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RANKING DEMOCRAT CAROLYN B. MALONEY

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MINORITY VIEWS

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INTRODUCTION

The Joint Economic Committee (JEC) is required by statute to submit findings and recommendations in response to the *Economic Report of the President* (or *Report*), which was released by the Council of Economic Advisers (CEA) on February 22, 2016.

The *Report* is a comprehensive assessment of the economy that analyzes data collected by nonpartisan government statistical agencies and reviews work from respected academic economists. It provides important information on the status of the current economic recovery, reviews the outlooks for future growth and provides policy recommendations for further strengthening the economy.

The *Report* also offers new thinking on some of the defining economic issues of our times, notably income inequality and how abuses of market power can exacerbate it. When corporations become so large and influential that they use their sway to impose barriers to entry for startup firms, this can limit innovation and productivity growth. And without labor protections, such as collective bargaining and strong labor unions, economic gains can become increasingly concentrated at the top.

The *Report* and this Democratic response put the recovery in context, reviewing how the seven-year recovery has taken place in the wake of the worst economic catastrophe since the Great Depression in the 1930s. To evaluate the recovery, it is first necessary to understand the severity of the recession and the global financial crisis that precipitated it. It has been well documented that financial crises have deeper, more-damaging and longer-

lasting effects. Thus, this recovery cannot be compared to a recovery from an “average” recession.

Several obstacles have limited growth during the recovery. The devastation in the housing sector prevented homebuilding from playing its customary leading role in the recovery; after the Federal Reserve lowered interest rates to zero, monetary policy was limited in its ability to further stimulate the economy and; fiscal policy at the federal, state and local levels slowed rather than accelerated growth for much of the recovery, a significant departure from previous recoveries.

Other challenges facing the economy long predate the recession. The size of the labor force is growing much more slowly than it did for most of the second half of the 20th century, a result of baby boomers entering retirement and women’s labor force participation rates plateauing after several decades of rapid growth. Demographic forces will continue to constrain economic growth in the years ahead.

Despite these obstacles, the *Report* demonstrates that the American economy has made tremendous progress as it recovers from the Great Recession. A broad range of economic indicators continue to show strong improvement, including private-sector job creation, the unemployment rate and GDP growth.

This progress is the result of bold actions taken by the Obama administration, Democrats in Congress and the Federal Reserve to halt the freefall and put the economy back on a path to growth. Research by economists Alan Blinder and Mark Zandi shows that without these joint efforts the recession would have lasted twice as long and job losses would have been about twice as great.

This successful response to the financial crisis reinforces the concept—long understood by mainstream economists—that government has a key role to play in stimulating demand during a recession, particularly a severe recession. The government steps in to invest when the private sector will not or cannot, and to sustain demand for goods and services when families are hurting.

Unfortunately, some have forgotten these basic principles. Republicans opposed the Recovery Act in 2009. And, after gaining control of Congress in 2010, Republicans cut government spending at precisely the moment government investment was needed to boost demand. These cuts slowed the recovery.

The *Report* and this response also explore the effects of increased globalization and automation. While these changes have driven higher productivity and increased growth in the economy as a whole, the benefits and costs are not evenly shared. As many jobs have been replaced by robots and production has shifted overseas, U.S. workers have seen wages stagnate, putting sustained pressure on middle-class families who are coping with rising costs of living but have limited wage leverage.

Some segments of the population have been hit especially hard. Millions of U.S. manufacturing jobs, for example, have disappeared since manufacturing employment peaked in 1979. Identifying effective ways to reintegrate these and others workers and helping them to build new skills that are in demand by employers must be a top priority for policymakers. This response includes a significant discussion of the importance of education and training programs to giving everyone a shot—or sometimes a badly needed second chance—at the American Dream.

Looking around the globe, the United States has recovered from the recession faster than other advanced economies as a result of the strong fiscal and monetary response. However, weak global demand combined with the strong U.S. dollar have presented headwinds in recent years, which are expected to continue. As an example, net exports have been a drag on GDP for the past two years as weak foreign demand for U.S. goods has constrained growth here at home.

There is little debate that the private sector is the engine of growth in the U.S. economy. But the government has a key role to play in supporting continued economic recovery and laying the groundwork for future growth. This Democratic response the *Report* discusses three key challenges policymakers should work

to address moving forward: slowing growth in the size of the labor force, lower rates of productivity growth and the increasingly inequitable distribution of gains from economic growth.

Both the *Report* and this response discuss policies to boost labor force participation, increase productivity and reduce inequality. These policies take many forms:

Implementing family-friendly policies such as paid leave and workplace flexibility will deepen women's attachment to the labor force.

- Achieving equal pay for equal work will reduce inequality.
- Reforming the immigration system will raise both the labor force participation rate and productivity.
- Rebuilding the nation's infrastructure will boost productivity and strengthen U.S. competitiveness.
- Investing in early childhood education, including universal pre-K, will help to reduce inequality and ensure a more productive labor force down the road.
- Policies such as these will strengthen the economy and promote inclusive growth that reaches households across income levels.

The economy is in stronger shape than it has been in years—now, policymakers must build on that progress and ensure that all Americans benefit from the economic recovery.

PUTTING THE RECOVERY IN CONTEXT: OVERVIEW OF ECONOMIC PROGRESS

Any assessment of the current state of the economy must keep in mind the severity of the financial crisis and the Great Recession, the significant obstacles this recovery has faced and how underlying structural trends can impact economic growth. Collectively, these factors make comparisons with recoveries from much less severe postwar recessions deeply misleading.

This section reviews the state of the economy when President Obama took office and the significant progress that has been made since then. It describes why comparing the current recovery to "average" recoveries is inappropriate, and shows that, in fact, the U.S. recovery has fared well when measured against the recoveries in other advanced economies that suffered from the same devastating global financial crisis.

A Severe Recession

When President Obama took over from President Bush, the world had just experienced "[…] the worst financial crisis in global history, including the Great Depression," according to former Federal Reserve (Fed) Chairman Ben Bernanke.[1] Former Fed Chairman, Alan Greenspan, called it "the most debilitating financial crisis ever."[2] According to the Financial Crisis Inquiry Commission, the crisis was the "avoidable" result of a number of factors, including lax financial regulation and excessive risk taking on Wall Street.[3] As the crisis spread from Wall Street to Main Street, millions of people lost their jobs, their homes or both.

During the last five quarters of the Bush presidency, real GDP fell 4.1 percent. This included a drop of 8.2 percent at an annual rate in the fourth quarter of 2008, the single worst quarterly economic performance in more than 50 years. The economy shed more than 4.5 million private-sector jobs during President Bush's last year in

office, including more than 800,000 in January 2009 alone. The unemployment rate jumped nearly 3 percentage points from January 2008 to January 2009, and it was on its way to peaking at 10.0 percent just eight months later.

The country's manufacturing base was rapidly eroding. The automotive industry was on the brink of collapse. From December 2007 to June 2009, auto industry employment plunged by more than 600,000 jobs—more than one-fifth of total employment in the industry.[4] Auto sales in 2009 ended at a 27-year low. The crisis threatened parts suppliers and retail outlets across the country.[5]

The housing sector was in shambles. Home values nationally were in the process of plummeting about 20 percent between 2007 and 2011, according to the Federal Housing Finance Agency's purchase-only index. In the states hit hardest by the housing crash, prices fell by more than twice as much. At the worst of the downturn, nearly one-third of all homeowners were underwater on their mortgages, meaning that they owed more on their home loans than their home was worth. All told, more than 9 million families would ultimately lose their homes due to foreclosure or distressed sale during the period from 2006 through 2014.[6]

Driven by steep losses in home values and the stock market, nearly $13 trillion in household wealth evaporated during the last seven quarters of the Bush presidency, severely impacting consumer spending and GDP growth. According to the CEA, this constituted an initial shock to household wealth that exceeded the one that precipitated the Great Depression of the 1930s.[7] The economy was teetering on the brink of total meltdown, and fears of another depression were very much real.

A Steady Recovery

President Obama faced a dire economic situation when he took office, and his administration took quick, decisive action. Policies enacted by President Obama with support from Democrats in Congress, along with aggressive Fed monetary policies, stabilized

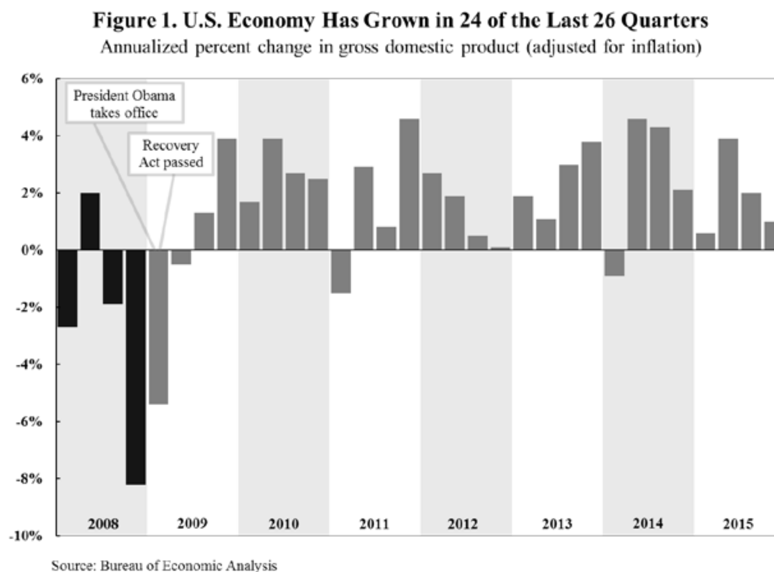
the financial system, provided support to the economy when it needed it most and laid the foundation for a return to growth.

The American Recovery and Reinvestment Act ("the Recovery Act" or "the Stimulus"), enacted in February 2009, was the largest and most significant fiscal policy response to the Great Recession. Additional support would come to include extensions of unemployment insurance, tax credits for individuals and small businesses, incentives for hiring veterans and the rescue and restructuring of the U.S. auto industry.[8] Many of these policies that helped to get the economy out of a tailspin were strongly opposed by most Republicans in Congress. But they were both necessary and successful in preventing the country from experiencing another Great Depression.

Instead of a sustained period of economic contraction, the economy returned to growth less than a year into President Obama's first term. Real GDP has now grown by 14.5 percent since the start of the Obama administration. The economy has expanded in 24 of the past 26 quarters (see **Figure 1**).

