted to either keep this share of their payroll tax or use it to fund a privately controlled savings plan.

IV. Reform #3: Reduce or Eliminate the Estate and Gift Tax

If a taxpayer owns a small business valued in excess of $650,000 at death, the federal government taxes the heirs on the value over this amount, even if they continue operating the business. The estate tax imposes rates as high as 55 percent—the second-highest rate in the world. Effective tax rates range from 37 percent to nearly 80 percent in some instances.[55]

The estate and gift tax raises little if any net revenue, promotes widespread tax avoidance, and causes substantial harm to the economy. A recent study concludes that it inhibits capital accumulation and economic growth; threatens the survival of family businesses and depresses entrepreneurial activity; violates the tax principles of fairness, simplicity and efficiency; and adversely impacts the conservation of environmentally sensitive land.[56] All told, the costs imposed by the estate and gift tax far outweigh any benefits.

The estate and gift tax also biases people toward consumption, undermining capital formation. People who can accumulate assets choose between consuming their wealth today or saving and investing it. Wealth that is consumed cannot generate additional goods or services in the future. In contrast, when people defer consumption, capital becomes available for those seeking to generate additional goods and services in the future.

Recently, a number of states, including New York, Louisiana, Kansas, Delaware, and Iowa have enacted legislation to eliminate or significantly reduce the burden of state-imposed estate taxes. The federal government should work in the same direction by increasing the share of wealth people can leave to their heirs and eventually eliminating this tax altogether.

V. Reform #4: Eliminate the Marriage Penalty

Because the federal income tax code does not recognize that marriage is, in part, an economic partnership in which husbands and

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[55]Bruce R. Bartlett, "Why Death Taxes Should Be Abolished," National Center for Policy Analysis Policy Backgrounder 150 (August 18, 1999); Joint Committee on Taxation, U.S. Congress, "Present Law and Background Relating to Estate and Gift Taxes," JCX-298 (1998).

[56]Joint Economic Committee, "The Economics of the Estate Tax," December 1998, at <http://www.house.gov/jec/fiscal/tx-grwth/estattax/estattax.pdf>.

wives share their incomes equally, most married couples pay a marriage penalty.

The main reason for the penalty is that the standard deduction and tax brackets are not twice as much for married couples as for singles. In 1999, the standard deduction is $4,300 for singles. Married couples receive a standard deduction of $7,200, while unmarried couples receive two deductions of $4,300, for a total of $8,600.

The marriage penalty reaches all the way up the income ladder. After the standard deduction and personal exemption, a single person faces the lowest 15 percent tax rate on the next $25,750 earned. Income above that is taxed at 28 percent or more. This means two single workers get the low 15 percent rate applied to up to $51,500 in taxable income (two times $25,750). In contrast, married couples are permitted to earn only $43,050 in the 15 percent bracket.

Once it is recognized that marriage is an equal partnership, it is clear that every married couple that uses the standard deduction or itemizes deductions and has income in the 28 percent tax bracket or above incurs the marriage penalty. The only married taxpayers who avoid it are those who both itemize and are in the 15 percent bracket.

The marriage penalty is bad public policy. The family has been the central supportive institution of society for several thousand years. Governments, despite their good intentions, are ill-equipped to deal with many problems that can be ameliorated by strong families. It is vitally important that public policy not weaken the family.

The best way to eliminate the marriage penalty is to make the standard deduction and the tax brackets for married couples twice the amounts for singles.[57] Senator Kay Bailey Hutchison (R-Texas) has introduced a bill to do just that. As an alternative, she has also introduced a bill that would allow "income splitting," so that married couples could choose to be taxed as two single filers, each earning half of the couple's combined income.

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[57]This implies that the width of each tax bracket must double as taxpayers move to higher brackets.

It has been proposed that married couples have the choice of filing as singles. This would reduce the marriage penalty, but if one spouse earned all or most of the income, the tax liability of the couple would be higher than that of another couple with the *same joint income*, but a more equal division of earnings between husband and wife. Families where one spouse stays at home or works much less than the other would be penalized.

VI. Reform #5: Make Health Insurance Fully Tax Deductible for Individuals

Fringe benefits such as health care insurance are a component of employee compensation, not a "gift" from employers. Employers who offer extensive fringe benefits can attract workers with lower money wages, while those who offer few fringe benefits have to pay higher wages. In essence, employees pay for health insurance and other fringe benefits in the form of lower money wages. There are two major reasons why employers and employees find it mutually advantageous to include health care insurance and other fringe benefits in the compensation package: the ability to obtain the benefit cheaper as the result of economies of group purchase, and tax advantages. Both are important in the case of health insurance benefits.[58]

When employees in the United States receive health insurance benefits as part of their compensation package, the benefits are not taxed.[59] In contrast, families and individuals purchasing health insurance directly must do so with after-tax earnings.[60] This difference in tax treatment makes the direct purchase of health insurance more costly and reduces the competitiveness of the industry.

Consider two individuals, Smith and Brown. Both receive compensation of $1,200 per month and take the standard deduction. Smith receives $900 of taxable earnings and $300 of health insurance. If Smith is taxed at a 20 percent rate, his tax bill is $180 (20 percent of the $900 of taxable earnings). This leaves Smith with after-tax compensation of $1,020 ($720 in after-tax earnings and $300 in the form of health insurance benefits). Brown's employer does not offer health insurance. Therefore, her total compensation of $1,200 is taxable. Brown's tax bill is $240 (20 percent of $1,200), $60 more than Smith. If Brown purchases the same $300 health insurance package as Smith, she is left with $60 less than Smith merely because she purchased insurance directly rather than through an employer.

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[58]Approximately two-thirds of non-elderly adults purchase health insurance through group plans offered by their employers.

[59]Employer-provided health insurance originated during World War II as a means to escape wage controls. Because health insurance was not counted as a wage increase, it enabled employers to raise total compensation and attract additional workers.

[60]Taxpayers who itemize can deduct health insurance expenses only to the extent that their total medical expenses exceed 7.5 percent of adjusted gross income. Self-employed individuals can currently deduct only 60 percent of their family's health insurance expenses; this amount will be 70 percent in 2002 and 100 percent in 2003.

This discriminatory treatment is unfair and it should be eliminated. It is not a proper function of government to channel most workers into "one size fits all" insurance plans provided through employers. Discriminatory treatment could be eliminated either by taxing employer-provided health care as income or by making the purchase of health insurance tax deductible for individuals and families. The latter is far more politically feasible. The recent tax bill passed by Congress would have made health insurance premiums tax deductible. President Clinton vetoed the bill.[61]

VII. Concluding Thought

The taxes discussed here fall into two categories. They either impose such high marginal rates that they undermine productive activity and the wise use of resources, or they unfairly tax a socially beneficial action. The excessive taxation of nominal capital gains, particularly those phantom gains that merely reflect inflation, is also indefensible. However, because of the complexity of this issue and the unique characteristics of capital gains, the subject requires a separate section, which follows.

[61]The current structure also discriminates against small employers. Group health plans covering a large number of employees are generally more economical than those covering only a small number. As a result, large firms are more likely to offer health insurance than smaller ones. This, along with differential tax treatment, provides large firms with a competitive advantage.

8. CAPITAL GAINS, GROWTH, AND INFLATION[62]

The present tax treatment of capital gains and losses is both inequitable and a barrier to economic growth. The tax on capital gains directly affects investment decisions, the mobility and flow of risk capital from static to more dynamic situations, the ease or difficulty experienced by new ventures in obtaining capital, and thereby the strength and potential growth of the economy.

President John F. Kennedy
Special Message to the Congress on
Tax Reduction and Reform
January 24, 1963

Capital gains reflect increases in the value of resources. As such, they are central to economic growth and prosperity. Capital gains are the result of investments that have already been taxed and often occur across long intervals, making inflation an important consideration. Taxpayers also have the power to choose when (and, sometimes, whether) to sell an asset and realize gains that will trigger a capital gains tax liability. These attributes need to be kept in mind when considering the proper tax treatment of capital gains.

I. Capital Gains and Economic Growth

High capital gains taxes reduce the incentive for individuals to invest in the new equipment that fuels economic growth. While other factors obviously play a role in determining economic growth, lower capital gains tax rates encourage faster growth. This relationship suggests that some of the recent unexpected strength in the U.S. economy stems from the 1997 reduction in capital gains tax rates.

Capital gains reward risk-takers who develop and invest in new businesses that are critical to creating jobs, increasing wages, and stimulating economic growth. Entrepreneurs frequently rely on venture capital to help finance new firms, sell their companies, or make initial public offerings (IPOs). Lowering capital gains taxes raises the after-tax return, prompting more entrepreneurs to start new companies or expand current operations. Cutting the rates on capital gains taxes unleashes more venture capital to fund new firms.

[62]This section is based on a staff report from the Joint Economic Committee, "Cutting Capital Gains Tax Rates: The Right Policy for the 21st Century," August 1999, available online at <http://www.senate.gov/~jec/capgains.htm>.

Lowering capital gains tax rates and indexing gains for inflation would reduce the cost of capital. In turn, lower capital costs would encourage entrepreneurship, new businesses, and investment. Abundant capital spurs technological innovations that allow workers to produce more with less effort by providing additional capital per work hour. That situation leads to greater economic growth, lower unemployment, and higher real wages.

A recent, comprehensive ten-country study by researchers at the London Business School and Babson College demonstrates the strong connection between the pace of new business formation and the speed of economic expansion. In comparing the economic development of various nations, the study concluded that the "variation in rates of entrepreneurship may account for as much as one-third of the variation in economic growth."[63]

II. The Nature and Uniqueness of Capital Gains

Because investors often do not realize (receive money from) capital gains until years after they invest, the nominal value of the gains is influenced by inflation. If any inflation occurs during the investment period, the real gain differs from the nominal gain. If someone invests $100 in a stock and sells the stock a year later for $102, the nominal gain is 2 percent. If inflation is also 2 percent, though, the real gain is zero. If inflation is 10 percent, the investor suffers a real loss of approximately $8.

Many taxpayers have the wherewithal to delay the realization of capital gains until their tax situation is most advantageous. Taxpayers are extremely sensitive to changes in capital gains tax rates. This phenomenon explains why it is so important to measure capital gains correctly, treat them properly, and not tax them punitively.

III. The Optimal Capital Gains Tax Rate

Recall that the optimal tax rate is less than the revenue-maximizing rate. Establishing the revenue-maximizing rate sets an upper bound for

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[63]See "New Entrepreneurs Appear Vital to Healthy Economic Growth," *Wall Street Journal*, June 24, 1999, p. A1. Another recent study of the impact of capital gains taxes on venture capital concludes that "[C]apital gains tax rates have an important effect at both the industry, state, and firm-specific levels. Decreases in the capital gains tax rates are associated with greater venture capital commitments. Increases in capital gains tax rates have a consistently negative effect on contributions to the venture industry." Paul A. Gompers and Josh Lerner, "What Drives Venture Capital Fundraising?" National Bureau of Economics Working Paper 6902 (January 1999), p. 2.

the optimal rate. A study by Lawrence Lindsey, then of Harvard University and later a member of the Federal Reserve Board of Governors, estimated that the revenue-maximizing capital gains tax rate was roughly 15 percent.[64] Furthermore, evidence indicates that the 1997 cut in the capital gains rate from 28 percent to 20 percent increased tax revenue. This evidence is consistent with Lindsey's findings.

If the capital gains tax rate that maximizes revenue is approximately 15 percent, the optimal rate is lower still. Therefore, cutting the current top rate of 20 percent further would be a move toward the optimal rate. It would improve economic efficiency, increase wages, and cause greater economic expansion.[65]

IV. The Double Taxation of Investment Returns

Some people mistakenly contend that the tax system gives special preference to capital gains over labor income because the 10 percent and 20 percent tax rates on long-term capital gains are lower than the tax rates on ordinary income. This analysis neglects the fact that investors receive returns from corporate stock based on *after-tax* corporate profits. Double taxation of returns to capital invested in corporations causes effective (compound) tax rates to substantially exceed both statutory capital gains tax rates and ordinary income tax rates applied to labor income, as the previous section explained.

V. Inflation and the Taxation of Capital Gains

One of the most inequitable characteristics of the way the U.S. tax system treats capital gains is that it forces people to pay taxes on inflation. The nominal gain of an investment has two components: real

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[64]Lawrence Lindsey, "Capital Gains Taxes Under the Tax Reform Act of 1986: Revenue Estimates Under Various Assumptions," *National Tax Journal*, v. 40 (September 1987), pp. 489-504.

[65]Many economists maintain that abolishing the capital gains tax would be optimal for economic growth. Federal Reserve Chairman Alan Greenspan has supported this position. In testimony before the Senate Banking Committee on February 25, 1997, he stated, "The point I made at the Budget Committee was that if the capital gains tax were eliminated, that we would presumably, over time, see increased economic growth which would raise revenues for the personal and corporate taxes as well as the other taxes we have. The crucial issue about the capital gains tax is not its revenue-raising capacity. I think it's a very poor tax for that purpose. Indeed, its major impact is to impede entrepreneurial activity and capital formation. While all taxes impede economic growth to one extent or another, the capital gains tax is at the far end of the scale. I argued that the appropriate capital gains tax rate was zero."

appreciation and price increases that merely reflect inflation. If Susan Shareholder invests $20,000 in XYZ Corporation and over one year earns a nominal gain of 5 percent ($1,000), assuming inflation is 3 percent, then $600 of the gain reflects the increase in the general level of prices, and only $400 is the real appreciation. The real capital gain in this case is slightly less than 2 percent.[66]

The U.S. tax system penalizes capital gains by taxing nominal gains that merely reflect inflation. People in effect pay taxes on inflation, a situation that not only compounds the bias against investment but also is unfair. Taxes owed to the government should not increase because of inflation that the government itself creates. Paying taxes on inflation also depresses investment and increases inefficiency by heightening the "lock-in effect." Investors continue to hold assets when it is economically inefficient because selling them would generate high taxes on the capital gains. The lower the nominal rate of return, the greater the inflation component of the return. Investors with low rates of return suffer a greater percentage erosion through taxes of real returns than do investors with high rates of return. Indexing gains for inflation would eliminate this inequity and improve economic efficiency.

Because the calculations of capital gains are not adjusted for inflation, investors frequently pay astonishingly high effective capital gains tax rates, sometimes more than 100 percent. Even worse, often investors have to pay taxes on real capital *losses,* implying an infinite tax rate! Analyzing tax data from 1993, the Congressional Budget Office (CBO) recently found that without the current tax law restricting losses to $3,000 annually, in aggregate there were *no real capital gains, only net real capital losses.* Even with the $3,000 loss limit, inflationary gains accounted for slightly more than half of the nominal gains. The CBO concluded,

> Taking account of that loss limit, capital assets other than bonds generated net capital gains of $81.4 billion, on average, before adjustment for inflation but only $39.5 billion once that adjustment was made. Thus,

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[66]The nominal return equals the product of the real return and inflation. In this example there is a 5 percent nominal rate of return and a 3 percent inflation rate. The formula to solve for the real return is

real return = (nominal return ÷ inflation) – 1

where figures are expressed as 1 plus a decimal (so a 5 percent return becomes 1.05). In the example, the nominal return of the investment equals 1.05. The inflation component is 1.03. Dividing the former by the latter (1.05 ÷ 1.03) and subtracting 1 (for the original investment) to solve for the real return yields 0.0194, or 1.94 percent.

> since inflation-adjusted capital gains amounted to about one-half of nominal gains in 1993, the effective tax rate on inflation-adjusted gains was about twice the rate currently applied to nominal gains.[67]

Since the top capital gains tax rate in 1993 was 28 percent, most investors on average paid an effective capital gains tax rate of double that—56 percent.

VI. Indexation

Indexing gains for inflation would reduce the lock-in effect by eliminating taxes on gains that merely reflect inflation. Even with the present low inflation, real after-tax rates of return fall far below pre-tax nominal rates of return. A one-year investment made in 1997, with a nominal return of 6 percent, yielded a real, after-tax return of less than 4 percent. The combination of inflation and capital gains taxes took more than one-third of the original nominal return. Federal Reserve Board Chairman Alan Greenspan, who has advocated completely abolishing the capital gains tax, has also supported indexing capital gains. Asked to choose between lowering the tax rate and indexing gains for inflation, he responded as follows:

> Actually I'd go to indexing. And the reason I would is that it's really wrong to tax a part of a gain in assets which are attributable to a decline in the purchasing power of the currency, which is attributable to poor governmental economic policy. So for the government to tax peoples' assets which rise as a consequence of inferior actions on the part of government strikes me as most inappropriate. I would therefore say, that at a minimum, indexing capital gains at least eliminates that problem.[68]

Some critics maintain that indexing capital gains for inflation would pose administrative problems. However, Great Britain and Australia have already successfully indexed gains. Their experience illustrates that the administrative difficulties can be overcome. Indexation would eliminate the indefensible practice of taxing illusory gains. It would also increase fairness by lowering the astronomically

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[67]Congressional Budget Office (CBO), "Perspectives on The Ownership of Capital Assets and the Realization of Capital Gains," May 1997, p. 28.

[68]Alan Greenspan, testimony before the Senate Banking Committee, February 25, 1997.

high effective capital gains tax rates imposed on many investors. Additionally, the "unlocking effect" accompanying indexing would lead to more efficient use of billions of dollars of capital assets.

VII. Beneficiaries of Lower Capital Gains Rates and Indexing

The debate surrounding capital gains taxes frequently focuses on the issue of who would benefit from rate cuts. Critics of lower rates and indexing argue that these policies would almost exclusively help the "wealthy." While it is certainly true that high-income taxpayers would be better off with these changes, the argument is simplistic and incomplete. A more thorough analysis shows that for a variety of reasons, cutting rates and indexing gains for inflation would improve the welfare of citizens at all income levels.

1. Capital gains taxes and the elderly. Capital gains taxes impose heavy costs on the elderly. The elderly often incur high capital gains on their houses or other assets they have held for many years and sell to finance retirement. According to the CBO,

> Older people account for a disproportionately larger share of realized capital gains and the taxes paid on capital gains. People 65 years old and older made up 12 percent of all taxpayers in 1993, but they realized 30 percent of total net capital gains and paid 30 percent of the tax on capital gains. Taxes on capital gains accounted for 7 percent of the income taxes paid overall, but 18 percent of the taxes paid by those 65 years old and older and 5 percent of the taxes of those under 65.[69]

People 65 and older who have held assets for a long time, including during the high inflation of the 1970s, face extraordinarily high real capital gains tax rates. Inflation has a bigger impact on capital gains for the elderly than for others. As the CBO observes, "[T]he elderly are more likely to realize losses after adjustment for inflation."[70] Indexing gains for inflation would address this unfairness and provide substantial relief for the elderly. It would also provide the elderly with additional resources to address their health and retirement needs. Indexing gains for inflation would unlock billions of dollars in assets held by the elderly. In the absence of indexing gains or lowering

[69]CBO, "Perspectives," p. 3.
[70]CBO, "Perspectives," p. 31.

rates, many of the elderly will hold assets until death, at which time they may be able to pass them along to their heirs tax-free.

2. Low- and middle-income taxpayers. High effective tax rates on capital gains hurt low-income people, because investing in stocks or in businesses is one of the few ways they can accumulate wealth. High capital gains taxes punish the poor, the young, and those at the start of their careers, because these people are furthest from the sources of capital. The tax most severely hurts those trying to create wealth, not those who already have it. Therefore, cutting capital gains tax rates and indexing gains for inflation would benefit those who are not yet wealthy, but who are trying to become so.