Figure 1. U.S. Economy Has Grown in 24 of the Last 26 Quarters

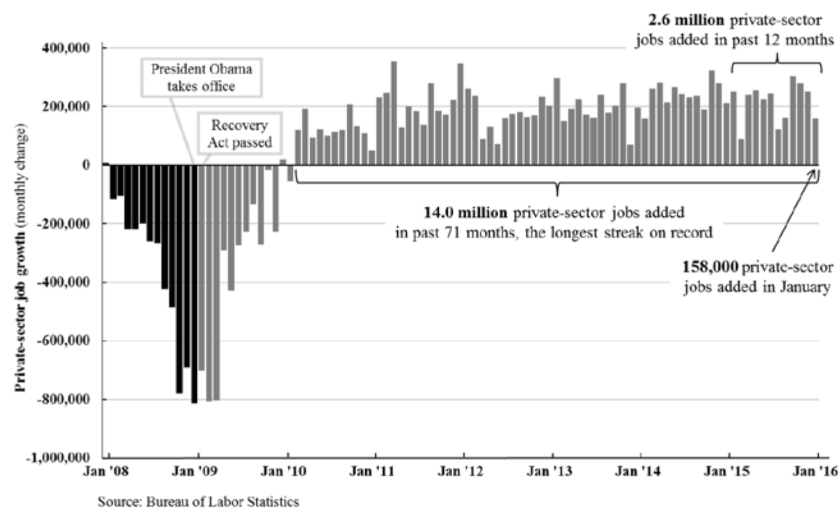
Annualized percent change in gross domestic product (adjusted for inflation)



Source: Bureau of Economic Analysis

Today, the economy is in the midst of the longest streak of private-sector job creation in history. Businesses have added 14 million jobs over a record 71 consecutive months of private-sector job growth (see **Figure 2**). The economy added an average of about 233,000 private-sector jobs per month over 2014 and 2015, the strongest two years of private-sector job creation since the 1990s.

Figure 2. Longest Streak of Private-Sector Job Growth Continues



Source: Bureau of Labor Statistics

On net, all jobs added since early 2010 have been full-time jobs, despite Republican claims that the Affordable Care Act (ACA) would drive up part-time employment (see **Figure 3**).

Figure 3. All Employment Growth Has Been Full-Time Jobs

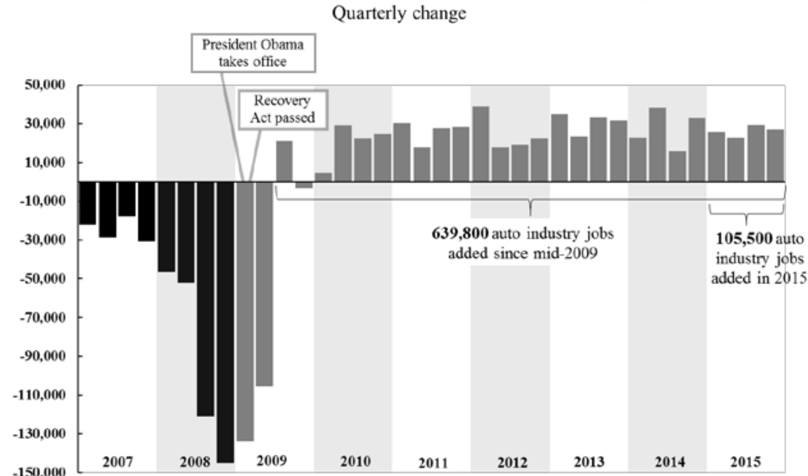
Net change in employment, January 2010 to January 2016

Source: JEC Democratic staff calculations using data from the Bureau of Labor Statistics

Note: Seasonally-adjusted data

The Obama administration's actions averted a near collapse of the U.S. auto industry. Auto sales hit a record high of 17.4 million units in 2015. Annual car and truck production has more than doubled since 2009. The auto industry has added nearly 640,000 jobs since mid-2009, including both manufacturing and retail (see **Figure 4**). Motor vehicle and parts manufacturers have added nearly 300,000 jobs since June 2009, contributing to job growth of more than 900,000 in the manufacturing sector overall during the recovery.

Figure 4. The U.S. Auto Industry Has Added Jobs for 6 Straight Years



Source: Bureau of Labor Statistics

Notes: Includes workers in the motor vehicle and parts industries of the manufacturing and retail trade sectors; data are seasonally adjusted

The unemployment rate has been more than cut in half since it peaked at 10.0 percent in October 2009. The 4.9 percent unemployment rate in January was the first reading below 5.0 percent in nearly eight years. The decline in unemployment has been broad-based. Hispanic unemployment is now 5.9 percent, down from a peak of 13.0 percent in August 2009. African-American unemployment is now 8.8 percent, down from 16.8 percent in March 2010. Post-9/11 veteran unemployment averaged 5.8 percent in 2015, down from an annual average peak of 12.1 percent in 2011.

Other labor-market indicators have also seen substantial improvements. The long-term unemployment rate has been slashed by more than two-thirds from its peak, and the duration of a typical spell of unemployment is less than half as long as it was at the worst of the downturn. The broadest measure of labor underutilization (the U-6), which includes workers employed part time but who would prefer full-time jobs as well as discouraged workers who have dropped out of the labor force but who want and would accept a job if offered, is down sharply from a peak of 17.1 percent and was 9.9 percent in January (see **Figure 5**).

Figure 5. Unemployment and Underemployment Rates Have Declined Significantly from Recession Peak
January 2006 to January 2016

Source: Bureau of Labor Statistics

Notes: "Underemployment Rate (U-6)" includes those marginally attached to the labor force and those employed part time for economic reasons; seasonally-adjusted data

The housing sector has recovered from severe losses. The FHFA purchase-only index is higher now than it was before prices began to fall precipitously in early 2007. The share of single-family homes with underwater mortgages has been more than cut in half. The percentage of residential mortgage loans that are seriously delinquent (at least 90 days past due) is at its lowest level in more than eight years. The rate of new foreclosures hit its lowest level since 2003 in the fourth quarter of 2015.

Buoyed by the recovery in home values and stock market gains, nominal household wealth has increased by more than $30 trillion since President Obama took office. It is now about $17.5 trillion higher than it was before the recession.

The policy response: By virtually every measure of economic health, the economy is undoubtedly in a stronger position now than when President Obama took office. The policies of the Obama administration and Federal Reserve made a major contribution to this recovery. A recent study by economists Alan Blinder and Mark Zandi found that, jointly, fiscal and monetary policy actions dramatically reduced the severity and length of the

Great Recession. Specifically, the study found that, without those responses, the economy would have contracted for more than twice as long, the unemployment rate would have reached nearly 16 percent and about twice as many jobs would have been lost.[9]

Putting the Recovery in Proper Context

Despite the significant progress made during the Obama years, the president's critics continue to assail his management of the economy. Some argue that the pace of the Obama recovery pales in comparison to "average" recoveries in the modern era, in particular to the Reagan recovery in the 1980s.[10]

While it is true in a narrow sense that GDP growth has been slower than during other recoveries since World War II, this is a deeply misleading comparison. The Great Recession was an economic cataclysm that rocked the global economy to its core. And it came at a time when structural and demographic trends were already working to hold down growth. In fact, compared to other advanced economies, the strength and resilience of the U.S. economy stands out—the recovery has been faster in the United States than virtually anywhere else.

Obstacles to recovery: Numerous factors that make this recovery different from other recent recoveries are discussed below.

Financial crisis origins. Comparing this recovery to an "average" recovery does not make sense because the Great Recession was not an "average" recession. It resulted from a severe global financial crisis and was the deepest and most protracted economic decline since the Great Depression. Economic research shows financial crises have deeper, more-damaging and longer-lasting effects. A recent study looked at recoveries from 100 systemic banking crises spanning three centuries and concluded that: "postwar business cycles are not the relevant comparator for the recent crises in advanced economies"[11] In fact, as a witness called by Republicans at a recent House Ways and Means Committee hearing noted, "The U.S. growth path has been in line with what

the history of recoveries from financial crisis would suggest it would be."[12]

Overleveraged housing sector. The bursting of the housing bubble and the loss of more than $7 trillion in home equity devastated the economy and prevented housing from fueling a recovery as it has after other recessions. Typically, an "outsized proportion" of growth in the first two years of a recovery comes from residential investment.[13] However, the crash, debt overhang and tight lending standards severely restricted residential construction's contribution to economic growth during this recovery.[14] In addition, the need for Americans to deleverage restrained growth in consumer spending for an extended period of time.

Monetary policy constraints. Unlike the situation after many other postwar recessions, Federal Reserve's ability to use its strongest monetary policy tools to assist the recovery was limited. Typically, Federal Reserve works to stimulate a weak economy by lowering the federal funds rate, which filters through into other interest rates, spurring borrowing and investment and bolstering economic growth. For example, during the 1981 recession, the Volcker Fed cut rates by 10 percentage points to support the recovery.[15] The Fed's actions were a major reason for the relatively strong recovery during the Reagan presidency.[16] However, this time, the federal funds rate quickly hit what is known as the "zero lower bound," forcing Federal Reserve to turn to comparatively weak monetary policy instruments to support the economy further.

Federal fiscal headwinds. With Federal Reserve having exhausted its most powerful tools, the economy desperately needed additional support from fiscal policymakers. Federal fiscal policy had made a positive contribution to the recoveries following the 1981 and 2001 recessions, for example, in both cases due in part to increases in defense spending. However, the House Republican leadership that came to power following the 2010 elections, instead of providing support, undermined the recovery by repeatedly threatening government shutdowns, arguing over

whether the nation should pay its bills and demanding deep, counterproductive spending cuts. According to one estimate, fiscal uncertainty and fiscal drag in tandem reduced GDP growth by about 1 percentage point and cost the economy more than 2 million jobs.[17]

State and local headwinds. The unusual circumstances of this recovery can also be seen in the state and local government sector. During the recovery period following every other postwar recession, state and local government spending increased, helping to raise GDP. However, this time, it continued to drop, in part due to declining property tax and other revenues as home values, incomes and consumer spending all fell precipitously.[18] Only over 2014 and 2015 have state and local governments begun to make a modest positive contribution to GDP growth again.