Many people who do not have high annual incomes pay capital gains taxes. According to the CBO, "Nearly two-thirds of tax returns reporting capital gains are filed by people whose incomes are under $50,000 a year."[71]

Many people think that those in the highest income brackets would receive nearly all of the benefits of lower capital gains taxes. That is not so. Statistics of income must be used cautiously here. Somebody earning $25,000 a year in wages who sells an asset he has owned for 20 years and makes a capital gain of $100,000 is counted as earning $125,000 that year. As Figure 8.1 illustrates, people with annual incomes (excluding capital gains) under $75,000 paid nearly half of capital gains taxes. Incorporating capital gains in the income calculation gives the false impression that the numbers reflect people's normal annual incomes. Excluding capital gains reveals that people whose typical income places them in the middle brackets realize significant capital gains.[72]

Many middle-income taxpayers invest through mutual funds, which by law must make annual capital gains distributions on which investors pay taxes. In 1988 the amount that mutual funds paid in capital gains to shareholders, excluding institutional investors, was 3 percent of the total amount of capital gains, but by 1994 it had risen to 13 percent. With the continued increase in mutual fund participation, the figure now is likely to be still higher.[73] Investors in mutual funds have almost no discretion over the timing of capital gains taxes and have less ability than high-income taxpayers to rearrange their finances to minimize capital gains taxes.

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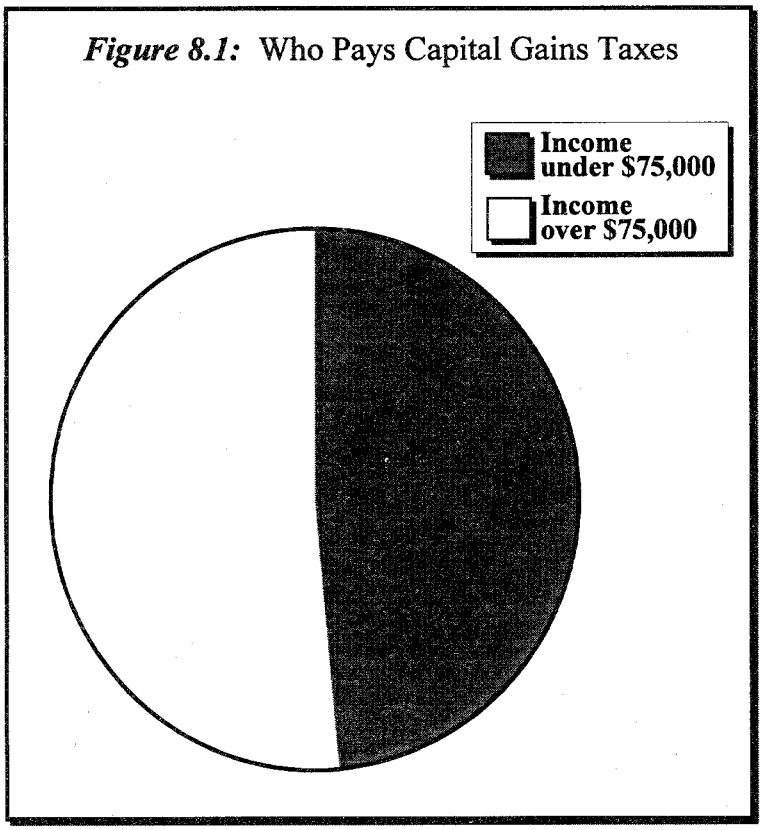
[71]CBO, "Perspectives," p. 2.

[72]The CBO acknowledges this circumstance. "The disadvantage [of using yearly IRS returns] is that annual 'snapshots' can be misleading. For example, a taxpayer of modest income who sells a business may appear to have a very high income in that year." CBO, "Perspectives," p. 10.

[73]Diana B. Henriques and Floyd Norris, "Rushing Away From Taxes?" New York *Times,* December 1, 1996.



Source: Heritage Foundation, based on IRS Public Use File, 1993.

3. High-income taxpayers. High-income taxpayers generally have the greatest flexibility and resources to minimize the capital gains taxes they pay. They can defer the realization of gains for long periods, and they are less likely than low- and middle-income taxpayers to use mutual funds. Accordingly, the share of capital gains taxes paid by high-income taxpayers tends to fall when the capital gains tax rate is high and increases when the rate is low.[74] This phenomenon is what happened following the 1987 increase in the top rate on capital gains from 20 percent to 28 percent. Measured in constant dollars, the capital gains realized by both the top 1 percent and top 5 percent of income recipients in 1994 were only 61 percent of their 1985 levels.[75]

[74]For evidence, see Congressional Budget Office, "How Capital Gains Tax Rates Affect Revenue: The Historical Evidence," March 1988, p. xiv.
[75]Gwartney and Holcombe, p. 13.

Realizations fell despite the rising incomes and stock prices of the period.

VIII. Conclusion

Economic growth is the proper focus for evaluating capital gains taxation. Rather than attempting to maximize the revenue from capital gains taxes, policy makers should seek to promote economic growth. Lower capital gains tax rates promote economic growth by reducing the cost of capital, encouraging new business start-up firms and other entrepreneurial activity, and increasing the prices of stocks and other assets. These factors are particularly important in high-technology fields.

The optimal tax rate—the rate that maximizes economic growth—is always less than the revenue-maximizing rate. Empirical evidence indicates that the revenue-maximizing rate for capital gains is approximately 15 percent. Therefore, the optimal tax rate for capital gains has to be less than 15 percent.

The current system taxes phantom gains that reflect inflation. In many cases, inflation results in tax rates that exceed 100 percent of real capital gains. These exorbitant rates are grossly unfair and exacerbate the lock-in effect. Indexing capital gains for inflation would be the single most powerful and effective policy to reduce inefficiency while increasing tax fairness.

Contrary to the conventional wisdom, the elderly, along with low- and middle-income taxpayers, would be the primary beneficiaries of lower capital gains tax rates and indexation. Because they often sell assets that they have worked their entire lives to accumulate, the elderly realize a large share of the total capital gains realizations and, therefore, pay a large share of capital gains taxes. Compared to those with higher incomes, low- and middle-income taxpayers possess less financial flexibility, and, consequently, have less ability to adjust their investments to reduce capital gains tax liabilities.

9. INTERNATIONAL FINANCIAL MARKETS

While the U.S. economy has been stable, the same has not been true of many other economies. The Clinton Administration's response to the Asian currency crisis and related crises in Russia and Brazil indicates a lack of understanding of the role played by monetary policy and flawed exchange rate regimes in generating economic instability. Furthermore, the United States is inviting future currency crises by supporting policies of the International Monetary Fund (IMF) that preserve defective monetary arrangements and have the potential to harm the American economy.

I. Causes of Recent Currency Crises

The key danger to international economic stability and growth in recent years has come from currency crises. To understand why the currency crises have happened one must understand the basic choices in exchange rate policy. There are two main issues. The first is whether to impose exchange controls, which restrict people's ability to use the domestic currency to buy foreign goods, services, and assets such as currency, stocks, and bonds. During the last two decades, many countries have eliminated exchange controls. No developed country has significant controls. Among the developing countries that attract large amounts of foreign investment, Chile and China are the most notable that impose significant controls. While exchange controls can insulate a country from currency crises, they involve the government in financial central planning—the use of controls to determine what people can buy abroad. Exchange controls also generate opportunities for corruption and other economic inefficiencies.

The second main issue in exchange rate policy is the choice of exchange rate regime. There are three general types of exchange rate regimes: fixed rates; floating rates; and pegged rates, a middle category. A fixed exchange rate is one that is held constant in terms of a foreign "anchor" currency. Under a fixed rate, maintaining the exchange rate is the only goal of monetary policy, and adequate institutional arrangements exist to guarantee the exchange rate. Examples of fixed exchange rates include dollarized systems and currency board systems. Countries with dollarized systems use a foreign currency for domestic transactions and they do not issue a domestic currency, except perhaps in the minor form of coins. The best-known dollarized system is Panama, which has used the U.S. dollar as its official currency since 1904. A currency board issues a domestic currency and maintains foreign reserves equal to 100 percent or slightly more of the monetary base (notes and coins in circulation

plus bank reserves) so as to always be in a position to preserve the exchange rate with the anchor currency. Hong Kong and Argentina are most notable among the countries with currency boards or currency board-like systems.

A floating exchange rate is one that is not held constant in terms of an anchor currency. Under a "clean" (unmanaged) float, the only goal of monetary policy is to influence domestic economic conditions — for example, to maintain domestic price stability. The exchange rate receives no attention. New Zealand is apparently the only country today that has a clean float and has maintained it for a long period. Other countries with floating exchange rates, including the United States, have "dirty" (managed) floats, under which their central banks sometimes seek to influence the exchange rate through the purchase or sale of foreign exchange, but not so often as to create a persistent conflict between the goals of maintaining the exchange rate and achieving domestic economic goals.

Pegged exchange rates and related arrangements such as target zones fall somewhere in between fixed and floating rates. Under a pegged rate, the exchange rate is kept at a constant value (or held within a specified range), but the institutional arrangements to prevent eventual devaluation are absent. Furthermore, monetary policy can be used to pursue objectives other than maintaining the pegged exchange rate. With the passage of time, this leads to conflicts, forcing a choice between devaluing the currency or sharply reducing the growth of the money supply. Politically, it is usually easier to devalue because a devaluation is completed more quickly and is more easily blamed on external forces. This also helps explain why when pegged exchange rates come under speculative attack, governments usually fail to extend them full support.

If a country is going to maintain full convertibility of its currency, it must either adopt a floating exchange rate or give up the freedom to use monetary policy for purposes other than maintaining a fixed exchange rate. A country cannot both peg its exchange rate and continue to pursue an independent monetary policy. It will only be a matter of time before conflicts arise between trying to use monetary policy to achieve various domestic goals and maintaining the peg. This has caused Milton Friedman to refer to pegged exchange rates as a time bomb. Just as a time bomb will explode, a pegged exchange rate will eventually be abandoned, usually during an economic crisis.

II. Pegged Exchange Rates and Currency Crises

The 1990s have seen five big international currency crises: those of the European Monetary System in 1992-93; Africa's CFA franc zone

in 1993-94; Mexico in 1994-95; Asia in 1997; and Russia/Brazil since then.[76] The hardest hit countries have been those whose pegged exchange rates interacted with other features making their financial systems susceptible to trouble. The countries of the European Monetary System were otherwise strong and enjoyed economic growth despite the crisis, but in Russia, for example, a weak banking system, shaky government finances, and a withdrawal of foreign investment combined to plunge the country into recession. With a different type of exchange rate, Russia would still have had many problems, but it would not have suffered the currency catastrophe of August 1998.

One alternative to a pegged exchange rate is a floating rate. Currencies with managed floats today include the U.S. dollar, the euro, the British pound, the Brazilian *real,* the Indonesian rupiah, and the Russian ruble. That short list includes three highly credible currencies and three currencies with low credibility, which is indicative of the mixed performance of floating exchange rates. The dollar, the euro, and the pound, which are all issued by developed countries, have inflation in low single digits and low interest rates to match. The *real,* the rupiah, and the ruble, which are all issued by developing countries, have recently had double-digit inflation and interest rates so high as to discourage business activity.

Developed countries have been far more successful than developing countries at maintaining good currencies under floating exchange rates. It is hard to name any developing country that has had a floating exchange rate and has been able over a long period to maintain such characteristics of a credible currency as low inflation, relatively low interest rates, and the absence of exchange controls.

Floating exchange rates sound good in theory for developing countries because they avoid problems with the balance of payments. In practice, however, they bring with them other problems that are just as bad. In particular, floating rates allow inflation to creep up to a point where it becomes difficult to reduce. Many developing countries seem trapped in an endless cycle of pegged exchange rates that eventually lead to a currency crises, followed by inflation that is difficult to control under floating exchange rates, followed by a return to pegged rates.

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[76]France, Ireland, Italy, Portugal, Spain, and the United Kingdom devalued their currencies as a result of the crisis of the European Monetary System. Finland, Norway, and Sweden, which were outside the system, also devalued. The CFA franc zone included Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Mali, Niger, Senegal, and Togo. In the Asian crisis, Indonesia, Malaysia, the Philippines, Singapore, South Korea, and Taiwan devalued their currencies, as did a few other developing countries in Asia and elsewhere.

Figure 9.1: Central Banks Devalue Often

Monetary authority	Countries	Dates	Permanent devaluations and temporary suspensions of exchange rate
Central bank	185	1668 (Sweden)-present (170+ countries)	At least 85 percent have devalued in peacetime and suspended in wartime, most several times. Devaluations less frequent before World War I.
Currency board or currency board-like	83	1849 (Mauritius)-present (12 countries)	One peacetime devaluation (Eastern Caribbean Currency Board 1976); four wartime suspensions (Argentina 1914-27; Hong Kong, Malaya, Philippines 1941-5).
Dollarization	120	before 1278 (Andorra)-present (28 countries)	Apparently none.

Source: Kurt Schuler, *Should Developing Countries Have Central Banks? Currency Quality and Monetary Systems in 155 Countries* (London: Institute of Economic Affairs, 1999), pp. 86-7.

Note: "Countries" is the number of countries ever having a system.

III. Fixed Exchange Rates Work for Developing Countries

Developing countries that have established fixed exchange rates have broken out of the cycle of pegging, devaluation, and inflation. They have done so by strengthening rather than devaluing their currencies. Establishing truly fixed exchange rates requires replacing central banking with dollarization or a currency board, because central banks generally cannot maintain fixed rates. Figure 9.1, which contains data covering several centuries, shows that the great majority of central

banks have devalued their exchange rates, while the great majority of currency boards and dollarized systems have never devalued. There is really no point in having a central bank except to be able to use it to respond to domestic economic conditions, but eventually that conflicts with a fixed exchange rate. American experience supports this view. The United States abandoned the gold standard in 1971 because a pegged exchange rate with gold conflicted with the Nixon Administration's desire to keep increasing the supply of money so as to try to avoid a recession. A pegged exchange rate is inherently highly politicized because its conflicting goals invite intervention by politicians to sort things out.

Figure 9.2 indicates that developing countries without central banks have had better currencies and higher economic growth than developing countries with central banks. Although the data of Figure 9.2 only cover the period from 1971 (when the Bretton Woods gold standard ended) to 1993, recent events and studies indicate that as a group, developing countries with central banks continue to perform worse than those without central banks.[77] In the currency crises of the 1990s, there have been no devaluations in countries with fixed exchange rates maintained by currency boards or dollarization. The currency board-like systems of Argentina and Hong Kong (which have loopholes that orthodox currency boards do not) have experienced temporarily high interest rates and even recessions, but have suffered less than some neighboring countries with pegged exchange rates and have not devalued their currencies.

No monetary system can guarantee good economic performance all by itself, but the evidence indicates that currency boards and dollarization improve the chances of success for developing countries. By making monetary policy transparent and anchoring it to a stable foreign currency, they avoid balance of payments problems and ensure low inflation. That prevents internally generated shocks caused by bad monetary policy, which frequently occur under central banking. Hence trade and investment tend to grow more steadily, making the economy less vulnerable to external shocks.

Many people are uncomfortable with the thought that central banking cannot work well in most developing countries. As an alternative to replacing central banks, they have proposed giving the central banks more political independence, to make them more like the Federal Reserve System is in relation to the U.S. Congress and the President. The hope is that those central banks will then be able to

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[77]Atish R. Ghosh, Anne-Marie Gulde, and Holger C. Wolf, "Currency Boards: The Ultimate Fix?" International Monetary Fund Working Paper 98/8 (January 1998).

Figure 9.2: Central Banking Has Performed Poorly in Most Developing Countries

	Developed countries	Developing countries with central banks	Developing countries *without* central banks
Annual growth per person, 1971-92			
Median	2.3%	1.5%	2.4%
Mean	2.0%	1.3%	2.7%
Standard deviation	2.6%	7.2%	7.5%
Ever had inflation over 20% a year, 1971-93	26%	84%	28%
Ever had inflation over 100% a year, 1971-93	0%	35%	26%*
Had currency controls in 1993	11%	89%	43%
Exchange rate depreciated against U.S. dollar, start of 1971 to end of 1993	63%**	90%	50%

Source: Kurt Schuler, *Should Developing Countries Have Central Banks? Currency Quality and Monetary Systems in 155 Countries* (London: Institute of Economic Affairs, 1996), Tables 2-6 and 11.

Notes: *All these inflations occurred in former Soviet republics that used the Russian ruble until they began issuing their own currencies, or as part of a deceleration to much lower inflation in countries that replaced central banking with other monetary systems.

**The U.S. dollar depreciated against gold, and is included among currencies that depreciated.

Data include all countries with at least 1 million people. All developed countries had central banks in this period. Data end with 1993, but more recent events and studies indicate that developing countries with central banks continue to perform worse than those without.

perform as well as the Federal Reserve. Unfortunately, studies indicate that for developing countries, making the central bank more independent has no significant effect on reducing inflation.[78] Mexico's inflation-triggering devaluation in 1994 and Russia's in 1998 both occurred under central banks that had a high degree of political independence, at least on paper. Economists are uncertain why political independence for the central bank does not reduce inflation significantly in developing countries, but puzzling as it may be, it is a brute fact that policy makers should acknowledge.

IV. A Vision for the International Financial System

Responsibility for recent currency crises rests with the affected countries. The crises arose from their mistakes in exchange rate policy, which only they can correct. Even so, the United States can offer them some help. For one thing, it can avoid imitating their mistakes. The Treasury and the Federal Reserve are correct to resist the desire of some academic economists and foreign officials to establish target exchange rate zones among the dollar, euro, and yen. Target zones are a loose form of pegging, and ultimately have the same problem of conflicts between the goal of maintaining the exchange rate and the goal of influencing domestic economic conditions.

By acting in a way that enables the U.S. economy to continue growing, the United States can provide a good market for the exports of countries that have experienced currency crises. Over the last few years the United States provides one of the few bright spots in the world economic picture. The large trade deficit that the United States is running is not a sign of weakness; rather, it reflects that our economy is stronger than the economies of our trading partners.

Encouraging developing countries to adopt better monetary policies can help ensure that the American people continue to support openness. Controversies about the "dumping" of foreign goods, such as those recently involving Russian and Brazilian steel, occur in part because large, sudden devaluations of foreign currencies can give producers in those countries short-term advantages that are not based on their underlying productivity and would not otherwise occur. Better monetary policies can reduce or eliminate such devaluations.

1. Two bad approaches: tight money and easy money. Because the Clinton Administration and most other policy makers have assumed that every country must have a central bank, countries that have suffered currency crises recently have considered their choice as

[78]Alex Cukierman, *Central Bank Strategy, Credibility, and Independence: Theory and Evidence* (Cambridge, Massachusetts: MIT Press, 1992).

being between two equally undesirable approaches: the tight-money approach favored by the International Monetary Fund (IMF) and the easy-money approach favored by many of its critics.

The IMF, supported by the Clinton Administration, has supported a tight-money approach that seeks to bring back the foreign capital whose flight contributed to the currency crisis. The tight-money approach involves avoiding default on foreign debt as much as possible; keeping the exchange rate from depreciating much further after an initial devaluation; maintaining high interest rates; and using IMF loans as stopgap funding. The main problem with the tight-money approach is that the interest rates it requires can easily exceed 30 percent a year, which degrades the balance sheets of domestic financial institutions and can intensify the capital flight it is intended to stop. Very high interest rates tend to cause deep and prolonged recessions. Indeed, Indonesia, Russia, and Brazil—three of the six most populous countries in the world and three of the IMF's biggest borrowers—have recently suffered recessions of this type.

Advocates of the easy-money approach favor keeping interest rates low, letting the currency depreciate if that is the consequence.[79] In some cases, they also seem to favor defaulting on a country's foreign debt. The main problem with the easy-money approach is that the currencies of most developing countries do not inspire confidence. If such countries keep interest rates too low they risk large-scale flight from the domestic currency, triggering massive depreciation and much higher inflation. Despite having devalued their currencies, Indonesia and Brazil continue to need interest rates above those of currency board or dollarized systems to prevent further depreciations.

Russia in 1998 took the different but still painful route of defaulting on its government debt and reimposing certain kinds of exchange controls. Exchange controls attempt to prevent capital from leaving the country. Because the tight-money approach has not worked well, exchange controls are now gaining supporters, and the IMF and its members are pondering their desirability. But exchange controls are inefficient, and over time people find ways to evade them. The government then faces a choice: reliberalize, or reinforce controls with increasingly dictatorial measures that are at odds with a market economy.

2. A third approach: financial integration. There is a third approach that avoids the high interest rates of the tight-money approach, the possibly uncontrollable currency depreciation of the easy-money approach, and exchange controls. It can be termed the

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[79]World Bank, *Global Economic Prospects 1998/99: Beyond Financial Crisis* (Washington: World Bank, 1998), pp. 87-90.

financial integration approach. It starts by asking a fundamental question the other approaches neglect: Why do people worry about flows of capital between New York and, say, Thailand, but not between New York and New Jersey? The answer is that their degrees of financial integration differ. New York and New Jersey have no exchange controls, a unified monetary policy (in fact, a common currency), and a common banking system. If $1 billion in deposits move from New York to New Jersey, it does not cause a big contraction in loans in New York and a big expansion in loans in New Jersey. An active interbank market and nationwide branch banking make most U.S. bank deposits in effect part of a huge nationwide pool. In general, the location of bank deposits does not dictate the location of bank loans: banks can lend where the opportunities for profit are greatest, even if they do not gather many deposits there. Moreover, the U.S. pool of bank deposits is well integrated into the worldwide pool for dollar lending.

Thailand, on the other hand, has exchange controls, a distinct monetary policy, and a separate banking system from New York. The Thai financial system is not well integrated with the financial system of the United States and the rest of the world. If $1 billion in deposits moves from New York to Thailand, exchange risk and lack of international branch banking tend to dictate that the resulting loans will be in Thailand. If the money moves back to New York, bank loans in Thailand tend to fall, which can be serious because the Thai banking system is so much smaller than the U.S. system.

The tight-money and easy-money approaches retain the status quo under which Thailand and other developing countries are only partly integrated into world financial markets. The exchange control variant of the easy-money approach calls for reducing the extent to which developing countries are integrated into world financial markets. In contrast, the financial integration approach calls for bringing developing countries fully into world financial markets, so that their financial relation to New York is more like New Jersey's relation.

3. Implementing the financial integration approach. Two steps are necessary to implement the financial integration approach. One is to make monetary policy much more reliable by establishing currency boards or dollarization in countries whose currencies have performed much worse than the major world currencies. Currency boards or dollarization enable a country to end exchange controls, if they are in place.

So, rather than advise developing countries to retain their central banks, the U.S. government should advise those whose central banks have performed poorly that they would be better off with currency boards or dollarization. There should be no element of arm-twisting to

end central banking, but U.S. advice should stress establishing monetary arrangements that work well instead of propping up those that perform poorly.

The other step is to end protectionism in the financial sector. Foreign banks and other financial firms should be allowed to buy local banks, to establish branch networks, and in general to compete on equal terms with locally owned financial firms. Deregulation that opens up the local financial system to foreign participation enables the financial system to become more geographically diversified. In contrast, deregulation that simply removes barriers to competition among local financial firms keeps all their eggs in the local basket, leaving them as vulnerable as ever to a national currency crisis or recession.

Through the Group of 7 (G-7), the Group of Ten (G-10), and the Group of 22 (G-22) nations, the U.S. government is working on proposals to strengthen supervision of banks and other financial institutions across the world. It will take time to implement their recommendations, which promise worthwhile incremental improvements but no giant steps forward. A quick way to bring the banking systems of many countries up to a high international standard is to open them to the infusion of knowledge and capital that foreign banks can bring.

Countries that have financial integration have suffered less than others from the Asian currency crisis and its aftershocks. A developing country well integrated into the world financial system is Panama, which uses the U.S. dollar as currency and has an extensive presence of foreign banks. Panama has not suffered at all from the problems affecting Mexico, Venezuela, and other nearby countries: interest rates have remained near U.S. levels.

Hong Kong provides additional evidence on this point. Although its currency board is not entirely orthodox and new foreign entrants are restricted from establishing branches to compete with other banks, Hong Kong is more deeply integrated with world financial markets than anyplace else in Asia. During the last few years, Hong Kong has suffered more financial problems than Panama, but far fewer than Thailand, Indonesia, or South Korea.

After many years of restricting foreign participation in their domestic financial systems, Thailand, Indonesia, and South Korea now appear to be headed in a more liberal direction. During their currency crises, the foreign banks that had already been allowed into the market were notably free of the troubles affecting domestic banks. Russia's currency crisis bankrupted many of its large banks because they were weak, domestically owned firms protected from foreign competition. In contrast, Brazil's currency crisis weakened but did not destroy its

banks in part because many are now foreign owned and can draw on their parent banks for support during difficult times.

V. The United States and the International Monetary Fund

The Clinton Administration last year received Congressional approval for an increase of $14.5 billion in the general U.S. contribution ("quota") to the IMF and $3.5 billion for an IMF emergency fund called the New Arrangements to Borrow. The first customer of the New Arrangements to Borrow was Brazil, which devalued its currency less than two months after receiving a loan. The IMF acts as a channel for some countries, mainly developed countries, to lend at below-market interest rates to developing countries. In light of the poor results of recent IMF programs, one must ask if the money the United States is contributing has been well used. In the last two years, the IMF has arranged stabilization packages for five of the most important developing countries—Thailand, Indonesia, South Korea, Russia, and Brazil. The currencies of all five depreciated sharply even after the IMF began to lend, and all went into recessions, though they are now recovering.

The effectiveness of IMF programs does not depend solely on the IMF; it also depends on the borrowing countries, whose cooperation in many cases is half-hearted. But the failure of IMF programs to quickly stabilize currencies in its biggest recent programs is symptomatic of the IMF's loss of focus. The organization was established in 1945 to support the Bretton Woods gold standard. The IMF's focus was on helping member countries experiencing exchange rate problems to avoid or soften the impact of devaluations. The breakdown of the Bretton Woods system in 1971 stripped the IMF of its original role and left it searching for a new one. After some conflict, it eventually settled into an agreement with its sister organization the World Bank to concentrate on near-term economic stabilization, leaving the World Bank to concentrate on longer-term structural economic adjustment.

1. The IMF has gotten in over its head. Especially in its current programs in Thailand, Indonesia, and South Korea, the IMF has moved far beyond its traditional concern with exchange rate problems to comprehensive involvement in the economy. It has told the governments of those countries to close banks, stop subsidizing industries, open up the clove trade, and so on.[80] The countries borrowing from the IMF have agreed to its conditions voluntarily, in the sense that they could have chosen not to borrow if they disliked the

[80]Details of the programs can be found on the IMF's Web site, <http://www.imf.org>.

conditions. But the conditions attached to some of the recent big IMF programs are broad, vague attempts to solve every economic problem at once—something the IMF lacks the expertise to do.

The IMF and the Clinton Administration have defended the IMF's comprehensive involvement by claiming that the crises in Thailand, Indonesia, and South Korea were mainly deep structural crises of the economy rather than simple currency crises.[81] If the IMF programs in those countries were obvious successes, the argument might carry some weight. But they do not appear to have been especially successful (see Figure 9.3). Thus, the position of the IMF and the Clinton Administration is dubious, to say the least. If the IMF is to be useful, it needs to match its aims with its capabilities. It should renew its focus on currency stability, which is listed as its most concrete purpose in Article I of its Articles of Agreement.

Currency stability does not mean exchange rates must be fixed, but it does imply that the IMF should stop supporting the central banks with bad records, which cause the worst currency instability. Among the five countries of the recent big IMF programs, only Thailand had a central bank with a good long-term record of currency stability (until recently). Compared to its value against the dollar at the start of 1971, the year the Bretton Woods system ended, Thailand's currency is worth roughly three-fifths as much. South Korea's is worth only about one-quarter as much as it was in 1971, Indonesia's 1/20 as much, Russia's 1/20,000 as much, and Brazil's one-trillionth as much.

2. IMF programs need a clear standard of evaluation. Although the exchange rate parities of the Bretton Woods system are long gone, there is an obvious standard for evaluating the success of IMF programs: whether the currencies of countries that receive loans from the IMF perform roughly as well as the world's major currencies (the dollar, euro, and yen). If not, currency boards or dollarization provide simple, effective ways of providing currencies that are as good as the major currencies. Without such a standard, there is no accountability, and hence no way to prevent repeated failures. The IMF has strayed so far from its original focus that its role now overlaps considerably with that of the World Bank. It is worth reconsidering whether the two organizations should be merged. Meanwhile, the U.S. government should use its voice and vote at the IMF to refocus the organization on improving monetary policy rather than on comprehensively meddling in the economies of borrower countries.

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[81] *Economic Report of the President,* 1999 (Washington: Government Printing Office, 1999), p. 246.

Figure 9.3: Data on Recent Big IMF Programs

Country	Exchange rate vs. dollar, June 30, 1997	Exchange rate at start of IMF program (month)	Most depreciated exchange rate (month)	Exchange rate, June 30, 1999	Economic growth, 1997 (actual)/ 1998 (estimated)/ 1999 (estimated)
Thailand	25.79	32.00 (8/97)	55.50 (1/98)	36.67	-0.4 / -8.0 / 1.0
Indonesia	2,350	3275 (10/97)	16,650 (6/98)	6,840	4.6 / -15.3 / -1.5
South Korea	888.10	1164 (12/97)	1,963 (12/97)	1,154	5.5 / -7.0 / 4.5
Brazil	1.08	1.20 (12/98)	2.17 (3/99)	1.79	3.2 / 0.5 / -1.0
Russia	5.78	6.21 (7/98)	26.14 (4/99)	24.32	0.7 / -5.7 / -8.3

Sources: International Monetary Fund, *World Economic Outlook,* December 1998; IMF Web site, <http://www.imf.org>; Timothy Lane, Atish R. Ghosh, Javier Hamann, Seven Phillips, Marianne Schulze-Ghattas, and Tsidi Tsikata, "IMF Supported Programs in Indonesia, Korea, and Thailand: A Preliminary Assessment" (preliminary copy, January 1999, available at IMF Web site), p. 42; Stanley Fischer, "The Asian Crisis: the Return of Growth," (speech delivered June 17, 1999, available at IMF Web site); press reports.

10. SUMMARY OF RECOMMENDATIONS

Economic growth is the key to progress and prosperity. While the stability of the U.S. economy during the last 16½ years has been exceptional, the growth rate is still below the average of the 1960s and early 1970s. Historical and international experience indicate that it is possible to raise the long-term rate of growth with appropriate policies. Throughout this report, we have analyzed various factors that influence economic growth. The following recommendations highlight the policy implications of our analysis. These recommendations will help the U.S. economy achieve its full potential and thereby create a more prosperous future for Americans.

Monetary policy

- Establish price stability as the primary long-term objective of the Federal Reserve.

Government spending

- Control the growth of federal spending and reduce it as a share of GDP.
- Reform Social Security and health care in a manner that will provide individuals with more freedom of choice and reduce their dependency on the federal government.

Trade

- Work to reduce trade barriers through the World Trade Organization and extend the North American Free Trade Agreement (NAFTA) to other countries.

Taxes

- Reduce or eliminate the double taxation of corporate income.
- Reduce marginal tax rates on the earnings of Social Security recipients by repealing the "earnings test" and eliminating the double taxation of benefits.
- Reduce or eliminate the estate and gift tax.
- Eliminate the marriage penalty.
- Lower the tax rate on capital gains and index gains for inflation, or eliminate capital gains taxes entirely.
- Make health insurance fully tax deductible for individuals.

International finance

- Recognize that in developing countries central banking has not worked well, whereas currency boards and dollarization have.
- Give programs of the International Monetary Fund a clear standard of evaluation: currency stability.
- Consider merging the International Monetary Fund and the World Bank.

This staff report was prepared by James Gwartney, Chief Economist to the Chairman, and James Carter, Chris Edwards, Angela Ritzert, Kurt Schuler, Charles D. Skipton, Robert Stein, Lawrence Whitman, and Victor Wolski, with assistance from David Landau. Contact James Gwartney (202-224-2989) with any questions or comments.

This staff report reflects the views of the authors only. These views do not necessarily reflect those of the Joint Economic Committee, its Chairman, Vice Chairman, or any of its Members.

RANKING MINORITY MEMBER'S VIEWS AND MINORITY STAFF REPORT

US Economic Prosperity: Non-Inflationary Growth, Low Unemployment and Rising Income

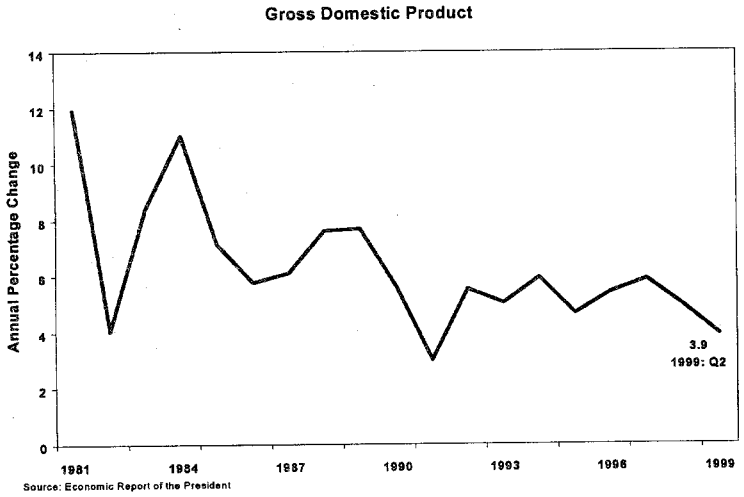
RECENT DEVELOPMENTS IN THE US ECONOMY

For the first time in over a generation, most Americans are enjoying economic prosperity. Unemployment is down, inflation is low and incomes are rising. Much of this improvement in the economy can be traced to eliminating the federal budget deficit and increasing productivity-enhancing investment.

The US economy is currently in its ninth consecutive year of economic growth, the nation's longest peace-time expansion.

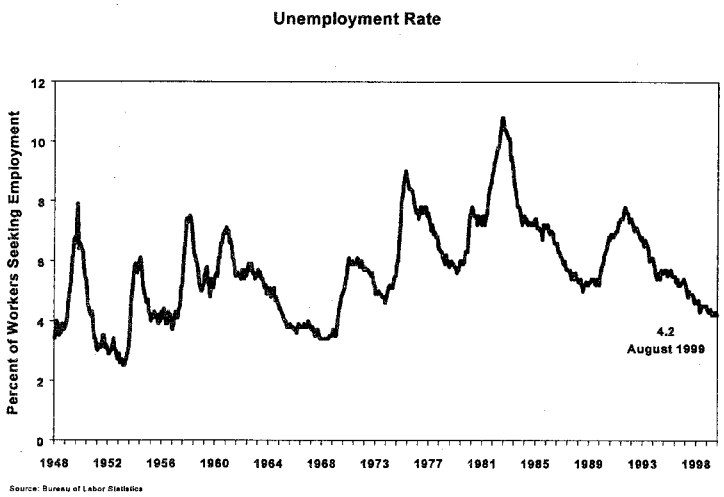
The economy has grown on average by more than 3 percent a year since 1991. There are virtually no signs of any economic slowdown on the horizon, as real GDP growth during the second quarter of 1999 was nearly 4 percent. Nine years of sustained growth has made the US economy the envy of the world.

Unemployment is at its lowest rate since the early 1970s.



The unemployment rate has been at or below 5 percent during each month since April 1997. During the first half of 1999, the unemployment rate averaged 4.3 percent, the lowest rate in more than 25 years. The unemployment rate in the United States is currently lower than that in Japan and many European countries.

Almost all groups within the economy have been enjoying improvements in unemployment. At 1.6 percent, the unemployment rate for college graduates in August 1999 remains the lowest of all groups. By contrast, the unemployment rate for high school graduates who do not go on to college is more than twice the college rate, at slightly below 3.5 percent.

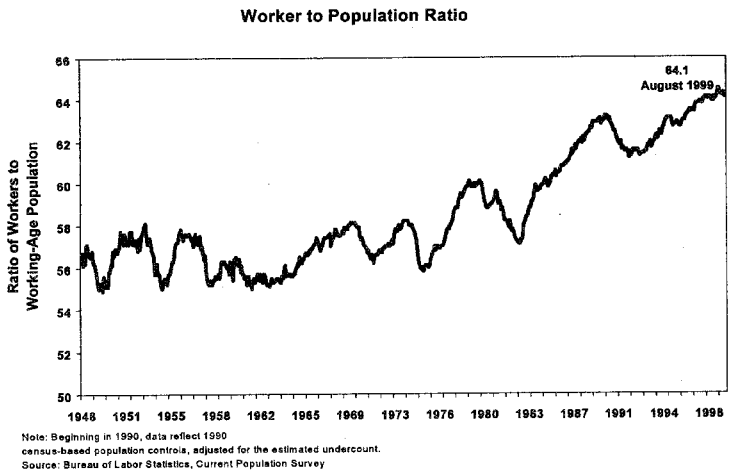


Minorities and teenagers have achieved the greatest improvements in unemployment rates. The unemployment rate for all minorities fell from 12.7 percent in 1992 to 6.8 percent in August 1999. Over the same period, the unemployment rate for African-Americans fell from 14.2 percent in 1992 to 7.8 percent in August 1999. The teenage unemployment rate fell from 20.1 percent in 1992 to 13.5 percent in August 1999. Although teenage and minority unemployment rates remain well above the national average, they have fallen to their lowest levels since the government began reporting such

rates. In general, minority and teenage unemployment rates tend to be slower in responding to economic expansions, making improvements in these unemployment rates harder to achieve. Most of the improvements in these unemployment rates have occurred over the last four years.