Global headwinds. This recovery is also different because it follows a truly global crisis. Many other countries that fell into recession have not fared as well as the United States over the recovery period. Slow global growth has in turn had ramifications for the U.S. recovery, for example by limiting demand for U.S. exports. The uncertainty of the economic situation overseas remains a challenge to the U.S. economy, and it is explored further in a section later in this report.

Demographic trends. In contrast to much of the second half of the 20th century, underlying demographic trends that long predate the Great Recession are no longer fueling an increase in the labor force participation rate and an acceleration in economic growth. Two factors in particular deserve mention: the aging of members of the baby boom generation out of their prime working years, and a plateauing of the number of women in the workforce after several decades of rapid growth.

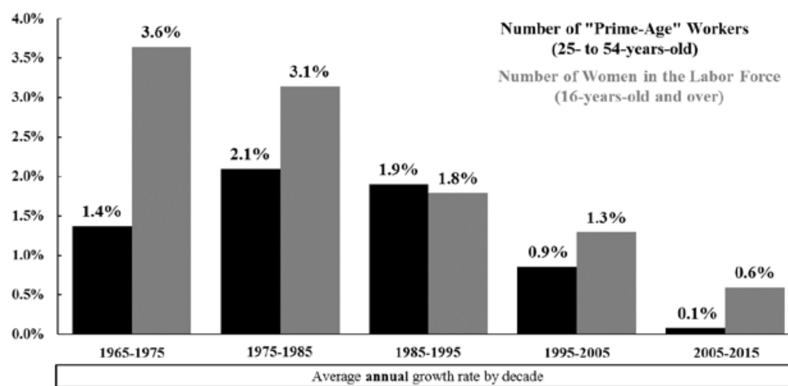
From 1965 to 2005, the number of Americans ages 25 to 54 grew at a 1.6 percent annual rate, but growth of this population has slowed to a virtual stop since then as baby boomers have aged, increasing just 0.1 percent per year this past decade. In addition, the number of women in the labor force increased at a 2.5 percent

annual rate over the 1965 to 2005 period. Growth in the number of women the workforce has since slowed to an average rate of 0.6 percent per year since 2005. The figure below shows these data broken out by decade over the past 50 years (see **Figure 6**).

According to CBO, a major reason why growth this recovery has been slower than other postwar recoveries is slowing growth in potential output—largely reflecting slower growth in the size of the potential labor force due to these demographic trends.[19] Demographic factors threaten to restrain economic growth in the future, regardless of the party or policies of future presidents. This report discusses demographics in greater depth in a later section.

Figure 6. Demographic Trends Are No Longer Fueling An Acceleration in Economic Growth

Average annual growth rate by decade, 1965-2015



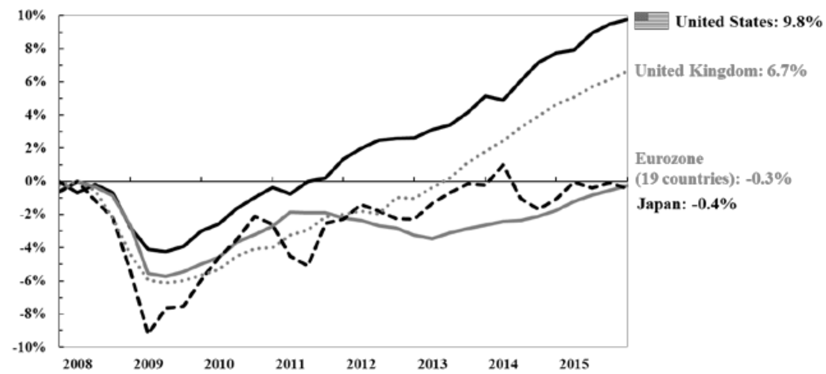
Source: JEC Democratic staff calculations using data from the Bureau of Labor Statistics

Notes: "Number of 'Prime-Age' Workers" refers to the civilian noninstitutional population 25- to 54-years-old; "Number of Women in the Labor Force" includes women 16-years-old and over who are either employed or unemployed; data are not seasonally adjusted

International comparison: Although it is difficult to provide a meaningful benchmark for a recovery from an economic crisis of the magnitude of the Great Recession, one plausibly reasonable method is to compare the U.S. recovery to the recoveries in other advanced economies from the same crisis. By this measure, the United States stands out as having among the strongest recoveries.

The current unemployment rate in the United States is less than half the unemployment rate in the Eurozone (10.4 percent). And while real GDP in the Eurozone remains below its prerecession peak, in the United States it is 9.8 percent higher than it was before the recession (see **Figure 7**). The U.S. recovery also exceeds the recoveries in the United Kingdom and Japan.

Figure 7. U.S. Economy Has Grown Faster Than Other Leading Advanced Economies
Percentage change in real gross domestic product from prerecession peak



Sources: JEC Democratic staff calculations through Q4-2015 using data from the Bureau of Economic Analysis, Statistical Office of the European Communities, Cabinet Office of Japan, and the Office for National Statistics of the United Kingdom

Notes: Eurozone refers to countries in the European Union that use the Euro as their common currency; prerecession peak in United States was Q4-2007; this peak was Q1-2008 for all others depicted

The aggressive policy response by the Obama administration and Federal Reserve is a major reason why the U.S. recovery has been faster than the recoveries in countries that pursued fiscal austerity and had central banks that moved too quickly to slam on the brakes.

Overview of Macroeconomic Conditions

The *Report* includes extensive economic data demonstrating that the recovery continued throughout 2015. The Council of Economic Advisers predicts that economic growth will accelerate slightly in 2016 to a rate of 2.7 percent.[20] This projection is in line with forecasts from the Congressional Budget Office and leading private-sector forecasters.

By many measures, the economy has recovered to its prerecession level. For example, real GDP is higher now than its pre-recession peak. In addition, more Americans are working today than when the recession began in December 2007 and the unemployment rate is below its prerecession average.

Challenges for Interpreting Economic Indicators

Understanding macroeconomic indicators demands broad knowledge of both medium-term cyclical trends and long-term structural trends. Pundits often cite the most recent economic indicator as an example that the economy is heating up or heading downhill. However, some indicators—notably GDP, housing starts and weekly jobless claims—are notoriously "noisy" so short-term variations have little meaning.

Evaluating economic data in the wake of a recession poses special challenges because it is difficult to choose an appropriate reference point. In the case of the Great Recession and the recent recovery, this is compounded by the fact that the recession was precipitated by a severe global financial crisis—as explained in Chapter 2, it is more difficult to recover from a financial crisis than a more typical economic downturn. Moreover, it is difficult to say whether the benchmark for any indicator should be the prerecession peak, the recession trough, the historical average, or conditions in other countries recovering from a similar recession.

The recent economic crisis, preceded by an enormous housing bubble, serves as a good example. It would be misleading to focus primarily on conditions the moment before the bubble burst as the standard for measuring economic recovery. It is more useful to look at performance over the previous business cycle or to compare data to broader historical averages.

It is also important to remember that aggregate indicators do not fully describe the contours of the economy. Although in some respects the economy has almost fully recovered from the recession, the recovery has proceeded at a different pace in different parts of the country, for different ages, for people with different levels of education, and for people at different income levels. Some Americans still suffer acutely from the effects of the financial crisis and the Great Recession.

With these principles as a guide, this chapter on current macroeconomic conditions attempts to build on the excellent analysis of *The Economic Report of the President.* Because the *Report* analyzes many of the most important economic indicators in detail, some will be mentioned here only in brief. Where possible, this chapter attempts to provide a different perspective on the data or shed light on indicators that are sometimes overlooked.

Recent Trends in Output Growth

Gross Domestic Product: GDP data fluctuate significantly quarter to quarter due to a variety of factors. For this reason, it is important to evaluate GDP over the long term. It is also essential to consider business cycles—in this case within the context of the global financial crisis.

The financial crisis had a catastrophic impact on the U.S. economy. GDP growth fell by 2.8 percent during the last year of the Bush administration, including a drop of more than 8 percent at an annualized rate during President Bush's last quarter in office. Growth remained negative during the first two quarters of the

Obama administration, though the pace of decline slowed significantly in the second quarter.

Since that time there has been a steady turnaround, with real gross domestic product growing in 24 of the past 26 quarters (see **Figure 1**). Overall, during the Obama administration, the economy has grown by 14.5 percent.

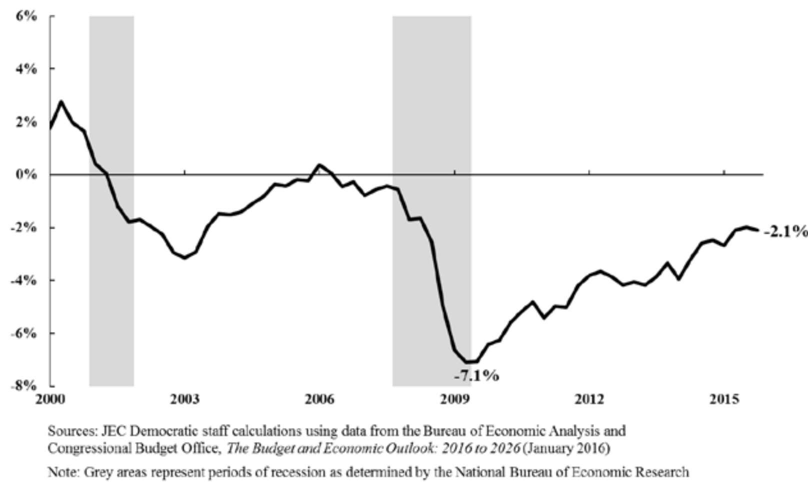
However, the growth of output slowed in 2015, as real GDP rose a modest 1.9 percent between the fourth quarter of 2014 and the fourth quarter of 2015. This was down from growth of 2.5 percent in each of the previous two years.

In addition to long-term trends in GDP growth, it is useful to compare the current level of GDP to its potential. CBO estimates potential GDP based on a variety of factors, including the size of the potential labor force, the capital stock and total factor productivity.