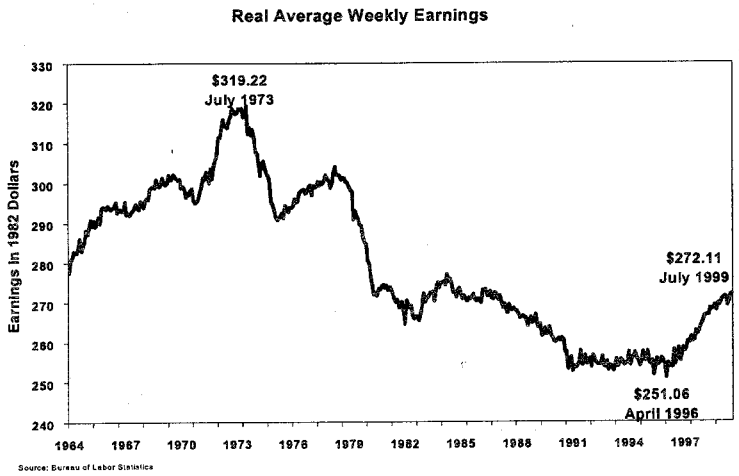
More Americans are currently working than ever before.

More than 64 percent of the working-age population are currently employed. This constitutes the highest ratio of workers to the total working-age population in recent history. The employment-population ratio for African-Americans and Hispanics were 60.3 percent and 63.3 percent, respectively, in August 1999, not much different from the national average.



After 20 years of stagnation, real average weekly earnings are rising.

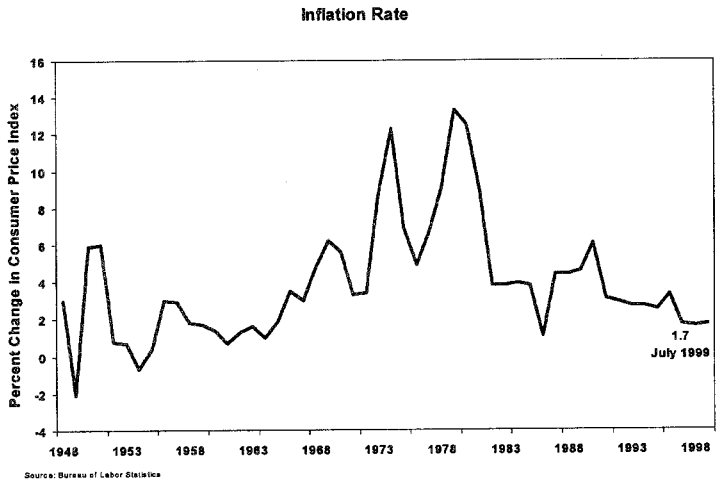
Real average weekly earnings were either falling or flat for most of the last 20 years. Weekly earnings did not begin increasing until well into the current economic recovery. Since 1996, real average weekly earnings have increased by 6 percent. Despite this recent increase, the *level* of real weekly earnings remains below its pre-1980 level.



The recent improvement in wages has not appeared to have placed upward pressure on inflation. Growing competition — originating both at home and abroad — lower producer costs and improvements in productivity continue to restrain increases in consumer prices.

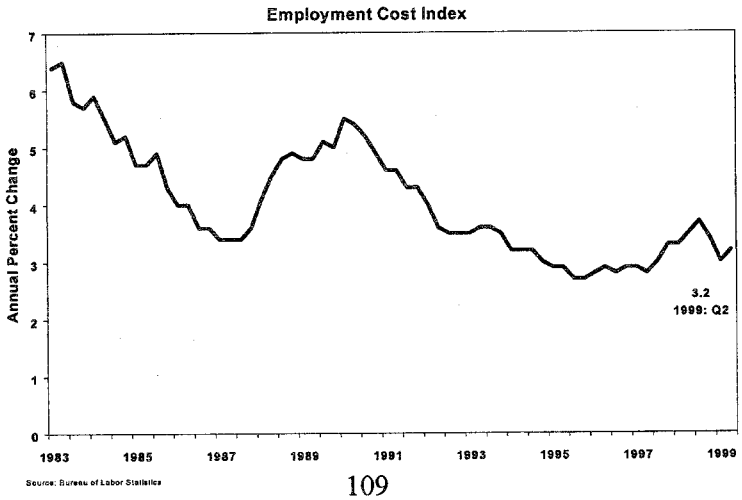
Inflation has fallen to its lowest rate in almost 30 years — despite continued declines in the unemployment rate.

During the first half of 1999, inflation rose by an annual rate of 2.2 percent. Falling commodity prices, significant reductions in transactions costs and moderate business expenses have contributed to keeping prices low. At a recent hearing before the Joint Economic Committee, Federal Reserve Chairman stated that the economy had reached "price stability." This stability makes it easier for businesses and consumers to plan ahead.



Employment costs remain low.

The Employment Cost Index (ECI), which measures the costs to employers of hiring workers, remains low. The ECI includes both the cost of wages and benefits. Low employment costs have bolstered corporate profits during the 1990s, which, in turn, have helped fuel the recent stock market surge. Corporate profits have also enabled companies to expand payrolls — by hiring more people and paying them more — and increase their investments.



Employment continues to grow.

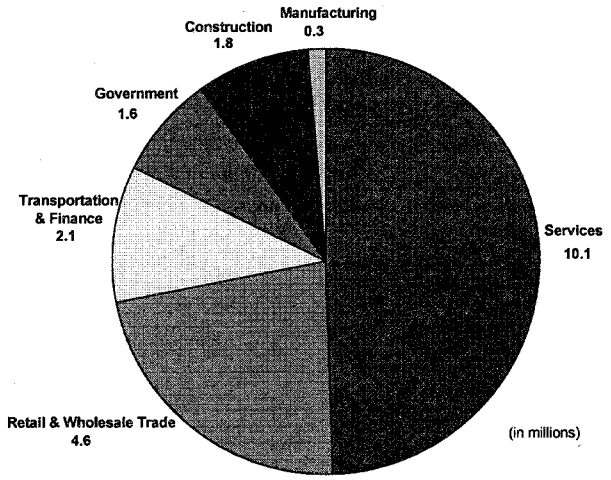
Nonagricultural employment grew by more than 20 million between 1992 and August 1999, adding, on average, approximately 2.8 million jobs annually and 230,000 jobs per month. These data reflect *net* increases in employment, representing the change in total employment, not the gross number of new jobs created or eliminated. The distribution of the close to 20 million net new jobs created since 1992 is as follows:

*First six months of 1999.
Source: Bureau of Labor Statistics

10.1 million	in traditional services
4.6 million	in wholesale and retail trade
2.1 million	in transportation and finance
1.6 million	in government (despite no increase in federal government employment)
18.4 million	in all services (91 percent of the more than 20 million jobs created)
1.8 million	in construction
280,000	in manufacturing. Manufacturing employment increased by 748,000 jobs between 1992 and May 1998.

Nearly a half million jobs have been lost since then, primarily due to the East Asian financial crisis.

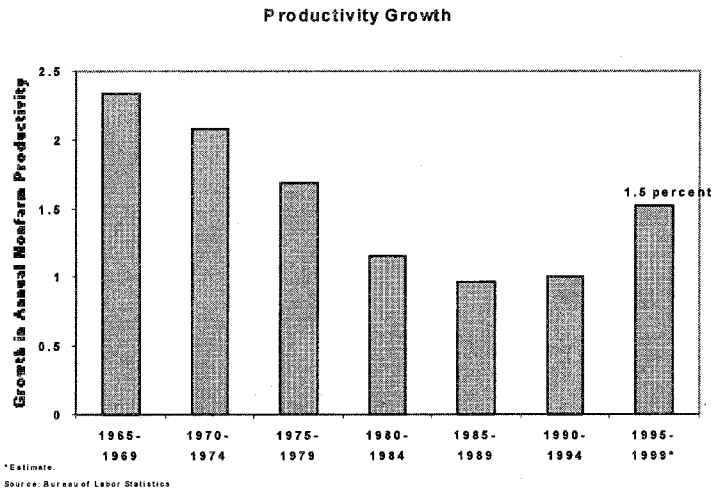
Recent improvements in productivity have enabled wages and incomes to grow.



Approximately 20 million net new jobs were created between 1992 and August 1999.

Source: Bureau of Labor Statistics

Productivity growth is the key to achieving sustainable improvements in living standards. Productivity growth reflects real improvements in the efficiency of workers and the equipment they use. These efficiency improvements must be perceived to be long-term in order to result in sustainable increases in salaries and incomes. If incomes rise faster than productivity (which was the case for much of the 1970s), inflation can result. If productivity grows faster than incomes (which was the case during much of the 1980s and early 1990s), then workers will experience real declines in their living standards.



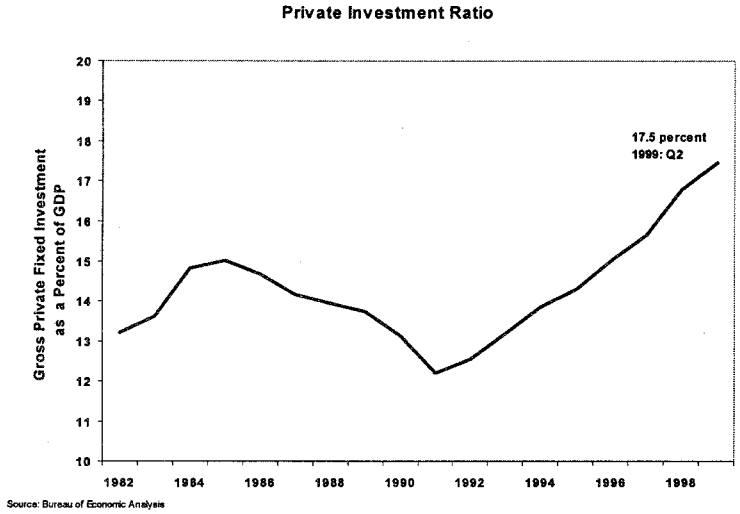
Productivity in the nonfarm business sector grew by more than 2 percent per year between 1995 and the first quarter of 1999. This represents a doubling of the productivity growth rates experienced during the 1980s. This increase in efficiency of workers and the equipment with which they work is one of the greatest achievements of the current economic expansion.

The key ingredient to improving productivity is increases in productive investments.

Total private investment as a share of GDP fell from 15 percent in the mid 1980s to close to 12 percent in 1991. The investment rate began growing in 1992, and reached more than 17 percent during the second quarter of 1999. This investment in plant, equipment, research and development is critical to raising productivity, which in turn enables companies to increase wages and salaries without fear of reigniting inflation. These investments continue to have positive impacts on productivity well into the future.

Recent investments in information technology and human capital — through education and training — have been key factors in raising US productivity over the last few years. In addition,

productivity gains have also resulted from structural changes in the labor market over the last 20 years. Faster productivity growth can be seen in quicker inventory turnover, a greater use of worker skills and higher quality controls.

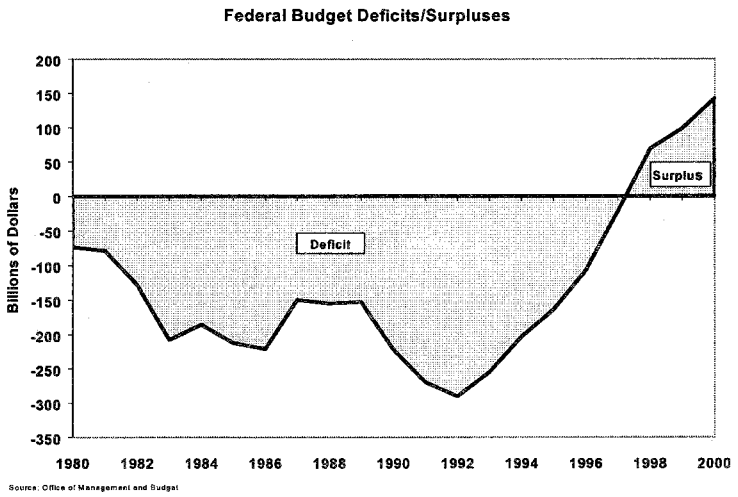


In order to achieve a higher return, it is optimal to finance domestic investment through domestic saving. There are two major components of domestic saving — personal saving and government surpluses. Since 1992, there has been a significant improvement in public saving — by eliminating the federal budget deficit — and a deterioration in personal saving.

The federal budget has moved from a deficit, which was close to 5 percent of GDP in 1992, to its current surplus of approximately 1 percent of GDP. Based on current economic assumptions, the surplus is expected to continue growing.

A combination of an increase in tax receipts — due in part to the strong economy and some changes in tax policies — and severe constraints on total federal spending have resulted in bringing the federal budget from deficit into surplus.

The Office of Management and Budget (OMB) recently projected that the federal budget surplus is expected to grow over the next decade. In addition, OMB and the Congressional Budget Office (CBO) recently revised their surplus projections, based on more optimistic economic assumptions. The most important change is an increase in projected productivity growth over the next several years. Raising the estimates for productivity growth between 1999 and 2002 from 1.3 percent to 1.6 percent, results in increasing projected economic growth from 2.2 percent to 2.5 percent annually. Stronger growth, in turn, stimulates higher tax receipts and puts less pressure on federal spending, thereby raising the projections for surpluses during this period.

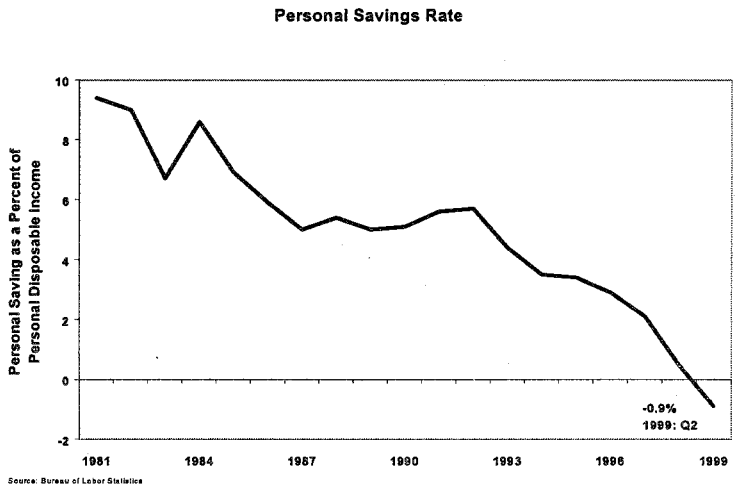


These revised surplus projections may be based on several unrealistic assumptions, including real cuts in federal spending over the next several years. These spending levels also exclude any emergency spending, e.g. disaster relief and military initiatives, as well as any future increases in defense spending. In addition, some proposals assume that some of the budget surplus will be used to reduce the public debt, thereby reducing federal interest payments on that debt.

Much of the credit for the current economic expansion can be traced back to the elimination of the budget deficit, thereby enabling monetary policy to be more flexible.

Improvements in government saving seem to have been offset by further reductions in private saving.

Americans have traditionally saved less than others around the world. The US personal saving rate has been falling since the early 1980s. In addition, by 1998, the personal saving rate turned negative. Since personal saving is the residual of personal disposable income minus personal consumption during any particular time period, a negative saving rate suggests that Americans, on average, are consuming more than they earn.

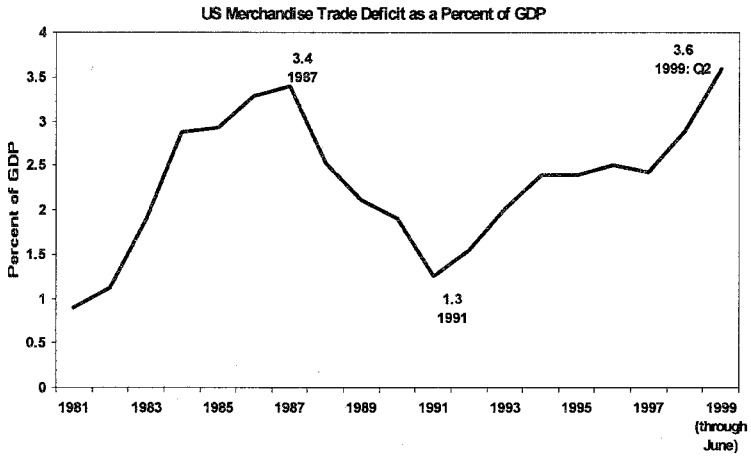


The saving rate is a little misleading, as it does not take into account the accumulation of wealth. For example, many Americans put their saving into their homes, and home-ownership is very high in the United States. The asset value of housing is not included as saving. Likewise, other investments, such as stocks and bonds, and the accumulated returns on these investments, are also not included as saving.

Regardless of these problems in defining saving, it is still important to note the precipitous decline in the saving rate over the last 20 years. Part of this decline may be explained by increased investment in assets currently not included in the definition of saving. Another factor may be the consequence of the significant shift in the federal budget from deficit to surplus over the same period. This improvement in government saving may have resulted in shifting more financial burdens on to individuals, either by paying more for services previously provided by the government, or by paying higher taxes.

The improvement in public saving — the move from budget deficit into surplus — has been more than offset by the decline in personal saving. Together, domestic saving has been inadequate to finance the strong growth in domestic investment, making it necessary for the United States to continue borrowing from abroad.

One consequence of this increasing gap in saving and investment has been the widening gap in the US current account. The single largest component of the current account deficit has been the growing merchandise trade deficit.



Source: Economic Report of the President

A combination of factors, including the East Asian financial crisis, slow growth in the industrialized countries and the strength of the US dollar, have contributed to widen the merchandise trade deficit. The merchandise trade deficit in 1998 was close to $250 billion. Initial monthly reports suggest that the deficit can be expected to reach $300 billion in 1999. In terms of percent of GDP, the trade deficit is currently as large as it was in 1987, prior to the Plaza Accord, which resulted in significant changes in exchange rates.

The growing trade deficit helps explain some of the job losses in the manufacturing sector discussed above. On the other hand, the trade deficit may be currently serving as a "safety valve," preventing the economy from over-heating and holding down inflation due to falling import prices.

Recent economic developments abroad have contributed to the current economic expansion in the United States. Increased competition at home and abroad has tended to place downward pressure on prices. Currently, US firms are reluctant to raise prices for fear of losing markets to other competitors. This has enabled falling world oil and other commodity prices to be passed on to consumers.

US economic growth has been outpacing the growth experienced in most other major industrialized economies. This is due to the strength in the US economy and continued weaknesses in the rest of the world, particularly in East Asian and Europe. On the other hand, slow growth abroad has depressed many of US industry's traditional export markets. Weakened currencies abroad have boosted US imports while making US exports more expensive. As a result, the US merchandise trade deficit has increased, reflecting a significant increase in imports and a decline in exports. This development has placed considerable pressure on the US tradeable goods sector and its workers.

Overall, there is much to celebrate in the current economic expansion. At the same time, not everyone in America has enjoyed the benefits of growing economy.

The economy seems to be split into two groups — those who are able to share in the fruits of economy-wide growth, and those for

whom it takes longer to personally realize some of the broader national economic gains. Economic statistics based on national averages tend to camouflage the plight of this second group.

For example, per capita income growth across the nation averaged 4.5 percent annually between 1991 and 1997. Despite this strong growth, approximately 500 counties — almost 16 percent of all counties — experienced no growth in average annual per capita income. By contrast, the remaining 2580 counties experienced an average per capita income growth of 5½ percent annually during the same period. The low per capita income growth ("low growth ") counties constituted more than 24 million people, or roughly 10 percent of the nation's total population. These countries tended to have a heavier reliance on farming and mining than the other countries. Despite the recent pick-up in the California economy, 29 percent of all Western counties experienced almost no per capita income growth.

As might be expected, the low growth counties had a higher incidence of poverty, with almost 700,000 families in these counties facing poverty in 1997. The low growth counties also had lower high school and college graduation rates than the higher per capita income growth counties. The low growth counties included large population centers such as Los Angeles, Fresno, Santa Barbara, Queens and Honolulu.

In addition to per capita income growth, there are regional differences in unemployment rates. In 1998, 389 counties — 13 percent of all counties — experienced unemployment rates at or above 8 percent, close to twice the national average. A little more than half of those counties — 187 of them — experienced unemployment at or above 10 percent. Less than one third of the counties which experienced low per capita income growth also had high unemployment rates.

The high unemployment counties constituted 20 million people — 7 percent of the national workforce. A sizable number, but not all of high unemployment counties were major population centers. These included two of the five New York boroughs. These counties were not regionally concentrated: 39 states had at least one high unemployment county. Yet some states do have a disproportionate

number of high unemployment counties. In 11 states, more than 10 percent of the state's workforce was found in high unemployment counties. The high unemployment counties tended to correlate with lower educational achievement and a persistence of high unemployment. (See attached paper, "Pockets of High Unemployment in a Low Unemployment Economy.")

In addition to a regional gap in per capita income and unemployment, there has also been a widening gap between income groups. Between 1989 to 1996, income growth was concentrated in those families whose earnings were in the top 20 percent of the income distribution. The remaining families experienced either no improvement or actual declines in their income. The widening income gap has resulted from income gains at the high end of the distribution and income stagnation or losses for the vast majority of the others.

One of the factors behind the declines in living standards for those on the lower end of the income distribution has been the erosion, and in some cases even elimination, of several government programs. Examples include welfare reform and the erosion in the real value of the minimum wage.

THE MINIMUM WAGE

During the past two decades, the ***real*** value of the minimum wage has been falling. This has hampered the ability of those at the lower end of the socioeconomic scale to fully share in the benefits of the recent economic prosperity. This erosion continues despite moderate increases in other wage and salary indices.

Part of the continuous erosion in the minimum wage can be explained by its legislatively-mandated structure. The minimum wage can only be adjusted by an act of Congress. Thus, the minimum wage, by its very nature, is reactive and is always trying to "catch up" to changes in prices and other wages.

The minimum wage was first instituted in 1938 to help ensure "maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers." The minimum wage is one of the country's oldest income policy tools.

It covers employees of enterprises doing at least $500,000 in business annually, as well as employees of smaller firms engaged in interstate commerce, government workers, hospital workers, school employees, and many domestic workers. In 1998, 4.4 million people earned the minimum wage, which is currently set at $5.15.

Distribution of Minimum Wage Workers by Industry 1998		
Industry	Number of Minimum Wage Workers	Percent of all Minimum Wage Workers
Retail Trade	2,334,000	52.7
Services	1,100,000	24.8
Manufacturing	299,000	6.8
Government	285,000	6.4

Most employees receiving the minimum wage work in fast food restaurants, retail establishments, and low-end service jobs (such as commercial housekeeping). More than half of those workers earning the minimum wage are employed in retail trade. Another 25 percent of minimum wage workers are employed in agriculture and 6 percent of those workers are employed in the public sector.

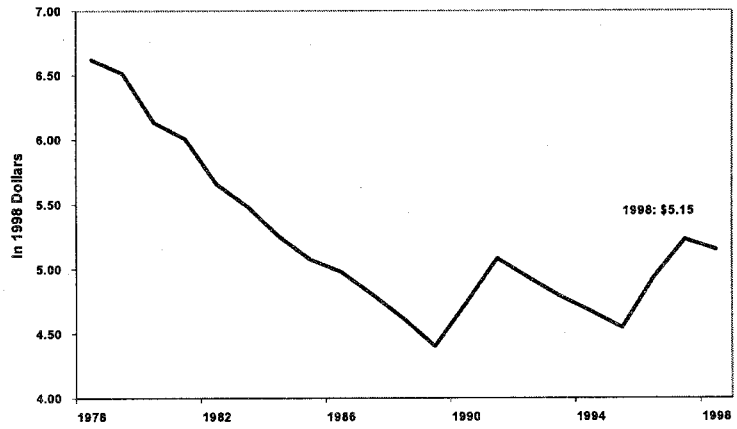
The typical minimum wage worker is an adult woman, and likely a minority. In 1998, women comprised almost two-thirds of minimum wage workers, and seventy percent of minimum wage earners were 18 years of age or older. A larger percentage of minorities earn the minimum wage, by age group, than white workers.

The most recent increase in the Federal minimum wage occurred in two steps in 1996 and 1997. On October 1, 1996 the minimum wage was increased from $4.25 to $4.75, followed eleven months later, on September 1, 1997, by an increase to $5.15. In 1996, Congress instituted a separate, lower ($4.25) sub-minimum wage for young workers, who are less than 20 years old during their first 90 days of employment with a particular employer.

After increases in the 1950s and early 1960s, the real value of the minimum wage peaked in 1968, fluctuated during the 1970s, and has, for the most part, been declining since then. The current minimum wage, $5.15, is similar to its real value in 1983 and 1984, and remains *below* its real value during the 1960s and 1970s. Over the last 20 years, the real value of the minimum wage has fallen by 22 percent. By contrast, the real average wage for all hourly workers has declined by 10 percent, or less than half that amount. Workers earning the minimum wage have been experiencing a real decline in their living standards — earning less and less for the same amount of work, and falling farther and farther behind.

The minimum wage has weakened relative to average wages in manufacturing and other private industries. At its peak in 1968, the minimum wage was about half of the average wage in manufacturing. Improvements in manufacturing wages and the continued erosion in the minimum wage through the 1990s, has resulted in the minimum wage standing currently at only approximately one-third of the average manufacturing wage.

Real Value of the Minimum Wage



Source: Bureau of Labor Statistics

The minimum wage does *not* guarantee a family income above the poverty level. Working full-time at the minimum wage, an individual would earn a gross salary of $10,300, without taxes and benefits. After taking taxes into account — subtracting the payroll tax and adding back the Earned Income Tax Credit — net income would be $10,912. This is lower than the national poverty rate for a family of one adult and one child ($11,235), one adult, two children ($13,133) and two adults, one child ($13,120). In order for an adult working full-time to earn enough to meet the federal poverty guideline for a family of two, the minimum wage would need to be set at $5.62. For a single parent with two children, the minimum wage would need to be at least $6.57.

Many states and localities have recognized that the federal minimum wage is not adequate and have instituted higher minimum wages for some or all workers. These initiatives fall into two categories, based upon whether the public body is a state or local government (county or municipality). State laws can mandate a minimum wage that is higher than the federal level, but not lower. Nine states — Alaska, California, Connecticut, Delaware, Hawaii, Massachusetts, Oregon, Washington and Vermont — and the District of Columbia have minimum wages which are higher than the federal minimum wage. These range from $5.25 in Hawaii, Massachusetts and Vermont to $6.50 in Oregon. These nine states and the District of Columbia cover one-fifth of the working-age population.

In addition, over 30 cities and counties have adopted ordinances which require those companies awarded municipal contracts, their subcontractors, and/or those receiving economic development funds to pay their employees a "living wage" set above the federal minimum. Many living wage ordinances are based upon poverty rates, adjusted for local living expenses for a family of two, three, or four, and are frequently indexed. In addition, many localities have begun adding a health care coverage component, by which firms not providing health coverage must pay their employees an additional amount. Many of the existing programs require an additional $1.00 an hour in wages be paid to those workers not covered by health insurance.

The 1996 and 1997 increases in the minimum wage have been accompanied by falling unemployment rates for teenagers and

minorities, those groups most likely affected by the minimum wage. Between 1996 and the first half of 1999, the unemployment rate for teenagers fell from 16.7 to 13.5 percent, the Africa-American unemployment rate has fell from 10.5 to 7.3 percent and the unemployment rate for other minorities fell from 8.9 to 6.8 percent. Similar patterns have also occurred in states which have recently raised their minimum wage above the federal level. With respect to living wage ordinances, 2 years following the establishment of a living wage in Baltimore, the costs of city contracts declined, wages increased, and unemployment declined.

Recent evidence flies in the face of the claims that increases in the minimum wage necessarily lead to increased unemployment. Three issues must be considered when estimating the impact of an increase in the minimum wage on employment: the prevailing minimum wage, the size of the increase and the economic environment against which the increase is taking place. As the US economy enters one of it longest expansions in recent history, there are signs of labor shortages in many parts of the country. Raising the minimum wage during a period of a tight labor market may result in more employment. In addition, firms may be more willing to train those workers employed at the minimum wage, thereby increasing productivity. In addition, as people are being moved off the welfare rolls and brought into the workforce, and other benefits are being reduced, it is becoming increasingly important that full-time employment brings enough earnings to purchase basic food, shelter, and health care.

PRESCRIPTION DRUG BENEFIT

Concerns about rising prescription drug costs, the desire to enable more seniors to take advantage of new effective medications, and arguments that proper use of medications can decrease the reliance on other, more expensive treatments have led to various initiatives to incorporate a prescription benefit into the Medicare program. As part of its plan to reform and expand Medicare, the Administration has included a significant prescription drug benefit, similar to HR 1495, Access to Prescription Medications in Medicare Act of 1999, proposed by the Committee's Ranking Member, Congressman Pete Stark, in late 1998.

Since 1980, drug expenditures have grown in the double digits, far more than the growth in total health care expenditures. In 1997 alone, drug expenditures grew by 14 percent, almost three times the growth rate of total national health care expenditures, hospital service expenditures and physician service expenditures.[1] Most of the growth in drug expenditures can be traced to a significant increase in volume, mix and availability. As the costs of prescriptions escalated and an expanded number of new medicines provided cost-effective alternatives to other medical therapies, private drug plans began covering an increasing portion of all prescription drug payments during the 1990s.

Yet those who rely the most on prescription drugs — the elderly — do not have any comprehensive prescription drug coverage, as a group. Although they comprise only 12 percent of the population, the elderly account for a third of all prescription drug use.[2] However, almost 14 million elderly — approximately one-third of the 38 million people enrolled in Medicare in 1997 — had *no* prescription drug coverage at all. An additional 4 million people voluntarily paid more and received limited prescription coverage. The rest were covered either through Medicaid or private employer-based plans.

Prescription drug costs have become a significant financial burden on the elderly, as drugs are the single largest out-of-pocket medical expense for seniors, many of whom have moderate incomes. In 1994 and 1995, 76 percent of the seniors had incomes below $30,000 and the average senior paid $558 for prescriptions. This compared to an average of $355 spent by 55 to 64 year-olds during the same period. In fact, a 1993 survey found that one in eight seniors reported having to chose between medicine and food at some point during the year.[3]

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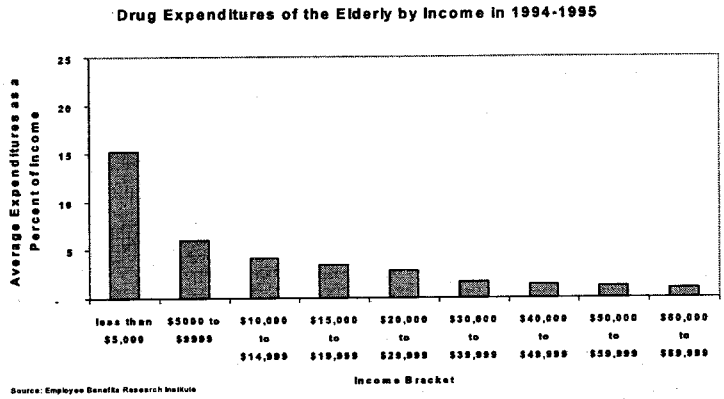
1 Employee Benefits Research Institute, Issue Brief 208, April 1999.

2 *Ibid.*

3 *American Pharmacy,* October, 1992; HCFA Office of Strategic Planning, Data from the Current Beneficiary Survey, cited in staff

Additionally, private sector benefit managers are able to negotiate lower drug prices than uninsured individuals. Consequently, Medicare beneficiaries without supplemental private insurance for prescription drugs spend twice as much on prescription drugs as their counterparts with private insurance.[4]



To address this deficit in health care coverage, the Administration's prescription drug benefit would:

- Be a voluntary plan, available for purchase by all Medicare beneficiaries, generally, on a one-time only basis;

- Have no deductible, so that all enrollees would begin benefitting from the plan with the first prescription filled;

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documents, Medicare Commission; Department of Health and Human Services, unpublished data; Committee on Government Reform and Oversight, US House of Representatives, Minority Staff Report, "Prescription Drug Pricing in the United States: Drug Companies Profit at the Expense of Older Americans," October 20, 1998.

4
Rogowski, *The Gerontologist* 37:4 (August 1997).

- Be phased-in from 2002 to 2008;
- Have a subsidized premium, estimated at $24 a month in 2002 and $44 per month when fully phased-in by 2008;
- Pay for half of the prescription costs up to a total of $5,000 total drug costs ($2,500 in Medicare payment) by 2008; and
- Be subsidized for beneficiaries with incomes below 135 percent of poverty (those individuals earning below $11,000 and couples earning below $17,000 would pay no premium or co-payments). Those people living 35 to 50 percent above the poverty rate would pay only partial premiums.

Several cost saving mechanisms would be incorporated, as well as incentives to employers, to maintain and develop retiree health coverage which include a prescription drug benefit package similar to (or better than) to the Administration's proposal. The Administration estimates that its plan would cover roughly 31 million older and disabled citizens each year. It also estimates that the plan will cost $118 billion over the next 10 years, mostly to be paid by cost savings instituted elsewhere within Medicare ($64.5 billion) and partly out of surplus budgetary revenues ($45.5 billion).

Although it is difficult to precisely predict all the potential impacts of this Medicare prescription drug proposal, several types of affects can be inferred from previous research. Some studies have shown that drugs can be used as effective substitutes for other kinds of treatment.[1] For example, proper use of medication can be expected to decrease hospital and nursing home costs.[2] According to the General Accounting Office, Medicaid's automated drug utilization system reduced adverse drug reactions and saved more than $30 million in five states.

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1 See for example, the Employee Benefit Research Institute.

2 See *New England Journal of Medicine*, March 4, 1999.

Adding a prescription drug benefit to Medicare might be expected to increase prescription drug usage but not necessarily raise overall medical costs. Financial incentives to drug manufacturers to continue searching for new medicines which might substitute for expensive existing drugs and for in-patient care will continue. In the end, a prescription drug benefit might result in healthier seniors, and curb, or even bring down, overall medical costs.

PROSPECTS FOR THE FUTURE

Recent data confirm that the US economy remains sound and there are virtually no indications for a significant slowdown in the near future. In fact, the lack of an economic slowdown has led some economists to suggest that the traditional business cycle of recessions and recoveries may be obsolete. It may be premature to come to that conclusion, but the economy's performance over the last several years — in particular the long period of non-inflationary low unemployment — clearly suggests that something new is happening to the US economy.

There are several factors which are key to the future prospects of the US economy:

Productivity is the key nutrient to economic prosperity. The more efficient the economy and our workers are, the more we can afford to enjoy higher living standards. It is also important that productivity not come at the expense of employment. Thus, our objective should be to achieve robust productivity and economic growth simultaneously. Economic growth will help re-employ those workers who might have lost their jobs due to productivity gains. Increased **investment**, both public and private, is necessary in order to achieve the dual goals of raising productivity and overall economic growth.

Between 1950 and 1970 productivity grew by 3 and 4 percent annually. This high rate of productivity growth enabled workers to enjoy considerable increases in their living standard. Since then, productivity growth has been on average between 1 and 2 percent annually. In response, workers wages have been stagnant or rising

only by a small amount. Since 1995, productivity growth has increased by more than 2 percent annually.

Many analysts link recent increases in productivity with the introduction of new technology, particularly in the information sector. It is too early to confirm or deny this assessment, but if technology is driving increases in productivity, the future could hold sustained increases in productivity as continued investment, research and development yield new products and more efficient practices.

The recent improvement in fiscal policy — moving from continued deficits to surpluses — has resulted in lower interest rates, which in turn has stimulated private investment. Increased productivity-enhancing investment is the cornerstone to achieving non-inflationary economic growth.

The key to future improvements in productivity and investment is the ability to maintain favorable conditions for private investment. These favorable conditions include avoiding a return to the government budget deficits of the 1980s and unnecessary moves to raise interest rates.

There are virtually no sighs of a resurgence of **inflation** in the economy. Increased global competition, falling commodity prices and weak currencies overseas — due to slow growth and the recent financial crisis — are helping keep prices down in the United States. The fact that low and falling unemployment has been coupled with only modest increases in wages has also served as another major factor behind low inflation in the United States. Low interest rates and significant declines in other costs of doing business have also contributed to keeping inflation low. These factors are expected to remain in place for at least the near future.

Employment — The US economy is considered to be a "jobs machine" -- having created, on net, some 20 million jobs since 1992. Many of these jobs are in sectors which have traditionally paid higher wages that in other sectors. On the other hand, many of these new jobs do not provide health care insurance coverage and pensions.

Unemployment is at its lowest rate in more than 30 years. The gradual nature of this improvement combined with moderate economic growth could keep unemployment rates low into the future. The fact that the unemployment rate has been so low for so long has provided previously low-skilled workers the opportunity to gain valuable experience that assists them throughout their working lives. The drop in unemployment has included hard hit areas and historically higher-unemployed populations including minorities, the less educated and youth. The longer this economic expansion continues, the greater the prospects for meaningful inroads into skill development and income growth for these historically disadvantaged populations.

There are three important concerns in the current economy — the falling and recently negative **saving rate**, the growing **trade deficit** and the growing **income gap** between the wealthy and the rest of society.

Americans have traditional been low savers in comparison to those living in other countries. On the other hand, more Americans own their homes than others abroad. The concern is that since the mid 1970s, the US saving rate has been falling, and this year has gone negative. In other words, on a monthly basis, Americans spend more than they earn, after taxes. Private household saving an important ingredient for domestic investment. Without a healthy home-grown pool of capital, people must borrow from overseas the capital they need to build plant and equipment, carry out research and development, and create good paying jobs. Insufficient domestic saving could lead to less investment or higher interest rates.

America's need to borrow capital from abroad has contributed to a growing deficit in merchandise trade. US exports have been hurt due to slow growth in Europe and Japan, and the financial crisis in East Asia. In addition, strong growth at home and weak currencies abroad have push up US imports. Over the first half of this year, US imports have been running at 1½ times US exports. Insufficient exports to pay for our imports further contributes to the need to borrow from abroad.

During the 1980s, the United States was borrowing from abroad to finance its ballooning budget deficits. During the 1990s, the United States has been borrowing from abroad to finance its

investment boom, since domestic saving was insufficient. Stimulating more domestic saving should thus help reduce some of the need to borrow from abroad.

In addition, the United States has a strong interest in rejuvenating economic growth around the world, particularly in those countries which tend to buy US goods and services. Economic stimulus and financial stability are key to achieving this objective. The United States must also make sure that its currency does not overvaluate, as it did in the 1980s. Maintaining exchange rate stability is also important objective.

The trade deficit has noting to do with the *level* of employment in the United States. For example, unemployment has been falling to historic low levels during the same time that the trade deficit has been rising to record highs. On the other hand, the trade deficit reflects the *composition* of employment, i.e. the pressure on the agriculture sector of the move out of manufacturing employment and into services. In some cases, this compositional change has reflected a move from high wage jobs with benefits to lower wage jobs without benefits.

This shift, together with changes in technology and the lack of skills in the workforce, has contributed to making it harder for most American workers to "get ahead." On the other hand, the tremendous gains in the stock market and other financial markets over the decade have helped upper income people increase their wealth rather substantially. The combination of both factors has resulted in a growing income gap between the small share of wealthy people and the majority of working people in this country. This growing income gap has important economic, political and social consequences which should not be denied or ignored.