At its peak in 2009, the gap between actual GDP and its potential reached 7.1 percent, meaning that the economy fell far behind what CBO estimated to be its potential.[21] However, there has been steady upward improvement since that time (see **Figure 8**). At the end of 2015, the difference between actual and potential GDP was only 2.1 percent – almost the same level it was during President Bush's first term in 2003.[22]

Figure 8. U.S. Output Gap

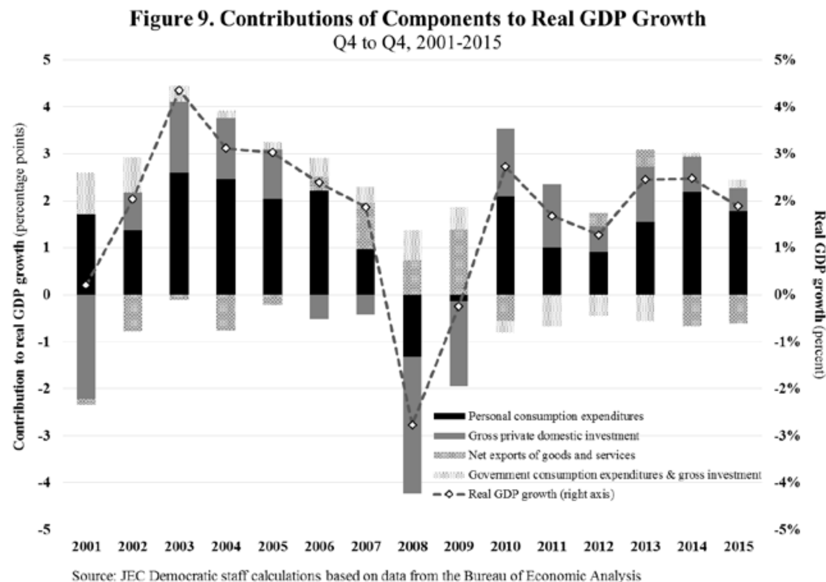
Actual minus potential real GDP as percent of potential GDP, Q1-2000 to Q4-2015



GDP's four principal components—consumer spending, private investment, government expenditures and net exports—are each discussed in detail below. As seen in **Figure 9**, consumer spending sustained economic growth until the crisis, when both consumer expenditures and private investment collapsed and dragged GDP down. As the economy has recovered, consumer spending has played a key role, contributing an increasing share to output growth. In fact, GDP growth in 2015 was largely driven by continued gains in consumer spending.

During the past two years, government purchases also have contributed positively to the growth of output, after subtracting from GDP during most of the recovery. By contrast, net exports were a drag on growth during the past two years, as the strong dollar and weak global demand weighed on exports and imports continued to rise.

Figure 9. Contributions of Components to Real GDP Growth
Q4 to Q4, 2001-2015



Source: JEC Democratic staff calculations based on data from the Bureau of Economic Analysis

Consumer spending: Consumer spending, which comprises about two-thirds of GDP, expanded by 2.6 percent in 2015, a pace slightly below that of the previous year. This was due in large part to a 3.1 percent increase in real disposable income over the past year, which was in turn attributable to employment growth, modest gains in hourly wages and falling prices of oil and gasoline.

In recent years, consumer spending has been somewhat restrained by consumers' efforts to pay down debt–a hangover from the collapse of the housing market. In prior years, when home prices were soaring, many households extracted wealth from their homes through cash-out refinancing or home equity loans which allowed them to spend beyond their means. But the dynamic reversed when the bubble burst and families restricted spending and reduced their debt. This deleveraging enabled families to regain their financial footing, but by reducing spending it also slowed GDP growth.

The same pattern can be seen in savings rates, which in 2007 stood at only about 3 percent of disposable income. The housing collapse forced families to cut spending and increase savings, and

by 2012 the saving rate jumped to 7 percent.[23] It has now drifted down to about 5 percent, allowing an uptick in consumer spending.

A similar trend is reflected in the ratio of household debt to disposable income, which jumped from an average of 99 percent in 2002 to a peak of 128 percent in early 2008. But by the third quarter of 2015 the ratio dropped to 101 percent.[24] Together these patterns in both the savings rate and debt to disposable income ratio suggest that the deleveraging process has largely run its course and that it is no longer restraining spending.

Residential investment: Another source of strength was residential investment, which rose by about 9 percent in 2015, a significantly higher rate than in the previous year. Residential investment currently accounts for only about 3.5 percent of GDP, a share that is below the historical average of about 4.5 percent prior to the emergence of the housing bubble.[25] Residential investment reached 6.5 percent of GDP in 2005, though it is not a fair benchmark because that occurred at the peak of the housing bubble, shortly before it popped. Today, conditions for continued strength from this sector are favorable since household formation is beginning to pick up, interest rates and vacancy rates are low, and deleveraging has run its course.

Business investment: In contrast, business investment slowed in the second half of 2015, largely due to declining investment in oil drilling equipment. More broadly, over the past several years business investment has flattened as a share of GDP at a level slightly below its average during the two decades before the recession.[26]

As noted in the *Report*, one key determinant of the level of business investment historically has been the rate of growth of overall aggregate demand. For example, a faster rate of consumer spending attracts higher levels of business investment. Consequently, the forces that restrained consumer spending during and immediately following the recession indirectly slowed business investment. In simple terms, consumers were spending less so businesses decided not to expand or hire new workers.

Along these lines, it is noteworthy that business investment has also fallen below prerecession trends in other advanced economies.

Government: In 2015, government spending at the federal, state and local levels added about 0.2 percentage points to the growth of GDP.[27] This represents a sharp contrast with the period from 2010 to 2013, when reductions in government spending slowed GDP growth by an average of 0.5 percentage points per year.

Slower GDP growth in the latter period was due in part to the waning effects of the 2009 American Recovery and Reinvestment Act (ARRA), which is estimated by CBO to have boosted GDP growth by between 0.6 and 3.5 percent in 2009, the year it was passed.[28] The effect of ARRA began to wane in 2011, restraining growth in that and the next several years even though the level of GDP was still higher than it would have been without ARRA.[29] The problem was compounded by deep cuts by state and local governments, nearly all of which are required to balance budgets and therefore in the wake of the Great Recession were forced to slash spending. The situation was further exacerbated when after the 2010 elections House Republicans forced further spending cuts at the federal level, slowing the economy at a time it needed stimulus.

Federal government spending is now on a slight upward trajectory and it likely will make a positive contribution to GDP growth in 2016.

Net exports: During the past two years, net exports have been a significant drag on GDP growth.[30] The decline in exports has largely been the result of slow economic growth worldwide and an appreciating U.S. dollar, which made American exports more expensive compared with those of foreign competitors. In 2015, real exports declined by 0.8 percent, while real imports rose by 2.9 percent. Overall, real net exports subtracted about 0.7 percentage points from GDP growth in 2014, and 0.6 percentage points in 2015.[31]

The Labor Market

Labor market conditions continued to improve in 2015. The economy added an average of 220,000 private sector jobs per month in 2015, a total of 2.6 million during the year. This extends the record string of 71 consecutive months of private sector job growth through January 2016. Most major industry categories participated in that growth, with especially large contributions from professional and business services and from health care. However, as noted in the *Report*, 133,000 jobs were lost in mining and logging in 2015 in large part due to the collapse of oil prices. Most of these losses were in oil and gas extraction and in support activities for oil and gas operations.

With the strong job growth, the unemployment rate has continued to fall, dropping below 5 percent in January for the first time since early 2008. January's 4.9 percent unemployment rate matches several current estimates of the sustainable rate, including CBO's estimate of the natural rate of unemployment and the median longer-run projection in the Federal Open Market Committee's December Summary of Economic Projections.[32]

Unemployment rates within all demographic categories have come down substantially from their post-recession highs and are now close to their prerecession averages. Nonetheless, unemployment rates for some groups, including African Americans, Hispanics, the young and the least-educated are higher than the overall average.

African Americans: The unemployment rate for African Americans was 8.8 percent in January, cut almost in half from its peak of 16.8 percent reached in March 2010. This rate is also somewhat lower than its prerecession average of 9.8 percent.[33] The 8.8 percent unemployment rate for African Americans remains double the 4.3 percent rate for whites and almost 4 percentage points above the overall unemployment rate.

Hispanics: The unemployment rate for Hispanics was 5.9 percent in January, cut by more than half from a peak of 13.0 percent in

August 2009. This is below its prerecession average of 6.5 percent.[34]

Young workers: Young workers, those ages 16-24, experienced unemployment rate of 10.3 percent in January. This is a decline from its peak of 19.5 percent and below its prerecession average of 11.4 percent.[35]

Less than high school education: Those workers ages 25 and older without a high school diploma had an unemployment rate of 7.4 percent in January, below the prerecession average of 7.9 percent for this group.[36] This 7.4 percent rate is almost triple the 2.5 percent unemployment rate for workers with at least a bachelor's degree, reinforcing the key role education plays in employment prospects.

Long-term unemployment: There was continued progress in reducing long-term unemployment in 2015. The long-term unemployment rate fell 0.5 percentage points over the year, reaching 1.3 percent in December, slightly above its 1.0 percent prerecession average.[37] As noted in the *Report*, the decline in the long-term unemployment rate accounted for more than 85 percent of the decline in the overall unemployment rate during the year.[38] Still, more than one-in-four unemployed workers have been jobless for six months or more.

One factor contributing to the reduction in long-term unemployment has been gains in the ability of unemployed people to find a job. At the end of 2015, the probability that a person who was unemployed in a given month had by the next month found a job averaged 25 percent, up from 19 percent just two years earlier.[39] This figure was as low as 16 percent in late 2009, though it is still below its average of 28 percent in 2007. This improvement reflects gains in the number of people hired, as measured in the Job Openings and Labor Turnover Survey.

Other labor market indicators: The labor force participation rate in January stood at 62.7 percent, down from about 66 percent before the recession. More than half of that decline can be

attributed to the aging of the population, as members of the large baby boomer generation reach ages where people tend to retire and leave the labor force.[40]

Some have claimed that the drop in the unemployment rate largely is due to workers leaving the labor force. However, evidence does not support this claim. The participation rate dropped by only 0.2 percentage point between January 2015 and January 2016 while the unemployment rate fell 0.8 percentage point, from 5.7 percent to 4.9 percent. Moreover, the participation rate for people in their prime working years (ages 25 to 54) rose by half a percentage point between September and January, and the overall employment-to-population ratio has risen over the past year even with the downward pull arising from population aging. These data indicate that the drop in the unemployment rate is largely due to the fact that more people found jobs in 2015.

Another useful measure of labor market health is BLS' U-6 measure of underutilization, which in addition to unemployment captures marginally-attached and part-time workers who would prefer but are unable to find a full-time job or whose hours were reduced due to slack demand. The U-6 stood at 9.9 percent in January, down from just over 11 percent in early 2015. As a point of reference, it should be noted that the U-6 reached a peak of 17.1 percent in late 2009 (see **Figure 5**).

The growth of hourly wages recently has shown signs of picking up. Over the past year, average hourly earnings of production and nonsupervisory workers have risen by 2.5 percent, up from 2 percent a year earlier. Over the past six months, average hourly earnings of all private industry workers have risen at a 2.9 percent annual rate, the fastest 6-month rate of increase since the Great Recession. With a very low rate of inflation over the past year, this has translated to a sizable gain in real earnings.

Inflation

The rate of inflation, which has been quite low during most of the period since the Great Recession, was even lower in 2015. Both the chain price index for personal consumption expenditures (PCE) and the Consumer Price Index (CPI) rose by just 0.7 percent in 2015. To a significant degree slowing inflation in 2015 reflected falling prices for oil and gasoline. However, "core" measures of inflation—that is, measures excluding the often volatile food and energy components—were also subdued. Most notably, the core PCE index rose by 1.5 percent, a rate significantly below the Federal Reserve's target of 2 percent inflation.[41]

On one hand, the low rate of inflation resulting from lower oil and gasoline prices represents a boon for households, translating their nominal gains in income into greater real gains. On the other hand, households that borrow are hurt by extremely low inflation rates because a modest amount of inflation decreases the real value of outstanding debt.

In addition, if inflation continues to run below the target it would complicate the Federal Reserve's efforts to normalize monetary policy. If low inflation leads the Federal Reserve to keep interest rates close to their effective zero lower bound, there would be little room for monetary policy to respond to the next recession using conventional tools. In that situation, if Congress were to remain reluctant to stimulate the economy through fiscal policy, any downturn would be deeper and more prolonged than necessary.

The Outlook

The forecast presented in the *Report*, based on information available as of early November 2015, calls for real GDP to grow by 2.7 percent in 2016 and 2.5 percent in 2017.[42] This forecast is identical to that of CBO, which was completed in late December, and similar to other forecasts completed late last year and in early January.[43] In addition, the Report's forecast and others anticipate some further decline in the unemployment rate this year and less

slack in the economy. These forecasts also anticipate that inflation will remain below the Federal Reserve's target in 2016, but will move toward that target during the next several years.

Because the projected rate of GDP growth is significantly faster than CBO's estimate of the growth of potential GDP (the latter being 1.6 percent in 2016, 1.7 percent in 2017), under this forecast the output gap would be down to about 1 percent by the end of 2016.[44] It would go away entirely during 2018.

However, recent developments suggest a downside risk to these projections, particularly due to the decline in the stock market, continued appreciation of the dollar, and a further weakening of the global outlook. February's *Blue Chip* consensus forecast downgraded its projection for growth in 2016 from 2.6 to 2.4 percent.[45]

While some analysts suggest there could be an elevated risk of recession, most do not believe that recession is likely this year. Still, in the face of soft global demand, residual slack in the labor market, and an inflation rate that remains below the Federal Reserve's target, fiscal and monetary policies should remain at least slightly expansionary in the near term.

THE EFFECT OF THE GLOBAL ECONOMY

The economic recovery in the United States has been faster than in other countries hit by the global financial crisis, in large part due to aggressive actions by the Obama administration and the Federal Reserve. However, sluggish global growth has slowed the U.S. recovery and remains a downside risk to the U.S. economy.

Global real GDP growth decelerated in 2015, from 3.4 percent in 2014 to an estimated 3.1 percent. While the growth in advanced economies edged up slightly from 1.8 percent to an estimated 1.9 percent, growth in emerging markets dropped from 4.6 percent to an estimated 4.0 percent.[46]

The slow real GDP growth weakened global consumer demand, one of the factors weighing down U.S. exports. Net exports subtracted 0.6 percent from real GDP growth over the past four quarters.

The decline in exports also was driven by appreciation in the value of the U.S. dollar, which increased by about 10 percent in 2015.[47] The strong dollar has generally made U.S. exports more expensive overseas, reducing the demand for American goods. At the same time, the strong dollar has increased demand by U.S. consumers for relatively inexpensive foreign goods, driving up imports.

Overall, while the global economy continues to grow at a modest pace, several global factors—such as the collapse of commodity prices and weak growth in major U.S. trading partners—pose both upside and downside risks to the U.S. economy. This section provides analysis to assess whether these factors will translate to net gains or net losses to the U.S. economy in the near term.

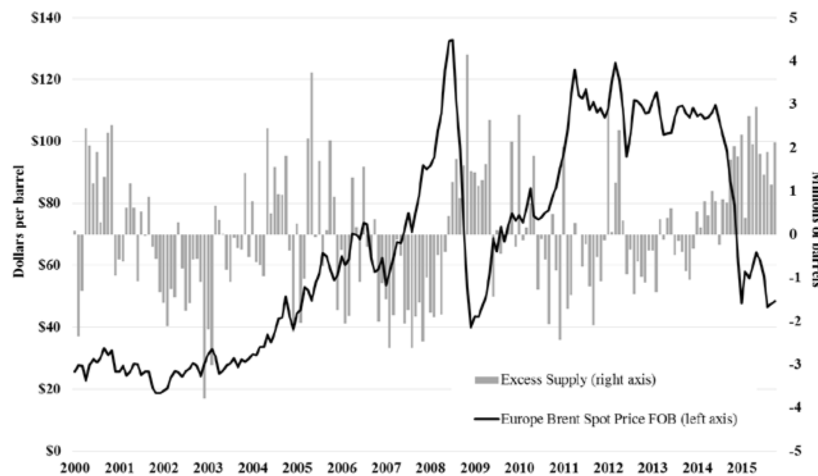
The Effects of a Sharp Decline in Oil Prices

The U.S. economy has been greatly affected by falling worldwide commodity prices—a positive development for commodity-using

manufacturers and consumers, but a strongly negative one for commodity producers. The United States, a net importer of commodities, should theoretically gain more than it loses from dropping commodity prices. United States net import of commodities as share of GDP has fallen from 1.7 percent in 2011 to 0.4 percent in the first three quarters of 2015.[48]

The most precipitous drop was in crude oil prices, which have fallen by more than 70 percent since mid-2014—from over $100 a barrel in 2014 to around $30 at the beginning of 2016.[49] The price collapse can be attributed primarily to the global supply of crude oil persistently exceeding demand, resulting in an excess supply of about 2 million barrels per day in 2015 (see **Figure 10**).[50] This excess supply has pushed the global stockpile of crude oil to a record-level.

Figure 10. Monthly Crude Oil Price and Global Excess Supply, 2000-2015



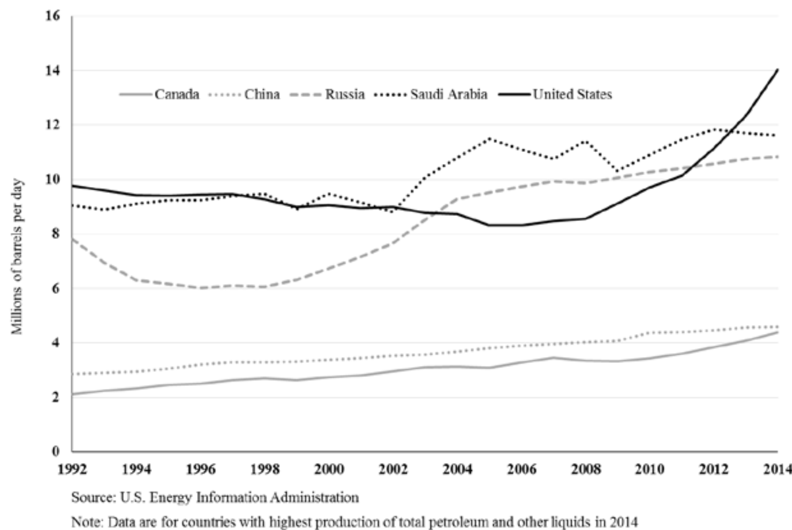
Source: U.S. Energy Information Administration

Drops in crude oil prices cause gain and pain: As with other commodities, dropping oil prices creates winners and losers in the domestic economy. Drivers in the United States saw regular retail gasoline prices drop from $3.63 in June 2014 to $1.68 per gallon in February 2016.[51] The U.S. Energy Information Administration

(EIA) estimates that as a result, U.S. households spent an average of about $700 less on gasoline in 2015.[52] Families spent a portion of that windfall, boosting consumer spending and GDP growth. However, falling oil prices also hurt U.S. oil producers, who had experienced dramatic growth over the past decade when oil prices were relatively high.

The United States is the largest petroleum products producer in the world, surpassing Saudi Arabia and Russia in 2013 (see **Figure 11**). United States petroleum production increased by 68 percent from 2005 to 2014.[53] As a result, U.S. petroleum production as a share of world production has risen from 9.1 percent in Q4-2005 to 15.8 percent in Q2-2015.[54]

Figure 11. World's Largest Petroluem Producers
Annual production, 1992-2014



The United States is also the largest petroleum consumer in the world, consuming a total of almost 7 billion barrels in 2014.[55] Thus, despite the surge in production in recent years, domestic production has yet to catch up with the consumption level, and the United States is still a net importer of oil, with net imports averaging about 5 million barrels per day in 2014 when global price averaged around $99 per barrel.[56]

The total cost of petroleum imports is somewhat mitigated by the fact that the United States has decreased its consumption of oil, from a peak of 20.8 million barrels per day in 2005 to around 19 million barrels per day in 2014, an 8.5 percent decline despite a growing population. The CEA attributes this "consumption surprise" to a variety of factors such as improvement in fuel efficiency and changes in driving habits.[57]

The decline in consumption and increase in production, combined with lower prices, have led to a substantial decrease in U.S. crude oil imports as a share of GDP, from about 6 percent in 2010 to about 3 percent in 2015.[58]

Because the United States is a net importer of petroleum, dropping oil prices should have an overall positive effect on the economy. However, the benefits are hard to calculate because there are countervailing forces—e.g., lower prices could potentially translate into higher consumer spending and faster economic growth, but they also impose losses on U.S. oil producers, who in turn invest less on drilling and hire fewer workers, which can slow GDP growth.