One immediate way to address the growing income gap is to strengthen the safety net for those who might not be enjoying the benefits of the current economic expansion. For example, despite a recent increase, the minimum wage, after inflation, remains significantly *below* its level in the 1950s and 1960s. In addition to making up for recent declines in the minimum wage, it is important to remember that any further increases have to be protected from inflation which further erodes the real value of the minimum wage.

Improving access to health care insurance and pensions would also help the majority of Americans reduce their out-of-pocket expenses. Stemming any further widening in the income gap, let alone reducing it, does not have to mean taking wealth away from the rich. It could be done by devoting more of the recent economic gains to those people who's incomes have not been growing as much.

The United States is experiencing an unprecedented period of economic prosperity. Unemployment is at a historic low and there is no sign of a resurgence of inflation. After decades of budget deficits, the government is currently operating in surplus and the Administration is forecasting continued surpluses well into the future. Interest rates are low and investment in booming. Economic developments in the United States since 1992 are the envy of the world.

As good as this story is, it is not complete. Economic prosperity has not yet come to everyone in our society, and for most it has come following a period of prolonged economic hardship. The challenge before the nation is to both ensure the continuation of this economic prosperity and to aim at sharing its benefits more widely with all Americans.

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Congressman Pete Stark, Ranking Democrat

Pockets of High Unemployment in a Low Unemployment Economy

Robert Gibbs
July 1999

This series of papers, offered to the Democratic members of the Joint Economic Committee, addresses the major economic issues related to raising living standards for American workers and their families.

Pockets of High Unemployment in a Low Unemployment Economy

Robert Gibbs[1]

I. Introduction

The current low unemployment rate is one of the undisputed success stories of the U.S. economy. By early 1999 the U.S. unemployment rate stood near a 30-year low, at just over 4 percent. The decline in the national rate since 1992, coupled with reports of labor shortages across the board, has dampened concern about training the unemployed and debate about mismatches between worker skills and job requirements. Implicit in the current complacency about unemployment is the assumption that a low national rate translates into low rates across the country.

In fact, however, the national rate masks considerable variation in local unemployment rates (see Table 1). At one end of the spectrum, Clay County, South Dakota and McPherson County, Nebraska, experienced an average rate of 1.0 percent in 1998. Nationwide, 155 counties had rates below 2 percent and well over one-third were below 4 percent, a reflection of extremely tight labor markets for workers in those areas.

At the other end of the spectrum, 187 counties had average 1998 rates above 10 percent, led by Presidio County, Texas, at 32 percent. If the net is cast just slightly more widely to include counties with unemployment rates above 8 percent, the number of counties jumps to 389, or about 1 in 8 U.S. counties.[2] Many counties were experiencing severe unemployment at a time when the national economy was being watched suspiciously for signs of overheating. These counties all had rates in 1998 above the peak national unemployment rate following the 1990-91 recession, and so comprise an "unrecovered" group. Most of these high unemployment counties are experiencing unemployment rates at least *twice* as high as the current national average.

Does it matter that several hundred counties lie at the upper end of the unemployment rate distribution? Are these counties really important to the national economy? Yes to both questions. Counties with unemployment rates above 8 percent (henceforth called "high unemployment counties") are not merely small, isolated pockets impervious to economic

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[2] A list of these counties and their 1998 unemployment rates are shown in Appendix Table 1. The 8 percent threshold was chosen to approximate the national 1990-91 recession high of 7.6 percent. County unemployment data are drawn from the Local Area Unemployment Statistics provided by the Bureau of Labor Statistics, U.S. Department of Labor.

Table 1. U.S. County Unemployment Rates, 1998

Unemployment rate	*Number of counties*	*Percent of counties*
2 percent or lower	155	4.9
2.1 - 4 percent	1175	37.4
4.1 - 6 percent	951	30.3
6.1 - 8 percent	470	15.0
8.1 - 10 percent	202	6.4
10.1 - 15 percent	164	5.2
Higher than 15 percent	23	0.7
	3140	100.0

prosperity, but include a number of important employment centers of the United States. Collectively, high unemployment counties had a population of 20 million and a workforce of over 8 million in 1998, about 7 percent of the national total. A sizable number of high unemployment counties are major population centers, such as 2 of the 5 New York boroughs. Nor are these counties found in only a few regions: 39 states have at least 1 county with high unemployment. In 11 states, more than 10 percent of the workforce is found in high unemployment counties. In New Mexico, more than a quarter work in high unemployment areas.[3]

By definition, unemployment is the loss of *unrecoverable* human resources. The portion of a worker's life spent unemployed cannot be regained and the idle skills and abilities are lost permanently. Unemployment represents a double burden for the economy, because it not only involves the loss of productive capacity, but it also requires the disbursement of public funds to those unemployed. National effects aside, high unemployment counties face depressed demand for local private goods and services, additional demands on public services, and possibly increased social pathology. Few such counties are likely to realize the goal of providing self-sustaining work to all who need it, as embodied in current welfare reform policy. For these places, a low national unemployment rate says little about the experiences of local residents.

This paper explores the possibilities for improving conditions in high unemployment counties by identifying local and regional characteristics that affect the unemployment rate. The character of high unemployment counties is diverse in terms of location, population, and economic base. But they also share a number of important characteristics that can be sensitive to direct or indirect public policy. In brief, high unemployment counties generally have *higher* levels of the following attributes than other counties: employment in agriculture, mining, government, and retail trade; earnings per job; state unionization rates; share of residents who belong to a racial or ethnic minority; share of adults without a high school diploma; remoteness from cities; physical amenities; and location in the West. These same counties have lower levels of wholesale trade employment, lower employment growth, smaller shares of college graduates, smaller urban populations, and are less likely to be located in the Midwest, once other attributes have been controlled for.

It is important to keep in mind that for most of the 389 counties with high unemployment, high rates are persistent, indicative of a much larger problem of long-term economic and social stress. Temporarily high unemployment resulting from a plant closing, for instance, affects a significant number of counties each year, and most U.S. counties are subject to this type of event at some time or another. For the majority of high unemployment counties, however, such short-term events are an *additional* stress, and most likely a reflection of underlying conditions, such as overreliance on a declining industry. Thus, this analysis of unemployment can be read more

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[3] The eleven states and the percentage of workers living in high unemployment counties are as follows: New Mexico (29.0), West Virginia (22.0), New York (17.7), Mississippi (16.2), Alaska (16.9), Hawaii (16.7), Maryland (15.0), California (12.9), Arizona (11.2), Washington (11.5), and Oregon (11.2).

generally as an analysis of long-term economic distress. The bad news, then, is that there are few, if any, quick fixes to persistent local problems. The good news is that the geographic stability of these problems provides an identifiable, stationary target for long-term interventions.

II. How Large is the Problem of High Unemployment Areas?

The seriousness of locally high unemployment can be described by considering its magnitude and geographical distribution. That is, how many people and areas are affected by locally high unemployment, and how widespread is the phenomenon?

The 389 high unemployment counties combined had a labor force of 8.7 million people, about 7 percent of the national total in 1998. An average of 935,000 workers were unemployed in these counties each month, representing 18 percent of total unemployment in the United States. High unemployment counties come in all sizes: 31 counties have populations of more than 100,000, and 218 counties, over half, have populations of fewer than 20,000. The 25 largest high unemployment counties are shown in Table 2. At the top of the list are two of the five New York City boroughs, the only counties with populations exceeding one million. Scattered throughout are central counties of large urban areas, mostly along the East Coast or California. Small and medium-size high unemployment counties are distributed relatively evenly across the nation.

High unemployment counties are found in all four Census regions of the country. The largest number are in the South, with 217 counties, but the largest proportions of high unemployment counties within a region are in the West (25 percent), while they are relatively sparse in the Midwest (4 percent) and the Northeast (6 percent) (Table 3). The uneven regional distribution is particularly apparent when examined across the nine Census divisions. Among these, the Pacific division has the highest percentage of high unemployment counties -- 43 percent, or 72 of 166 counties. At the other extreme, the Great Plains states have just 12 high unemployment counties, 2 percent of their total, and New England has 1 high unemployment county, 1 percent of all counties in the census division.

Although found in all regions, high unemployment counties are nonetheless notable for their marked geographic clustering, as the map in Figure 1 illustrates. In the West, large portions of the Pacific Northwest, the Central Valley of California, and the Colorado Plateau are high unemployment areas. The South's high unemployment counties lie primarily in the Rio Grande Valley, the lower Mississippi Valley, especially in the Delta region, and the Appalachian Highlands. Unemployment in the Northeast and Midwest is clustered in the northern tier counties of Minnesota, Michigan, New York, and Maine. By contrast, high unemployment is unusual in the broad central section of the country, and relatively infrequent along the Atlantic coast. The fact that these clusters are geographically well-defined suggests strongly that regional characteristics are key determinants of differences in unemployment rates.

Table 2. The 25 Largest High Unemployment Counties

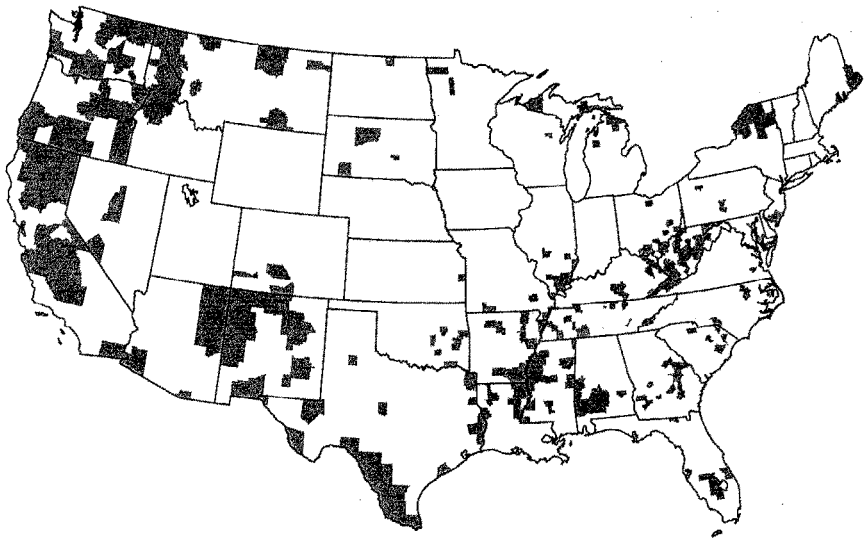
County	*Population (1997 est.)*	*Unemployment rate (1998)*
1. Kings, NY	2,240,384	9.3
2. Bronx, NY	1,187,984	9.9
3. Fresno, CA	754,396	13.9
4. El Paso, TX	701,576	10.1
5. Baltimore (city), MD	657,256	8.7
6. Kern, CA	628,605	12.0
7. San Joaquin, CA	542,504	10.6
8. District of Columbia	528,964	8.6
9. Hidalgo, TX	510,922	17.6
10. Stanislaus, CA	421,818	12.0
11. Monterey, CA	361,907	10.7
12. Tulare, CA	353,175	15.6
13. Cameron, TX	320,801	12.5
14. Atlantic, NJ	236,569	8.0
15. Yakima, WA	218,318	10.1
16. Merced, CA	196,123	15.3
17. Butte, CA	194,160	8.2
18. Webb, TX	183,219	9.4
19. St. Lucie, FL	179,559	10.7
20. Dona Ana, NM	168,470	8.9
21. Shasta, CA	163,178	8.9
22. Imperial, CA	143,706	26.0
23. Hawaii, HI	141,458	8.8
24. Cumberland, NJ	140,907	9.2
25. Yuma, AZ	130,016	26.0

Table 3. Regional Distribution of High Unemployment Counties (HUCs)

Region/Division	*Number of HUCs*	*Percent of all HUCs*	*Percent of total counties in region*
Northeast	14	4	6
Midwest	47	12	4
South	217	56	15
West	111	28	25
Total	**389**	**100**	**12**
New England	1	<1	1
Middle Atlantic	13	3	9
East North Central	35	9	8
West North Central	12	3	2
South Atlantic	79	20	13
East South Central	65	17	18
West South Central	73	19	16
Mountain	39	10	14
Pacific	72	19	43
Total	**389**	**100**	**12**

Figure 1. High Unemployment Counties in the U.S.

Rates greater than 8 percent in 1998 shown in gray



III. What Causes Geographical Variation in Unemployment Rates?

To understand why some counties have very high unemployment levels, it is helpful to understand why unemployment occurs in the first place, and how local unemployment rates are only partly related to national economic trends. In the simplest of economic models, unemployment occurs when the supply of workers exceeds the demand for those workers (the number of jobs available), and it persists until real wages fall enough to restore supply and demand equilibrium. At the national level, this *insufficient demand* for workers, which can be traced back to a weak demand for goods and services, drives the changes in unemployment rates observed during economic downturns. Contrarily, periods of economic expansion are characterized by rising labor demand brought on by growth in the national quantity of goods and services purchased.

But sustained economic expansion alone can never drive the unemployment rate to zero. Inevitably, there is a *structural* mismatch between the requirements of vacant jobs and the skills of available workers in a particular location, due to long-term shifts in product demand and production technology rather than the business cycle. Furthermore, even if overall skills and job requirements in the economy were equal, *frictional* unemployment would occur because individual workers and employers need time to find the most productive match.

Each of these types of unemployment--demand-deficient, structural, and frictional-- has a geographic dimension that helps to explain unemployment differences across local labor markets. Local unemployment rates may react very differently to a national economic slowdown or expansion based on their particular mix of industries, with some areas leading a national trend and others lagging. As noted in the introduction, the industry mix will accordingly affect the persistence of unemployment. Moreover, at any point in time, demand-deficient unemployment will persist where wage rates are higher than the long-run sustainable level, given the productivity of the workforce.

It is likely, however, that much of the geographic variation in unemployment can be attributed either to rigidities in the local economic and demographic *structure*, or to the frictional forces that prevent instantaneous matching of workers and firms, and that are also affected by local characteristics. Structural mismatch will be more severe where the local industry mix is changing rapidly, or where changes in an industry's product demand leads to sudden job creation or loss.

In addition, some areas have populations that have suffered historically from chronic unemployment, weak labor force attachment, and limited job skills. In standard economic models, migration eliminates such structural unemployment in the long-run. But these models typically fail to consider the costs of gathering information about job opportunities in other places, the complex labor supply decisions of dual-earner households, and the psychic costs of leaving local kinship and friendship networks, all of which diminish the likelihood of employment-equalizing migration.

Frictional unemployment is likely to vary geographically as well. The number of job seekers "in transition" at a given point in time is a function of job turnover, the difficulty and method of job search, and the ability to hold out for the best possible offer. These, in turn, depend on the skills and education required by the job, or held by the worker. In areas with a large proportion of high-skill jobs/workers, relatively low turnover and brief intervals between jobs push down the frictional component of unemployment.

IV. How Persistent Are High Unemployment Rates?

One line of thinking on unemployment is that there will always be a group of counties with high unemployment, but the counties in this unfortunate group will shift over time. That is, because local economies are dynamic over the long-run, the distribution of unemployment across the nation will change as local characteristics change. Economic hardship, in other words, gets spread around, much as individual households move into and out of poverty.

But in fact, the economies of places with distressed labor markets are not particularly dynamic. One way to see this is to compare the high-unemployment county rates with average unemployment rates over a number of years. Unfortunately, this comparison is not straightforward, because the variation of county rates around the average can be expected to differ during years of economic expansion and contraction. If, for example, the threshold for high unemployment is 8 percent when the U.S. average is 5 percent, what would the relevant threshold be if the national average rose to 8 percent? Merely holding the difference between the average and the threshold constant (at 3 percentage points) could be inappropriate if the variance of rates around the 8 percent average changes.

One solution is to convert county unemployment rates into standardized rates that measure how many standard deviations a given unemployment rate is from the average. A threshold of 1 standard deviation above the mean is consistent with the 8 percent high unemployment threshold in 1998. By this measure, most of the counties classified as "high unemployment" in 1998 were high unemployment counties as far back as 1979. During the 1980's, an average of 51 percent of the current high unemployment counties fell above the standardized threshold in a given year; in the early 1990's, 65 percent of these counties did so. Furthermore, three-fifths of the 389 high unemployment counties in 1998 were above the high-unemployment threshold in a majority of the 19 years available for this study, and 56 (14 percent) of these were high unemployment counties *every year* since 1979.

V. Characteristics of High Unemployment Counties

Geographic variation in the three types of unemployment discussed above arise from the economic, demographic, and natural resource characteristics of local areas. Although they are not linked in a one-to-one correspondence, the theoretical types are useful for understanding the

relationships between local attributes and unemployment rates. The key local factors to be considered can be grouped into market-related, locational, demographic, and education characteristics. In this section, the reasoning behind the expected association between these local factors and unemployment is discussed.

Market-related characteristics

The most obvious association between unemployment and other attributes of the local area is the ability of the economy to generate a sufficient number of jobs to match the labor supply. Where employment growth is high, unemployment should be lower unless there is an unusually strong influx of migrants. Labor supply growth could indeed outstrip growth in demand for a number of reasons. High wages, for example, have consistently been found in the social science literature to attract working-age migrants into a region. Their impact on job growth is less clear. If local wages are not matched by commensurate levels of productivity, long-term job growth will be sluggish.

Even where wages are not especially high, migrants may be attracted to the non-economic aspects of the local area, such as its climate and topography. Many migrants are willing to accept a lower wage and a greater uncertainty of employment in exchange for an enhanced quality of life, thus raising supply relative to demand. The attraction of physical amenities has increased relative to economic incentives for interregional migrants during the 1990's, suggesting that the association between amenities and unemployment may have increased as well (Cromartie and Nord, 1996).[4]

County unemployment rates necessarily reflect patterns of growth and decline among local industries. Counties where employment is concentrated in "old" industries, or industries with rapidly changing labor requirements, may experience high unemployment. There is evidence that a diversified economy, particularly one based on services, cushions workers against cyclical downturns and allows quicker transitions to new jobs. However, a comparison of major industry distributions by unemployment rate reveals that although high unemployment counties have slightly higher employment shares in agriculture, mining, and government (and slightly lower shares in other industries), there are no sharp differences in the mix of industries between high unemployment counties and all other counties (Table 4).[5]

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[4] The measure of physical amenities used in this report was developed by David McGranahan at the Economic Research Service, USDA. The amenities measure is a standardized index that combines attributes related to climate, elevation, topography, and proximity to water. The amenity index is scaled to a normal distribution with a mean of zero and a unit variance (see McGranahan, forthcoming, for a detailed discussion of the index).

[5] It is also possible that the use of broad industry categories masks geographic differences that would become apparent if employment were further disaggregated.