The impacts on consumer spending: From Q4-2014 to Q4-2015, energy expenditures as a share of disposable personal income declined by 0.85 percent. However, instead of spending the windfall, households appear to have put most of it in the bank last year, as personal saving as a share of disposable personal income increased by 0.75 percent while non-energy expenditures as a share of disposable personal income increased by only 0.17 percent during the period.[59]

One plausible explanation is that consumers have yet to believe oil prices will remain low. One recent survey finds that 70 percent of U.S. consumers expect gasoline prices to go back up in the next three months, and this expectation of rising prices contributes in part to consumers refraining from spending the extra cash.[60] Along with the recent volatile market conditions, it may take longer for households to alter their consumption habits. However, U.S. GDP

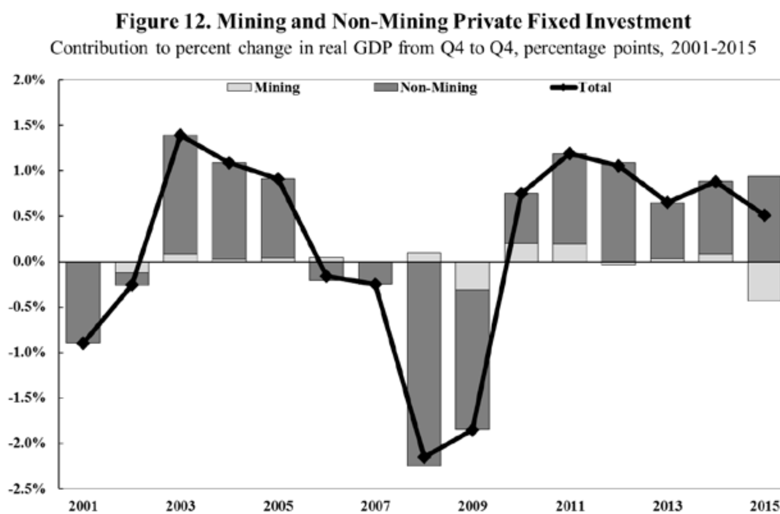
growth could also exceed expectations this year if consumers begin to spend down their savings from last year.

The impacts on investments: Since 2009, the combination of high oil prices and advancements in drilling technologies attracted a massive influx of capital to the oil and gas sector, making it one of the fastest-growing sectors in the economy. However, falling oil prices in 2015 have caused the industry to tumble.

Cutbacks in oil and gas industry investment have a sizable impact on the overall economy—declines in mining fixed investment took 0.43 percent off real U.S. GDP growth in 2015. However, for energy using firms, especially heavy oil-users, the lower cost of production should boost their investment. In fact, non-mining fixed investment grew by 6 percent in 2015 (see **Figure 12**).

Figure 12. Mining and Non-Mining Private Fixed Investment

Contribution to percent change in real GDP from Q4 to Q4, percentage points, 2001-2015



Source: JEC Democratic staff calculations using data from the Bureau of Economic Analysis

Notes: Mining includes investment in petroleum and mineral exploration, shafts and wells; non-mining is real private fixed investment except mining

The impacts on employment: The oil and gas sector remains a relatively small part of the overall U.S. labor market. Even at its peak, oil and gas comprised only about 0.4 percent of total private nonfarm payroll employment.[61] Nonetheless, it contributed substantially to employment growth during the recovery. A recent

analysis concludes that oil and gas extraction led to an increase in U.S. employment of 725,000 and a 0.5 percent decrease in the unemployment rate during the Great Recession.[62]

Steeply falling petroleum prices have forced producers to slash payrolls and cut capital expenditures. Mining and exploration investment declined 35 percent in 2015, the largest year-over-year decline since 1986.[63] The impact is concentrated in only a few oil-producing states. A study finds that lower oil prices would adversely affect total employment in eight states—Alaska, Louisiana, North Dakota, New Mexico, Oklahoma, Texas, West Virginia and Wyoming—where concentration of energy-related employment is the highest.[64]

However, lower costs of production for energy-using firms could also lead to more hiring in non-energy sectors, as observed in the robust job growth in recent years.

The possibility of large indirect costs: Low oil prices may not only place substantial costs on American petroleum producers, but there may also be much larger indirect costs that extend far beyond the oil industry and cannot be captured adequately in standard economic analysis. Low prices may encourage higher levels of worldwide consumption of fossil fuels, which play a large role in global climate change. The long-term cost of climate change, to the extent that it is attributable to lower oil prices, is beyond calculation.

Slow Growth in China

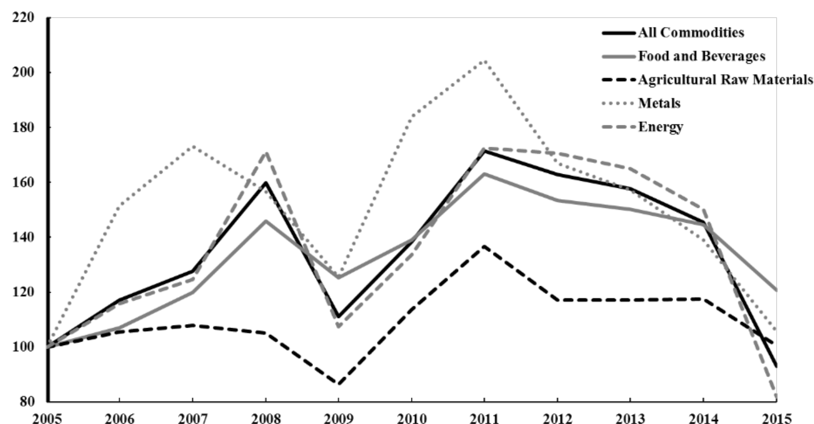
Slowing economic growth in China, the second largest economy in the world after the United States, has raised concerns about the impact this could have on the U.S. economy. China's real GDP growth averaged 10.7 percent from 2001 to 2008, but has dipped down to about 7 percent since 2012 and is projected to further decelerate to about 6 percent in the near term.[65] This so-called "soft landing" is primarily due to the Chinese government's

rebalancing reform agenda, as it attempts to shift the economy from investment-led to consumption-led growth.[66]

The impact of China's growth on global demand: The growth of the Chinese economy during the past two decades has been an important source of demand for global products. Chinese imports as a share of total world imports of goods and services climbed from 1.4 percent in 1990 to 8.8 percent in 2014. In comparison, U.S. imports as a share of the world imports of goods and services fell from 18.6 percent to 11.4 percent during the same period.[67]

The main mechanism through which the slowdown in China will affect the U.S. economy is through lower commodity prices. China is an important consumer in global commodity markets and lower Chinese demand has drastically reduced demand for commodities. Overall commodity prices fell by a staggering 35 percent between 2014 and 2015, mostly driven by the collapse of energy prices, and the International Monetary Fund projects that they will fall another 25 percent in 2016 (see **Figure 13**). Prices of U.S. corn and soybeans have fallen below their cost of production, and Chinese steel prices fell by 37 percent at one point last year.[68]

Figure 13. Global Commodity Prices
Index values in terms of real U.S. dollars, 2005 = 100



Source: JEC Democratic staff calculations using data from the International Monetary Fund and the Bureau of Economic Analysis

Notes: International Monetary Fund data are nominal monthly index values; data are averaged by year, adjusted for inflation using the Bureau of Economic Analysis GDP Implicit Price Deflator and reindexed to 2005

Declines in Chinese equity indices: The major Chinese stock market index, Shanghai Composite, has fallen by nearly 48 percent from its recent peak in June 2015. The stock market crash raised concerns for a full-blown recession, or a "hard landing."

However, the lost equity value should not pose a significant threat to China's real economy. The linkage between the equity market and the real economy is weaker in China than in the U.S. and most other developed economies because corporate fundraising is mostly conducted through bank loans and bonds, not by issuing stock. Consequently, lower stock prices have little impact on business investment in China. Stock holdings also comprise an insignificant share of household wealth.[69]

Still, the significant decline in the Shanghai Composite has rattled U.S. markets, contributing to the decline in U.S. equities during the first months of 2016. Further equity market declines in China could also create panic that spill over to its foreign exchange market and erode business and consumer confidence.

Preventing a currency crisis: Capital flight has become one of the biggest threats to the stability of the Chinese economy. Monetary policy normalization in the United States, coupled with China's domestic macroeconomic concerns, have led to massive capital outflows and put downward pressure on the value of the yuan—its exchange rate vis-à-vis the U.S. dollar has fallen by about 8 percent from January 2014 to January 2016.[70]

The prospect of further yuan depreciation will add deflationary pressure to the U.S. dollar in the near term, as Chinese imports comprise 23.2 percent of U.S. non-oil goods imports.[71] A weaker yuan will also boost U.S. imports from China, creating further drags on the net exports component of U.S. real GDP growth and could have a significant negative impact on the U.S. manufacturing sector.

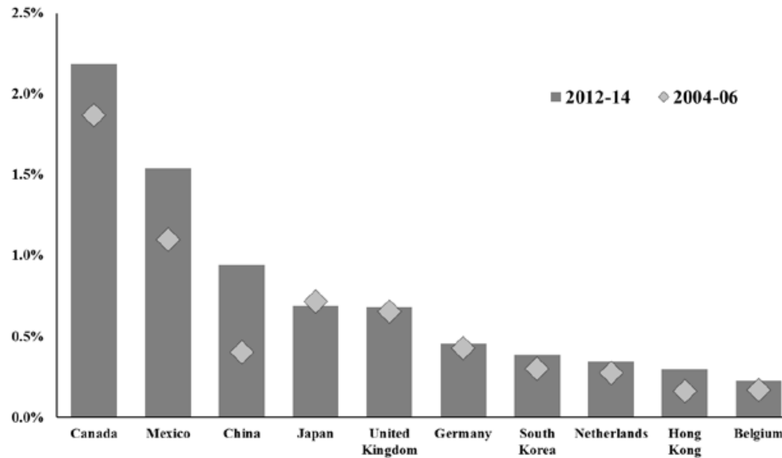
In order to prevent a currency crisis, most analysts expect the Chinese central bank to intervene by drawing down foreign exchange reserves and further tightening capital controls such as

limiting cash withdrawal outside China. China's massive foreign exchange reserve and relatively low foreign exchange debt should provide sufficient buffer, but further devaluation of the yuan seems likely.