Table 4. Industry Mix in HUCs and Non-HUCs

	Percent of total employment	
Industry	*HUCs*	*Non-HUCs*
Agriculture, Forestry, Fishing	2.5	1.6
Mining	2.0	1.2
Construction	4.6	5.6
Manufacturing	12.7	13.8
Transportation, Utilities, Communications	4.0	3.9
Wholesale Trade	2.4	3.2
Retail Trade	15.3	16.2
Finance, Insurance, Real Estate	3.8	4.8
Services	21.3	22.2
Government	19.0	16.1
Total	**100.0**	**100.0**

County Typology (nonmetro only)	#	%	#	%
Farm-dependent	63	18	493	25
Mining-dependent	42	12	105	5
Manufacturing-dependent	76	22	439	23
Services-dependent	40	12	283	15
Government-dependent	59	17	196	10
Nonspecialized	66	19	422	22
Total	**346**	**100**	**1938**	**100**

For nonmetropolitan counties, an alternative measure of industry-specific influence in the local economy exists that uses income as well as employment share. A comparison of county types by industry "dependence" developed at the U.S. Department of Agriculture's Economic Research Service (ERS) shows that high unemployment counties are more likely to be dependent on the employment and income derived from publicly-funded services and mining than counties with lower unemployment rates. (Table 4) This is not surprising. Income generated from government-related employment and income transfers tends to dominate the local economy only when basic industrial activity is weak, or when other kinds of economic stress such as low income exist. Mining-dependent counties face chronic sharp boom-and-bust cycles. At any given time, a substantial number of these counties will exhibit the effects of depressed world demand for their particular mineral.

While high unemployment counties overall have a higher-than-average proportion of workers engaged in agriculture, nonmetropolitan counties with high unemployment are *less* likely to be dependent on farming than other nonmetro counties. Part of this discrepancy can be explained by differences in the way that industry dependence is measured, which is not directly related to local employment share. In addition, agricultural workers are found disproportionately in nonmetro areas, which as a group have above-average unemployment rates for a variety of other reasons. It may be, then, that the relationship between agriculture and unemployment depends on its geographic context, a point explored later in the paper.

Locational

One of the most striking features of high unemployment counties is their strongly nonmetropolitan character. Just 9 percent of the counties lie in metro areas, compared with 29 percent of non-high unemployment counties (Table 5). The 35 metropolitan high unemployment counties are nearly evenly distributed between the South and the West; none are found in the Midwest, and only a handful in the Northeast (Table 6).

High unemployment counties are particularly unusual among counties in metropolitan areas of one million people or more (2 percent, or 4 out of 179 counties), but their incidence rises among smaller metropolitan counties (Table 5). For nonmetropolitan areas, the highest incidence of high unemployment counties is in areas without large towns (10,000 or more residents) that are not adjacent to a metropolitan area. Adjacency to a metropolitan area appears to have a positive effect on employment, in part because proximity promotes economic diversification, and in part because commuting links with urban centers increase workers' abilities to search for new jobs. Adjacent counties are also often feasible residential locations for urban workers, who typically have more education and skills than their rural counterparts, and therefore spend less time looking for work.

Table 5. Urbanicity of High Unemployment Counties

Metropolitan Status	*Number of HUCs*	*Percent of all HUCs*	*Percent of all counties in status*
Metro	35	9	4
Nonmetro	354	91	15
Total	**389**	**100**	**12**
Urban influence[1]			
Metropolitan:			
Large metro	4	1	1
Small metro	31	8	6
Nonmetropolitan:			
Adjacent to large metro, city > 10,000	7	2	11
Other adjacent to large metro	8	2	7
Adjacent to small metro, city > 10,000	18	5	10
Other adjacent to small metro	98	25	16
Non-adjacent, city > 10,000	26	7	11
Non-adjacent, city 2,500-10,000	104	27	19
Other non-adjacent	92	24	18
Total	**389**	**100**	**12**

[1] "Urban influence" divides all U.S. counties into 9 mutually exclusive groups. These groups classify metro counties by the size of the metro area they are in and nonmetro counties by their adjacency to each size of metro area and by the size of their own largest city or town (see Ghelfi and Parker, 1997). "Other non-adjacent" counties are typically the smallest and most remote.

Table 6. MetroStatus by Region, High Unemployment Counties

Status		*Northeast*	*Midwest*	*South*	*West*	*Total*
Metro	#	5	0	14	16	**35**
	%	14	0	40	46	**100**
Nonmetro	#	9	47	203	95	**354**
	%	3	13	57	27	**100**

Education

The probability of being unemployed falls sharply as workers acquire more education. Adults without a high school diploma face unemployment rates four times as high as college graduates. Many of the least-educated adults are in insecure, low-quality jobs, leading to higher rates of turnover and greater vulnerability to occupational and industrial change. Areas where a large proportion of adults have low educational attainment often have trouble attracting prospective employers, or even keeping those whose main motivation for staying is the low local wage level. For these reasons, both structural and frictional unemployment tends to be elevated in counties with lower average education levels. Average years of schooling in high unemployment counties is 10.4 years vs. 11.1 years in other counties.[6]

A more telling comparison between high unemployment counties and other counties is the share of adults at either end of the educational spectrum. For instance, 13 percent of all counties in 1990 had a high proportion of college graduates (20 percent or more of the adult population) but only 1 percent of high unemployment counties did. Similarly while 65 percent of counties nationally had a high proportion of high school dropouts (25 percent or more), the rate for high unemployment counties was greater than 90 percent.

Demographic characteristics

The demographics of the labor force varies greatly from place to place. Worker characteristics that affect entry and exit from the labor force, such as age, are especially associated with geographic differences in frictional unemployment. Younger workers move into and out of jobs with greater frequency than older workers because they are less likely to assume the financial responsibility of maintaining a household, and because they are still in the job-sampling phase of their work lives. Hence counties with a greater share of young workers in the labor force should see higher unemployment rates. A similar argument could once be made for women's labor force participation, but their employment dynamics have changed dramatically since the 1970's.

The legacy of institutionalized discrimination and segregation that marks the landscape in many parts of the United States is evident in the strong association between high unemployment rates and the geographic concentration of racial and ethnic minorities. Blacks, Hispanics, and/or American Indians make up a significant share of the population (at least 25 percent) in 43 percent (169) of high unemployment counties, compared with 16 percent of all other counties (Table 7). Similarly, 28 percent of all counties with significant minority populations are also high unemployment counties. The strongest association is for American Indians -- 51 percent of counties where they form a significant presence experience high unemployment.

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[6] The average years of schooling in low-unemployment counties is 11.5 years.

Table 7. Racial and Ethnicity Characteristics in High Unemployment Counties (HUCs) and Non-HUCs

County type	*Number of HUCs*	*Percent of all HUCs*	*Percent of non-HUCs*	*Percent of low unemployment counties*	*HUCs as percent of all counties*
Black	95	24	11	5	24
Hispanic	52	13	4	2	34
Native American	24	6	1	<1	51
All minorities	169	43	16	7	28
Total	**389**	**100**	**—**	**—**	**12**

Consistency of attributes

Do all high unemployment counties possess the attributes enumerated above? Certainly not. For example, 117 high unemployment counties have average adult education levels *above* the average for all counties. The 389 high unemployment counties also include 297 that are *not* in remote, sparsely settled areas and 173 with *below-average* shares of both Black and Hispanic residents.

Even so, nearly all high unemployment counties possess at least major risk factor, and many have several. Furthermore, if educational attainment levels, presence of racial/ethnic minorities, employment growth, and urbanization/remoteness are considered simultaneously, only 24 of the 389 go against the profile of high unemployment counties for *all* of these attributes.

VI. Quantifying the Relationship Between County Characteristics and Unemployment

Although unemployment rates are the outcome of many factors working simultaneously, some factors can be expected to play a large role in explaining geographical difference in unemployment, while others will have a more marginal influence. Furthermore, many of these factors are difficult to disentangle. Rural counties, for example, tend to have fewer college graduates, and both rurality and lower education levels are likely to be associated with higher unemployment rates. In some cases, seemingly important factors may derive most of their explanatory power from their linkage with other factors--rurality's apparent effect on unemployment may work mostly through education, for instance. To separate and compare the marginal contribution of each variable, the characteristics are included together in a series of regression analyses of county unemployment rates.

The findings reported here are based on a model of unemployment in which local characteristics are related to simple county unemployment rates, which allows a quantifiable relationship to be established between specific rates and each characteristic. The analysis, then, uses local attributes to help explain a county's unemployment rate.

All of the characteristics discussed so far are considered simultaneously in the analysis. A few additional variables that have been found to influence unemployment rates in other studies are also included. These are the average *union membership rate* for the state, the state's average *AFDC payments* to families in 1995, and its average weekly *unemployment insurance payment* per recipient.

High unionization rates have historically been associated with slower economic growth and more rigid local wage scales. Both of these conditions are expected to increase unemployment. Unionization rates also vary markedly by industry type, especially within manufacturing. Because broad industry measures -- "manufacturing" rather than "textile and apparel manufacturing," for

example -- are used in the analysis, the union variable will also capture differences in the type of manufacturing or services located in a county.

The legacy of Aid to Families with Dependent Children (AFDC), which was phased out in most states by 1997, may also affect unemployment rates. The decision to look for work reflects an array of costs and benefits. Prior to the passage of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996, parents of dependent children with insufficient income were often entitled to receive AFDC. Receipt of AFDC could increase frictional unemployment by raising the lowest wage rate that job seekers were willing to accept (known as the "reservation wage"). Likewise, the higher the AFDC payment available from the state (and these varied considerably by state), the more incentive recipients had to wait for better job offers. This would have been an important consideration for recipients who typically faced a job market characterized by very low pay and often limited or no benefits. Now that AFDC has been replaced by Temporary Assistance to Needy Families, the relatively large number of recipients in AFDC-generous states who remained outside the labor force must now comply with work requirements and may raise local unemployment rates, at least temporarily. Workers in states with high unemployment insurance payments also have an increased incentive to wait for better job offers, which should in turn increase frictional unemployment.

Finally, a measure of the surrounding local labor market area has been added to capture nearby effects -- the average earnings per job for all counties in the commuting zone other than the county of interest. In many small counties, where out-commuting is common, the job market in adjoining counties may be of equal or greater significance to local residents.

Predictors of unemployment rates

While our regression analysis can test for a "significant" association between the presence or level of a local characteristic and the local unemployment rate, *controlling for the effects of all other characteristics*, there is no definitive way to measure the relative significance of these associations. Thus, several alternative measures were applied to the data.[7] **Race, education**, and **unionization rates** emerged consistently as the strongest predictors of county unemployment. Indeed as the national map in Figure 1 shows, high unemployment counties closely track areas with large proportions of Black, Hispanic, and Native American residents, and low average education levels. The association with unionization is less apparent, but undoubtedly plays a role in areas with certain types of mining and manufacturing.

Most of the other characteristics with theoretical associations to unemployment turned out to show an empirical relationship as well. As shown in Table 8, local characteristics explain more

[7] The measures included comparing variables based on their OLS parameter estimates, the standardized "beta" coefficients, and elasticities evaluated at the mean of both the independent and dependent variable.

than half the variation in unemployment rates across counties.[8] In the discussion that follows, the impacts of local attributes on the unemployment rates of *all* counties in the United States are described. More detailed results from the regression analysis are found in Table 8 and Appendix Table 1.

Market-related characteristics

A number of the market-related local characteristics are strong predictors of unemployment rates, particularly the state's **union membership** rate. With all other local characteristics held constant, a county whose state's unionization rate is a standard deviation above the average for all states (about a 5.6 percentage-point difference) has a 1 percentage-point higher unemployment rate than a county in an average state. Put differently, a 10-percentage-point higher unionization rate translates into a 1.7 percentage-point higher unemployment rate. If a county in a state with a 10 percent union membership rate has 6 percent unemployment, an otherwise identical county in a state with a 20 percent union membership rate could expect to have 7.7 percent unemployment.

Higher **employment growth** is associated with lower unemployment. Nationally, the unemployment rate in a county with employment growth one standard deviation above the mean (about 4 percent) was 0.4 percentage points lower than in a county with average growth.

Earnings per job in the *county* is a significant and positive predictor of unemployment, as high labor costs may dissuade employers from opening or expanding operations, while also raising reservation wages. County earnings also captures a portion of the impact of unionization at the substate level. At the same time, earnings in the entire *commuting zone* is a significant and negative predictor, indicating that high earnings in the area are more likely due to a high-skill, high productivity economy, which tends to spread its effects across a multicounty area. The earnings effect is relatively small, however -- a difference of $5,000 in average earnings per job in the county yields a 0.14 percentage-point difference in unemployment rates. To reduce unemployment in a county by a percentage point (say, from 8 to 7 percent), earnings per job would have to fall $36,000.

In terms of key industries, greater employment in **agriculture, manufacturing, mining, government, transportation-utilities-communications (TUC)**, and **retail trade** *boosts* unemployment, while greater employment in **wholesale trade** *decreases* unemployment. In addition to the seasonal effects of agriculture and retail trade, the workforce in these industries tends to have lower average education levels and lower occupational status for a given level of education. Retail trade tends to employ younger workers who have higher-than-average turnover rates. As noted earlier, the government sector tends to assume more importance where private

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[8] The remaining variation is due to several causes, including the inevitable omission of other factors that may influence unemployment rates, which in many cases are unquantifiable or difficult to measure. Additionally, the factors included in the model are subject to measurement error, which always reduces the explanatory power of those factors.

Table 8. Relationship Between Local Characteristics and Unemployment Rates

Characteristics	*Significance and Direction*	*Standardized effect of additional unit on unemployment rate*
Market-related		
Employment growth, 1996-97	Yes (-)	-0.13
Earnings per job, 1996	Yes (+)	0.05
State unionization rate	Yes (+)	0.35
Average state AFDC payment	No	
State unemployment insurance	No	
Percent employed in:		
Agriculture	Yes (+)	0.08
Manufacturing	Yes (+)	0.05
Mining	Yes (+)	0.05
Government	Yes (+)	0.06
Wholesale Trade	Yes (-)	-0.07
Retail Trade	Yes (+)	0.13
Transp/Utilities/Communications	Yes (+)	0.04
Finance, Insurance, Real Estate	No	
Construction	No	
Earnings per job in commuting shed	Yes (-)	- 0.04
Locational		
Midwest (compared with Northeast)	Yes (-)	-0.09
South	No	
West	Yes (+)	0.13
Small remote (compared w/large urban)	Yes (+)	0.14
Amenity index	Yes (+)	0.13
Demographic		
Percent Black	Yes (+)	0.22
Percent Hispanic	Yes (+)	0.24
Percent Native American	Yes (+)	0.14
Percent ages 16-19	Yes (+)	0.06
Human capital		
Percent with college degree	Yes (-)	-0.12
Percent with less than high school	Yes (+)	0.36

sector demand is insufficient. The relationships between unemployment and the TUC and manufacturing sectors, however, are more difficult to explain. This sector tends to be more prominent in the core of large urban areas and pays relatively high wages, but these factors are controlled for in the analysis.

Locational characteristics

Overall, the locational factors discussed earlier continue to affect local unemployment rates even after controlling for confounding influences. **Rural** and **western** locations are associated with higher unemployment, as are **high-amenity** locations. The **Midwest** continues to exert a negative influence on unemployment rates, and its effect is heightened after controlling for demographic factors. The effects of being a small remote county are particularly notable, increasing unemployment by a percentage point relative to the core counties of large metropolitan areas.

Demographic characteristics

The proportion of the population that is **Black**, **Hispanic**, or **Native American** is strongly, positively associated with unemployment rates. Controlling for all other factors, a county in which the proportion of residents who are Black is one standard deviation above the mean (23 percent vs. 8 percent) will have an unemployment rate .6 percentage points higher than a county with the mean proportion. The impact of a similar difference in the proportion of Hispanic or Native American residents would be .7 and .4 percentage points, respectively.

Human capital characteristics

The educational composition of the adult population emerges as one of the key determinants of differences in local unemployment rates. A one-standard-deviation increase in **college** completion rates (about 6 percentage points) shaves .3 percentage points off the county unemployment rate. More critical by far, however, is the population **without a high school diploma**. A similar increase in their proportion would raise the rate by about 1 point.

Relative importance of local characteristics

Stephen Marston (1985) first observed that conclusions about the relationship between unemployment rates and local characteristics are unlikely to hold in all places. That is, not only do characteristics vary from region to region, but the fundamental relationship between characteristics such as employment growth and unemployment rates can vary as well due to a

variety of structural forces.[9] Thus, otherwise well-targeted policies designed to alter a single risk factor (say, education levels) may have much greater impacts on unemployment in some regions than others.

A separate analysis of each of the four Census regions confirms that the structure of unemployment is quite different from place to place (Table 9). In the Northeast, the size of the college-educated population is a dominating influence on unemployment rates. The size of the trade sectors is also of much greater importance. Surprisingly unimportant are several characteristics that are key at the national level -- commuting zone effects, employment growth, most demographic characteristics, and the proportion of adults who do not have a high school diploma.

Another case of regional differences is the role of agriculture, which is sensitive to its production context. In the Midwest, greater agricultural employment is strongly associated with lower unemployment rates, the reverse of both the national results and of those in the West. The discrepancy in the findings for agriculture is largely explained by regional differences in the kinds of crops grown and in the way that agricultural production is integrated into the local economy. In the West, counties with substantial agricultural employment are often metropolitan. These counties rely on labor-intensive production, typically requiring large numbers of migrant or seasonal workers who are officially unemployed part of the year. Great Plains agriculture is relatively capital intensive, employing far less seasonal labor, and generating very low rates of unemployment.

Also more important in the Midwest is the role of natural amenities -- again, contrary to the West, where amenity differences are of no significance to unemployment. Meanwhile, the West is different from the Northeast in that college completion is insignificant, while high school completion is very closely tied to higher unemployment.

Finally, the South most closely mirrors the United States as a whole in the relative importance of local characteristics. Its chief differences are in the effect of local earnings and employment

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[9] A good example of this is the relative openness of the local economy. Local employment growth may have a greater impact on the unemployment rate if there are structural barriers to in-migration. Another example is the strength of internal transactional relationships between establishments in the area. Where these relationships are strong, factor productivity (including labor) is likely to be higher due to agglomeration forces, and a higher wage level is sustainable without depressing labor demand and raising unemployment.

Table 9. Regional Divergence from the National Model

Characteristics	*Northeast*	*Midwest*	*South*	*West*
Market-related				
Employment growth, 1996-97	NS	NS		
Earnings per job, 1996	NS			NS
State unionization rate		L	S	NS
Average state AFDC payment		Sign.(-)		Sign.(+)
Percent employed in:				
Agriculture	NS	(-)	NS	L
Manufacturing		Sign.(-)		Sign.(+)
Mining	NS		NS	NS
Government	NS		NS	NS
Wholesale Trade				
Retail Trade		NS		
Transp/Utilities/Communications	NS	NS	NS	NS
Finance, Insurance, Real Estate				
Construction	Sign.(-)			
Earnings per job in commuting shed	NS		NS	NS
Locational				
Small remote (compared with large urban)	NS			L
Amenity index	NS			NS
Demographic				
Percent Black	NS			NS
Percent Hispanic		NS		
Percent ages 16-19	NS	NS		NS
Human capital				
Percent with college degree	L			NS
Percent with less than high school	NS	S		

NS=Not significant at .05 level; L=Standardized estimate > by at least .1; S=Standardized estimate < by at least .1; Sign.=Now significant at .05 level; ( ) indicates change of sign.

growth, both having somewhat greater influence on the region's unemployment rates than is the case nationally.[10]

VII. Summary and Policy Implications

High unemployment, defined as a rate exceeding 8 percent, afflicted some 389 counties containing over 9 million workers during 1998. Although these high unemployment counties are found in every region of the nation, they tend to be grouped into geographic clusters. Despite their wide distribution across the country, they often share a number of economic, demographic, and locational features that distinguish them from the more prosperous areas of the United States.