The outlook for growth: One of the most significant factors putting downward pressure on growth in China is its rising debt. Debt levels in both public and private sectors have reached 282 percent of GDP in 2014, a level that is not sustainable, according to the McKinsey Global Institute.[72] China has relied on credit to stimulate growth since the global financial crisis in 2008, but it is no longer feasible to continue down that path.[73]

Meanwhile, excess capacity in housing and industry will continue to put downward pressure on housing prices and investment. These factors point to a further deceleration of growth in the near term, although China is still expected to incrementally add to global demand but at a markedly slower pace.

Nonetheless, the overall impact of China's decelerating growth on the U.S. economy is likely to be fairly limited. Even though the impressive growth of the Chinese economy in the past few decades has elevated China's importance as a driver of global demand, U.S. exports to China still represent less than 1 percent of GDP (see **Figure 14**).



Financial linkages between the two countries are also limited, although the *Report* suggests the possibility of a spreading contagion in the financial markets, with China as its origin.[74]

Major U.S. Trading Partners

The most important U.S. trading partners—Canada, Mexico and the Euro area—together comprised almost half of total U.S. exports in 2015. Weak growth in these countries puts downward pressure on U.S. exports and GDP growth.

Canada: Canada is the number one destination for U.S. exports, accounting for 19 percent of U.S. exports in 2015. Canada is a net exporter of petroleum, with crude oil production representing about 3 percent of the Canadian economy.[75] The decline in oil prices has also affected Canada—its real GDP contracted in the first half of 2015, before resuming modest positive growth in the second part of the year.[76] However, with substantial depreciation of the Canadian dollar, along with continued monetary and fiscal

easing, Canada's growth is expected to remain positive, albeit at a modest pace.[77]

Mexico: Mexico, the second largest export destination of the United States, also experienced disappointing growth in 2015 as a result of low oil prices. Industrial production was very weak this past year, in part because the mining sector experienced its worst year since 1993 amid low oil prices, and the manufacturing sector suffered from a slowdown in automobile production and sales to the United States. In the past decade, the Mexican government has increased spending with the extra tax revenue collected from the petroleum sector.[78] With lower oil prices, government expenditures could become contractionary and slow growth in 2016. In addition, the Mexican peso exchange rate vis-à-vis the U.S. dollar fell significantly in 2015, further lowering demand for U.S. imports.

The Euro area: The Eurozone sovereign debt crisis stabilized in the second half of 2015, with the currency bloc remaining intact after Greece entered negotiation to avoid an exit from the Eurozone. However, many downside risks remain in the area, such as the increasingly high government debt burdens that reached 93 percent of GDP in 2015.[79] And as discussed in the *Report*, even though the job market improved slightly in 2015, the unemployment rate in the region remains alarmingly high at 10.4 percent as of December 2015. The pace of recovery is also highly uneven across the member countries.

Other prominent near term challenges faced by the Euro area include the refugee crisis, which will further increase the burden on governments and reduce fiscal space for reacting to future downturns. Political uncertainties created by antiestablishment political parties across Europe also undermine business and consumer confidence. Most private analysts predict the growth in the Euro area will improve slightly relative to the past few years, but still be well below 2 percent in 2016.[80]

Emerging Market Economies

Emerging markets, a significant source of growth for global demand in the past several years, took a blow in 2015 as a result of the significant decline in commodity prices. Commodity exporters and countries that rely on extensive trade ties with China have experienced significant slowdowns over the past year due to depressed commodity prices and slowing Chinese import demand.

Many emerging markets, such as Russia and Brazil, were built on high commodity prices, and the recent price collapse has created major headwinds for their continued growth. While still accounting for over 70 percent of global growth, growth in emerging markets has been decelerating for the past five consecutive years, to 4 percent in 2015, its slowest pace since the 2008-09 financial crisis.[81]

In the latest update, the International Monetary Fund revised down its 2016 emerging market growth projection by 0.2 percentage points, to 4.3 percent. Even though the updated projection represents a slight pickup in growth compared to 2015, the downward revision is symptomatic of the fact that emerging markets continue to perform weaker than previously expected.

Many analysts initially viewed the deflationary forces in emerging markets as transitory. But an oversupply of labor and capital, together with an overcapacity in industries that borrowed heavily to build new production facilities over the past few years, will continue to exert downward pressure on the growth of emerging markets in the near term.

Effects of a Global Slowdown on the U.S. Economy

The strong dollar and net exports: Weaker growth abroad relative to the United States will continue to put upward pressure on the U.S. dollar and downward pressure on exports. With the dollar expected to stay strong, savings realized from lower commodity prices will likely be offset by an increase in imports of

non-commodity goods and a decline in exports. Therefore, net exports will continue to act as a drag to real GDP growth in the near term. The combination of stronger dollar and drags on net exports may slow the pace of Federal Reserve's normalization policy path.[82]

Uncertain effects: While the sluggish global growth will have some negative impacts on the U.S. economy, it is important to note that the effects are expected to be limited, as only 10 percent of value added in the U.S. economy is directly attributable to final spending in the rest of the world.[83] The slowdown abroad would have to be catastrophic for U.S. trade to have any major effect on U.S. GDP growth. Nonetheless, there are substantial risks for spillovers through other channels such as financial contagion as global financial integration continues to deepen, so the overall prospect remains highly uncertain.[84]

Policy implications: With weak global demand and uncertainties surrounding the effects of lower commodity prices on the U.S. economy, U.S. growth prospects will continue to rely heavily on domestic factors in the near term. Policymakers should set fiscal and monetary policies to adequately counter these global headwinds and sustain U.S. growth. Specifically, if domestic consumption growth is not sufficient to offset the drag from these global headwinds, policymakers should implement effective fiscal stimulus to help the economy achieve its growth objective.

Furthermore, the slow global growth outlook suggests that commodity prices will likely stay low for some time, so policymakers should take advantage of the lower construction costs to implement the much needed infrastructure projects when it is relatively cheap to do so.[85]

KEY LONG-TERM ECONOMIC CHALLENGES

Earlier sections of this report discuss headwinds that have slowed the recovery from the Great Recession, as well as the outlook for the economy in the short term. This section takes a broader look at three key challenges that long predate the recession and that the economy will continue to face in the years ahead.

The first challenge is mitigating the consequences of demographic trends, especially the aging U.S. population, which will continue to exert downward pressure on labor force participation and economic growth, while also straining the federal budget. The second challenge is to accelerate labor productivity growth, which has slowed in recent years. The third challenge is ensuring that that economic gains are shared more broadly in the future than they have been in recent decades.

Steps policymakers can take to address these three challenges are outlined in the final section of this report.

Demographics and Population Aging

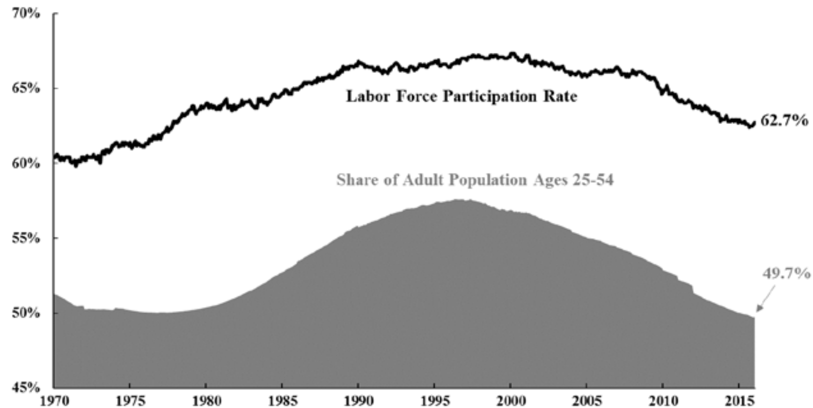
The size of the working-age population, and the share of this population participating in the labor force, are core drivers of economic growth. All else equal, if the number of people in the labor force is growing, GDP will increase. This was the case for much of the second half of the 20th century when baby boomers were entering adulthood and women began to participate in the labor force in much greater numbers than in the past. By contrast, if the size of the labor force is constant or shrinking, economic growth must come from other sources.

CBO estimates that the potential labor force (the number of people working or seeking work in an economy with full utilization of labor and capital resources) will grow just 0.5 percent per year over the next 10 years. While this matches the average from 2008 to 2015, it is down markedly from growth rates during earlier

decades. Average annual growth in the potential labor force has been trending down for years, from 2.5 percent from 1974 to 1981, to 1.6 percent from 1982 to 1990, to 1.3 percent from 1991 to 2001, to 1.0 percent from 2002 to 2007.[86]

Aging of the population: The U.S. population is older than ever before. This is due to a variety of reasons—the aging of the baby boom generation, declining birth rates and longer lifespans. In 1964, 9.5 percent of the population was at least 65 years of age. By 2004, this share had increased to 12.4 percent. By 2014, it was 14.5 percent. According to CBO, there are nearly two and a half times as many people age 65 and older today than there were 50 years ago, and this number is expected to increase by more than another 35 percent over the next 10 years.[87]

As the population has become older, the share of adults in their prime working years (ages of 25 to 54) has declined. This share peaked at around 57 percent in the mid-1990s but has since fallen to less than 50 percent (see **Figure 15**). In raw numerical terms, growth in the number of people in this age bracket has slowed to a virtual stop, from an average annual growth rate of 1.6 percent from 1965 to 2005, to an increase of just 0.1 percent per year since then.



The rise and fall of the labor force participation rate has closely tracked the aging of the baby boomer generation (individuals born between 1946 and 1964). The oldest of the baby boomers entered their prime working years beginning in 1971, and their entrance into the labor force was a significant driver of labor force participation rate increases during the latter part of the 20th century. During this period, the growth in the size of the labor force was an important contributor to growth in GDP. However, as baby boomers have reached retirement age, with the first turning 65 in 2011, labor force participation has fallen.

One element that weighs against the trend of declining labor force participation is that many older Americans remain in the labor force longer than they did in the past. Although in 1995 only 38 percent of people ages 62 to 64 were in the labor force, in 2015 more than 50 percent were. Participation is also higher among individuals 65 and older, which has traditionally been considered retirement age. Among 65 to 69 year olds, the share in the labor force increased from 22 percent to 32 percent from 1995 to 2015.