High unemployment counties overall have *higher* levels of the following attributes than other counties: employment in agriculture, mining, government, the TUC sector, and retail trade; state unionization rates; earnings per job; share of residents who belong to a racial or ethnic minority; share of adults without a high school diploma; remoteness from cities; physical amenities; and location in the West. These same counties have lower levels of wholesale trade employment, lower employment growth, smaller shares of college graduates, smaller urban populations, and are less likely to be located in the Midwest, once other attributes have been controlled for.

Three-fifths of counties with high unemployment have suffered from insufficient labor demand for most of the last two decades, with unemployment rates well above the national average. This stability in *relative* unemployment rates is not surprising because many of the most important characteristics associated with high unemployment change very slowly over time. For example, the racial and ethnic mix of the local population may change rapidly in urban areas, but in rural areas, where high unemployment counties are concentrated, such changes are gradual if apparent at all. Likewise the education mix of the workforce responds primarily to changing skill requirements. But most of the recent industrial change occurring in high unemployment counties, as in most other places, is from manufacturing to services, which changes the skills requirements of local employers in unpredictable ways, depending on the particular types of services where employment growth is concentrated.

The relationship between particular local characteristics and the unemployment rate can strengthen or weaken over time as well, and be a potential source of movement into and out of

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[10] A number of alternative models to predict unemployment rates were tested, including a state fixed-effects model and the inclusion of additional variables thought to have an effect on unemployment, such as state unemployment insurance payments. While the fixed-effects model explains variation in unemployment rates across counties slightly better than the model presented here, the effects of individual independent variables (other than the state dummy variables) do not change significantly. None of the additional variables are significant at the 5 percent level, nor do they alter the significance of the basic variables. They are therefore omitted from the final analysis.

high-unemployment status. A good example is the changing effect of women's labor force participation. In the 1970's, women were more likely to be unemployed than men due to their more frequent entry and exit from the workforce, as well as to the nature of jobs deemed to be "woman's work." The gender gap in unemployment had all but disappeared by the 1990's, and the share of the labor force composed of women is no longer an important source of geographic variation in unemployment (although this share still varies considerably from place to place).

Regressions of unemployment rates on data from each year of the 1990's confirm that relationships between local characteristics and unemployment do change. Over the course of the decade, counties with large proportions of minorities became more likely to have high unemployment, as did agricultural counties. Other associations with unemployment are weaker now than was true a decade ago, including the links between unemployment and the proportion of local workers engaged in manufacturing, retail trade, and government; state union membership rates; and the proportion of the working-age population who are teenagers.

What does this mean for policy interventions? First, these findings help explain why the neoclassical solution of redistributing labor from areas of low demand to areas of high demand through migration is simplistic. First regions where high unemployment has persisted for twenty years (and often many more) obviously retain their populations for other reasons. Kinship and friendship networks are often important parts of individual and family survival strategies in these places. Workers with very low human capital, limited proficiency in English, or other severe barriers to employment may see little reason to incur the enormous economic and social costs of breaking these sustaining ties and moving to a low-unemployment area. Remember, too, that many individual attributes found disproportionately in high-unemployment counties are "risk factors" for unemployment regardless of residence. Blacks and those with less than a high school diploma, for instance, suffer unemployment rates higher than the local average in Atlanta just as they do in Sunflower County, Mississippi. Long-distance migration exposes them to new and unknown labor market risk while curtailing their previous support network.

Even for workers without employment barriers or other labor market disadvantages, community or family ties and the attachment to place may be strong enough to prevent them from seeking higher education or better employment opportunities elsewhere. Perhaps the question ultimately becomes whether the current geographic distribution of jobs should be taken as a given or ceded primacy over the non-job-related preferences of the nation's citizens. If not, then local and regional economic development policies assume an equal role with workforce development policies as a means of combating persistent and severe spatial inequities.

A first step is to distinguish policies focused on changing local attributes from policies designed to change the relationship between unemployment and the attribute. The effect of women's labor force participation is a case of the latter. Policies that removed barriers to working women, such as child care tax credits and stronger Federal enforcement of anti-bias and sexual harassment laws, reduced turnover and encouraged job ladder promotion, which in turn played a role in weakening the link between gender and unemployment. Most policies related to demographic

associations with unemployment would necessarily be of this nature. For example, as national standardized test scores reveal, counties with large minority populations would benefit from a variety of policies intended to promote the quality of education and training for disadvantaged groups.

Other policies would need to be developed to change the local characteristic itself if local unemployment rates are to be reduced. In most cases this requires a commitment to long-term, comprehensive (not piecemeal) economic development that is rarely possible if carried out by local stakeholders alone. A recent series of reports based on the Rural Manufacturing Survey, designed by the Economic Research Service (USDA), concludes that technological change requiring a more highly-skilled workforce is as evident in rural areas as in cities. Perhaps more establishments, including those in high unemployment counties, could be encouraged to adopt advanced production technologies and management practices if the proper investment incentives were more widely available, or if these incentives were better targeted to areas with high unemployment. Such incentives would also attack persistent unemployment from several angles because they would help alter the industry mix as well as the education and skill mix of the area.

Policies designed to raise local educational attainment without simultaneously creating high-skill work would prove less effective, but may still be useful in communities where intercounty commuting is a feasible alternative to local employment. At least one previous study has demonstrated that college graduates from disadvantaged areas will often return because of social and family ties, even when job prospects are inferior to those of other destinations (Gibbs, 1998). Although they may not work in their county of residence, they create income for local consumption, and are unlikely to experience the job instability of their less-educated peers. Hence raising "locally-grown" college graduates can be a good investment for non-remote counties afflicted with persistently high unemployment.

One of the messages emerging from the analysis is that Federal anti-unemployment policies may well be limited in what they can achieve. Few such policies could be applied across high unemployment areas with uniform results. Recall, for example, that the association between agricultural employment and unemployment was negative in the Midwest, but strongly positive in the West. Thus a policy that attempted to ameliorate unemployment by encouraging the transfer of workers from farming to other jobs would have no impact in the former region, but might make a real difference in the latter. Likewise, tax incentives aimed at promoting advanced production technologies in rural manufacturing establishments would both encourage manufacturing and the presence of college graduates. Yet northeastern counties would find this strategy far more compelling than those in the West as a way of reducing unemployment. Thus it should be considered carefully whether a proposed policy is more sensibly implemented at a state, or even local, level rather than nationally.

It must be acknowledged that effective and sensible remedies may not exist in all cases. Clearly a policy to reduce the physical amenities of a county for the sake of reducing unemployment would encounter stiff opposition. Neither would it improve the welfare of workers in the long run

to enact policies to discourage unionization efforts. Even where remedies do exist, the ability to change a characteristic or its association with unemployment may be limited by deeply-embedded historical or economic realities. Counties with large proportions of Blacks and Hispanics have legacies of underinvestment in human and physical capital, and of low-paying, unstable jobs, which affect their attractiveness for prospective new employers as well as their ability to generate new entrepreneurial activity internally. Without a fundamental shift in the mix of jobs, policies aimed at equality in hiring and promotion can only work at the margins of unemployment reduction.

Finally policies designed to reduce unemployment without considering other measures of workers' well-being create more problems than they solve. Local economic development initiatives aimed at attracting *any* industry, for instance, may well increase employment. Yet if average new job quality is low, areas that pursue this strategy also increase the risks associated with a high-turnover labor force and employers who view the county as a convenient source for cheap labor, at least until a better location can be found. For some counties, this may be the only feasible approach, but it should always be a last resort.

The preferable anti-unemployment strategy, from both a local and a national prospective, is really very much an economic growth strategy as well. Such a strategy should proceed along two broad lines: aggressive human capital investments in school quality, college enrollment, and job training; and concurrent assistance and encouragement of advanced technology employers, who demand a higher-skill workforce and are less exposed to the threat of competition from cheaper labor elsewhere. Recall that earnings and unemployment were found in this analysis to be very weakly associated. A county need not fear being saddled with a "high-wage/high-unemployment" labor mix if high wages flow from a well-prepared workforce engaged in advanced production processes. On the contrary, as the global economy becomes increasingly integrated, high wages *and* employment levels are likely to form a necessary partnership to ensure local prosperity in the next century.

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Appendix Table 1. Unemployment Model: Means, Coefficients, and Standard Errors of Local Characteristics

Characteristics	*Mean*	*Parameter*	*Standard error*
Market-related			
Employment growth, 1996-97	.97	-0.0886	0.0092
Earnings per job, 1996	21.54	0.0252	0.0099
State unionization rate	12.12	0.1765	0.0107
Average state AFDC payment	298	0.0003	0.0006
State unemployment insurance	182	-0.0018	0.0019
Percent employed in:			
Agriculture	1.7	1.0558	0.2051
Manufacturing	13.7	0.1387	0.0559
Mining	1.3	0.3453	0.1095
Government	16.4	0.2701	0.0737
Wholesale Trade	3.1	-1.1104	0.2297
Retail Trade	16.2	0.8479	0.1064
Transp/Utilities/Communications	3.9	0.5571	0.1733
Finance, Insurance, Real Estate	4.7	0.1097	0.2296
Construction	5.5	0.1741	0.1603
Earnings per job in commuting shed	23.52	-0.0201	0.0098
Locational			
Midwest (compared with Northeast)	.35	-0.5116	0.1724
South	.45	-0.1879	0.2138
West	.14	1.2383	0.1960
Small remote (compared w/large urban)	.17	1.0674	0.2086
Amenity index	0	0.1682	0.0237
Demographic			
Percent Black	8.44	0.0440	0.0035
Percent Hispanic	4.51	0.0603	0.0041
Percent Native American	1.43	0.0685	0.6693
Percent ages 16-19	9.62	0.0533	0.0244
Human capital			
Percent with college degree	13.36	-0.0512	0.0102
Percent with less than high school	30.46	0.0988	0.0076

Appendix: U.S. Counties with Unemployment Rates at or above 8 Percent in 1998

State/County	*Unemployment rate, 1998*
Alabama	
Bullock	9.3
Butler	10.3
Choctaw	10.2
Conecuh	8.2
Dallas	9.2
Greene	12.5
Lowndes	10.0
Monroe	10.4
Sumter	8.4
Washington	11.8
Wilcox	12.3
Alaska	
Bethel	8.0
Haines	10.2
Kenai Peninsula	10.2
Nome	9.4
Northwest Arctic	11.4
Prince of Wales-Outer Ketchikan	12.0
Southeast Fairbanks	9.8
Valdez-Cordova	8.3
Wade Hampton	13.9
Wrangell-Petersburg	8.8
Yakutat	12.4
Yukon-Koyukuk	13.1
Arizona	
Apache	16.6
Navajo	13.3
Santa Cruz	15.9
Yuma	26.7

Arkansas	
Ashley	8.4
Bradley	10.9
Calhoun	9.9
Chicot	8.2
Desha	8.9
Drew	8.5
Jackson	10.1
Lawrence	8.4
Lee	8.5
Mississippi	10.5
Newton	8.6
Ouachita	9.9
Randolph	10.1
St. Francis	8.3
Searcy	9.4
Van Buren	8.1
Woodruff	11.0
California	
Alpine	9.2
Butte	8.2
Calaveras	8.8
Colusa	19.5
Del Norte	10.0
Fresno	13.9
Glenn	12.6
Imperial	26.0
Kern	12.0
Kings	12.1
Lake	9.7
Lassen	9.4
Madera	12.8
Mariposa	8.2
Merced	15.3
Modoc	11.5

Monterey	10.7
Plumas	9.9
San Benito	10.4
San Joaquin	10.6
Shasta	8.9
Sierra	11.7
Siskiyou	12.8
Stanislaus	12.0
Sutter	15.4
Tehama	8.9
Trinity	12.5
Tulare	15.6
Yuba	13.1
Colorado	
Conejos	8.1
Costilla	13.9
Dolores	10.4
Saguache	9.1
San Juan	14.8
District of Columbia	8.6
Florida	
Glades	8.9
Gulf	11.2
Hamilton	8.4
Hardee	10.9
Hendry	11.8
Highlands	8.1
Indian River	8.0
St.Lucie	10.7
Georgia	
Appling	9.5
Baker	9.0
Burke	11.9

Dougherty	8.2
Emanuel	8.2
Glascock	10.2
Hancock	11.1
Jefferson	11.2
Johnson	11.0
Macon	9.5
Randolph	12.4
Telfair	8.3
Terrell	11.6
Toombs	8.3
Turner	10.8
Warren	15.2
Wheeler	8.6
Hawaii	
Hawaii	8.8
Kauai	9.3
Idaho	
Adams	13.6
Benewah	11.2
Boundary	8.5
Clearwater	12.6
Idaho	10.3
Shoshone	10.3
Valley	8.9
Illinois	
Alexander	9.3
Franklin	10.2
Gallatin	8.8
Hamilton	10.0
Jasper	10.3
Johnson	8.8
Lawrence	8.4
Montgomery	8.5

Perry	10.0
Pope	10.4
Pulaski	10.7
Saline	9.3
Wabash	9.4
White	8.2
Williamson	8.3
Kansas	
Linn	8.6
Kentucky	
Adair	14.8
Carter	11.0
Casey	8.1
Elliott	12.3
Fulton	8.8
Green	16.2
Harlan	11.6
Lawrence	9.5
Lewis	11.0
Magoffin	13.4
Martin	10.0
Russell	26.9
Taylor	21.7
Wayne	10.8
Louisiana	
Bienville	10.7
Caldwell	8.1
Catahoula	9.8
Concordia	14.2
East Carroll	13.6
Franklin	10.6
Madison	11.8
Morehouse	11.7
Red River	13.3

Richland	9.7
Sabine	8.3
Webster	8.3
West Carroll	14.0
Maine	
Washington	9.3
Maryland	
Allegany	8.6
Dorchester	9.7
Garrett	10.7
Somerset	9.5
Worcester	10.3
Baltimore City	8.7
Michigan	
Cheboygan	10.3
Gogebic	8.0
Keweenaw	9.9
Mackinac	9.6
Montmorency	11.6
Ontonagon	8.6
Presque Isle	10.6
Schoolcraft	9.5
Wexford	8.2
Minnesota	
Clearwater	10.7
Marshall	8.4
Mississippi	
Attala	9.1
Bolivar	8.3
Chickasaw	8.3
Claiborne	10.1
Clay	8.7

Coahoma	9.6
Holmes	10.0
Humphreys	10.2
Issaquena	12.4
Jefferson	14.8
Jefferson Davis	10.3
Kemper	9.2
Leflore	8.4
Monroe	9.9
Noxubee	9.8
Panola	8.3
Quitman	10.2
Sharkey	12.0
Simpson	9.7
Sunflower	10.9
Tallahatchie	11.5
Tishomingo	10.6
Washington	8.8
Wilkinson	9.4
Missouri	
Pemiscot	8.3
Stone	12.0
Taney	8.4
Wayne	10.5
Montana	
Big Horn	9.8
Blaine	9.0
Glacier	13.4
Granite	9.8
Lincoln	12.6
Mineral	11.2
Phillips	8.3
Roosevelt	8.4
Sanders	10.6

Nevada	
Esmeralda	8.3
Lander	10.2
New Jersey	
Atlantic	8.0
Cape May	10.5
Cumberland	9.2
New Mexico	
Catron	11.5
Chaves	10.2
Cibola	9.5
Dona Ana	8.9
Guadalupe	10.4
Luna	26.9
McKinley	8.8
Mora	20.1
Rio Arriba	9.3
San Juan	8.5
San Miguel	8.6
Taos	12.8
New York	
Bronx	9.9
Essex	8.2
Franklin	8.2
Hamilton	10.9
Jefferson	9.4
Kings	9.3
Lewis	8.4
St. Lawrence	8.1
North Carolina	
Edgecombe	8.9
Graham	8.8
Halifax	8.4

Richmond	8.3
Scotland	8.1
Swain	12.6
Tyrrell	8.2
North Dakota	
Rolette	9.5
Oklahoma	
Adams	11.0
Gallia	8.4
Guernsey	8.0
Huron	8.2
Meigs	10.8
Monroe	9.0
Morgan	13.0
Pike	9.0
Scioto	9.4
Vinton	10.8
Oklahoma	
Choctaw	10.2
Coal	8.2
Haskell	11.5
Latimer	11.2
Okmulgee	8.2
Seminole	8.9
Sequoyah	8.0
Oregon	
Baker	8.3
Coos	9.7
Crook	8.8
Curry	8.4
Douglas	9.0
Grant	12.9
Hood River	9.6

Josephine	8.3
Klamath	8.5
Lake	10.6
Malheur	8.2
Morrow	8.0
Wallowa	9.7
Wheeler	8.4
Pennsylvania	
Forest	8.8
Huntingdon	8.0
South Carolina	
Chester	8.2
Lee	8.1
Marion	8.7
Marlboro	10.9
Williamsburg	10.6
South Dakota	
Buffalo	10.2
Dewey	13.9
Shannon	11.2
Ziebach	11.3
Tennessee	
Carroll	8.6
Clay	12.8
Decatur	9.0
Fentress	8.9
Hardeman	12.0
Haywood	10.3
Houston	10.8
Jackson	8.2
Lake	10.2
Lauderdale	8.3
Lawrence	9.0

Lewis	11.4
Meigs	8.5
Stewart	10.4
Trousdale	8.8
Wayne	13.7
Texas	
Brooks	9.5
Cameron	12.5
Cass	8.4
Coleman	9.3
Dimmit	15.8
Duval	12.8
El Paso	10.1
Floyd	8.2
Frio	9.2
Hidalgo	17.6
Jasper	10.9
Jim Hogg	9.6
Jim Wells	8.9
Kinney	9.5
La Salle	8.6
Loving	10.6
Marion	10.4
Matagorda	12.0
Maverick	26.3
Morris	12.4
Newton	11.6
Orange	9.1
Panola	9.8
Presidio	32.4
Reeves	10.5
Sabine	8.8
Starr	27.9
Tyler	8.6
Uvalde	10.7
Val Verde	9.4

Ward	8.0
Webb	9.4
Willacy	20.7
Winkler	9.1
Zapata	12.3
Zavala	22.2
Virginia	
Buchanan	13.9
Dickenson	16.7
Lancaster	11.2
Lee	8.5
Northumberland	9.7
Russell	9.7
Surry	8.6
Tazewell	9.0
Wise	11.0
Washington	
Adams	10.5
Chelan	8.4
Columbia	11.6
Ferry	9.7
Franklin	9.8
Grant	8.8
Grays Harbor	9.5
Klickitat	10.2
Lewis	8.1
Okanogan	10.1
Pacific	9.4
Pend Oreille	11.9
Skamania	10.0
Stevens	8.8
Yakima	10.1
West Virginia	
Barbour	11.3

Boone	10.0
Braxton	10.7
Calhoun	16.4
Clay	10.8
Fayette	9.1
Grant	9.1
Lewis	8.2
Lincoln	11.1
Logan	11.0
McDowell	11.4
Mason	11.8
Mingo	12.6
Nicholas	8.7
Pleasants	11.7
Pocahontas	8.7
Randolph	8.8
Ritchie	10.7
Roane	11.0
Summers	9.2
Tucker	10.5
Tyler	8.2
Webster	8.7
Wetzel	10.1
Wirt	14.7
Wyoming	9.3
Wisconsin	
Menominee	8.7