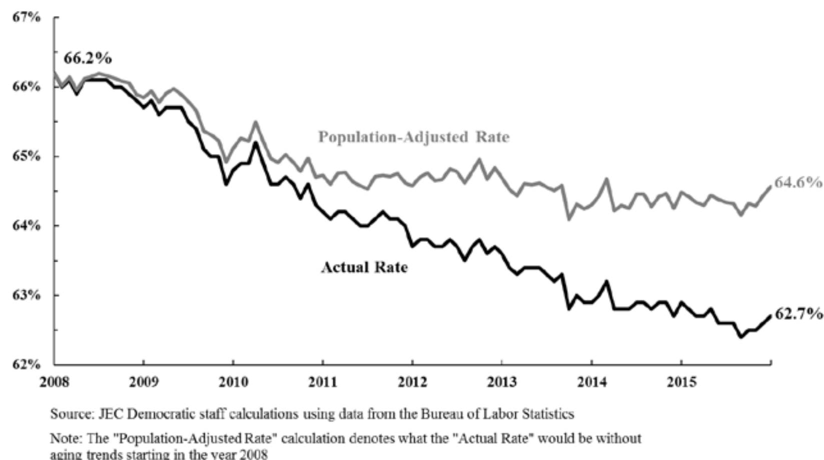
Nonetheless, the trend toward later retirement for many workers in recent years offsets only a small portion of the aging effect on the overall labor force participation rate. There remains a sharp drop off in participation as people age: for example, 72 percent of 55 to 59 year olds were in the labor force in 2015, as were 62 percent of 60 to 61 year olds and just 50 percent of 62 to 64 year olds.

This long-anticipated shift in the population's age distribution has served as a drag on labor force growth in recent years, and it is not expected to reverse. Federal Reserve Chair Janet Yellen has noted that this trend will continue in the coming years and that, consequently, the labor force participation rate should not be expected to return to its prerecession level anytime soon.[88]

Economists have attempted to quantify the effect of an aging population on the labor force participation rate. Researchers at CBO, the CEA and the Federal Reserve have found that about half of the recent decline in the labor force participation rate is due to aging of the population.[89] An analysis by the JEC Democratic staff confirms this. If the age distribution today were the same as at the start of 2008, the decline in the labor force participation rate over the past eight years would have been nearly cut in half. In other words, the labor force participation rate would be nearly 2 percentage points higher than it is today (see **Figure 16**).

Figure 16. Aging Trends Explain About Half of Decline in Labor Force Participation Rate

January 2008 to January 2016



Although policymakers can and should take steps to boost workforce participation across various demographic groups (as discussed in the policy section below), the aging population will continue to exert downward pressure on the labor force participation rate in the years ahead regardless of the policies pursued.

Slowdown of women entering the labor force: Another factor that boosted labor force participation during the latter half of the last century was the steady increase in participation among women. In 1950, roughly one in three women ages 16 and older were in the labor force. By 2000, after five decades of steady growth, the share had risen to three in five. That increase in participation roughly translated into an additional 30 million women in the paid labor force.

Several factors were behind the steady growth in women's labor force participation. The women's equality movement sparked vast changes in women's roles. Widespread access to household technologies such as electric washing machines, dryers and dishwashers helped to free up time for women to take jobs in the

paid workforce. More reliable contraception enabled women to delay starting families while they pursued their careers. And the increase in women's earnings relative to men's helped to draw more women into the paid labor force.[90]

In addition, many families have depended on women's earnings to meet increased financial pressures stemming from the rising costs of raising a family. Between 1960 and 2013, the amount a typical middle-income, two-parent family spent on providing for a child through age 17 increased 24 percent in (inflation-adjusted) terms.[91] The composition of these expenses also changed, with the share of spending going to child care and education growing ninefold from just 2 percent in 1960 to 18 percent in 2013.[92] The share of family income spent on health care doubled to 8 percent during that time.[93] The rising cost of college has put additional strain on family budgets, with the average cost of attending a four-year public university more than doubling in real terms between 1963 and 2013.[94]

However, after peaking in 2000, the female labor force participation rate has plateaued (see **Figure 17**). Between 2000 and the start of the recession in 2007, women's participation rate hovered between about 59 and 60 percent. In the wake of the recession, the share of women in the labor force has fallen to around 57 percent. While part this trend is attributable to population aging, the labor force participation rate for prime-age women has declined as well, from about 77 percent in 2000 to the current level of about 74 percent. The decline in women's labor force participation since its peak in 2000 is due in part to a lack of policies that would allow them to remain in the workforce while caring for children or other family members, such as paid leave and workplace flexibility.[95]

Figure 17. Labor Force Participation Rates by Gender
January 1950 to January 2016

Decline in male labor force participation: The share of men in the labor force has been steadily falling for over half a century during both Democratic and Republican administrations. This has stemmed in part from a decline in middle-skilled job opportunities due to the effects of globalization and technology.[96] As a result, men in their prime working years (ages 25 to 54) without a college degree have experienced larger declines in workforce participation over the past several decades than men with college degrees.[97]

The decline accelerated during the recent recession and has generally continued throughout the recovery, in part due to the aging of the baby boomers. Looking only at men ages 25 to 54, the participation rate has fallen from a high of nearly 98 percent in the 1950s to around 91 percent on the eve of the Great Recession in 2007 to about 89 percent today.

Impact of increased schooling on labor force participation: Labor force participation among 18 to 24 year olds has been declining for several decades as more young adults have delayed entering the workforce in favor of pursuing education beyond high school, a response to the growing wage premium for workers with

more education.[98] In 1980, only about 25 percent of 18 to 24 year olds were enrolled in college. By 2014, that share had increased to 40 percent.[99] Higher school enrollment reduces participation in the labor force among young adults in the short term. However, in the future, it is likely that they will have stronger attachment to the labor force and higher earnings.

Putting declines in labor force participation in context: Declining labor force participation poses a significant challenge for future economic growth. Labor force participation among prime-age workers (ages 25 to 54) in particular remains lower than economists and policymakers would like and below what would be expected in a robust economy. A portion of this decline reflects the lingering impact of the Great Recession on the labor market. However, most of the decline in labor force participation is due to reasons that long predate the Great Recession.

Some drivers of the long-term decline are worrisome, such as the long-term trend toward lower workforce participation among less educated men and the more recent decline in the share of women in the workforce.

Others drivers represent healthy developments for the economy, namely the increase in young people furthering their education. Spending time out of the labor force to acquire more training typically translates into an investment in human capital development, which has individual benefits, as well as benefits for the broader economy. This is also the case for temporary exits from the labor force by parents to care for young children, which benefits their children's development. The largest contributor to the decline, the aging of the baby boomers, may also be considered a positive to the extent that it reflects older Americans leaving the labor force because they are financially prepared to retire.

Rebutting misleading claims about labor force participation: Some critics of the Obama administration decry the decline in the labor force participation rate, using its drop to levels last seen during the Carter administration to imply that the economy remains very weak, while downplaying the long-term

demographic drivers of the trend. Others have significantly overstated the severity of the situation by pointing to the fact that more than 90 million Americans—about 40 percent of the adult population—are not working.[100] This misleading claim is rooted in the fact that there are more than 90 million people over the age of 15 not in the labor force. However, half of these people are either elderly or disabled. An additional 18 percent are younger than 65 and enrolled in school, and 6 percent are under 65, not in school, not disabled and have a child under the age of six.[101]

Not only has this specific claim been fact checked by several organizations and found to be misleading, the conservative American Enterprise Institute has noted, "it's non-factual to suggest that nearly 100 million American [sic] are unemployed."[102]

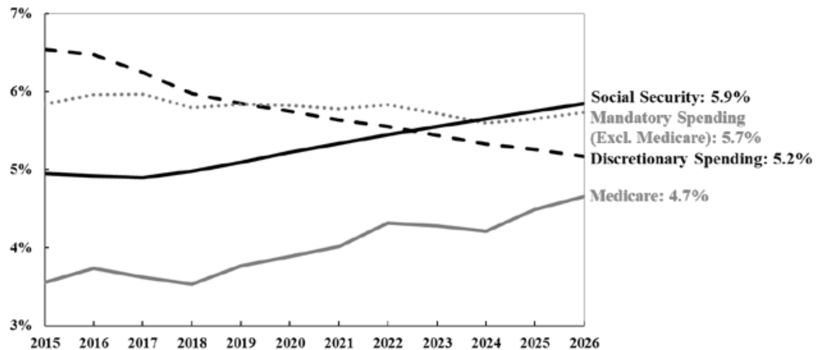
The impact of an aging population on the federal budget: In addition to constituting a drag on economic growth, the aging of the baby boomers into their retirement years is perhaps the single largest contributor to projected budget deficits in the years to come.[103] This is due to the fact that a ballooning number of people will begin to draw on the Social Security and Medicare benefits they have earned. In fact, according to an analysis by former CBO Director Douglas Elmendorf, if all components of the budget other than Social Security and Medicare were held at their current levels as a share of GDP, the aging population alone would push the primary budget deficit (the deficit excluding interest) well above the actual long-term CBO projections.[104] Other factors—including declining discretionary spending as a share of GDP—are projected to partially offset the budgetary impact of population aging.

According to the most recent CBO 10-year budget and economic outlook, published in January, Social Security outlays are expected to increase as a share of GDP from 5.0 percent in 2015 to 5.9 percent in 2026, while Medicare outlays are expected to increase from 3.6 percent to 4.7 percent (see **Figure 18**).[105] For Medicare, the projections account for not only the impact of the aging population but also rising health care costs, which are

generally considered to be the another major driver of long-term growth in the deficit.

Figure 18. Aging Population Will Raise Spending on Social Security and Medicare; All Other Spending Projected to Decline

Primary (non-interest) spending as a share of Gross Domestic Product, 2015 (actual) to 2026 (projections)



Source: JEC Democratic staff calculations using data from the Congressional Budget Office, *The Budget and Economic Outlook: 2016 to 2026* (January 2016)

Notes: Discretionary spending includes both defense and nondefense; mandatory spending excluding Medicare includes Medicaid, the Children's Health Insurance Program (CHIP), health care exchange subsidies and a variety of income security, education and veterans programs

By contrast, spending on virtually all other functions of government is projected to decline as a share of GDP over the coming decade. Nondefense discretionary spending is projected to fall from 3.3 percent of GDP in 2015 to 2.6 percent in 2026, which would be 1.2 percentage points below its 50-year average and the lowest level since at least 1962, when recordkeeping began. Defense discretionary spending is also projected to fall to its lowest level on record as a share of GDP, from 3.3 percent in 2015 to 2.6 percent in 2026.

While Medicaid spending is projected to increase from 2.0 to 2.3 percent of GDP, in part due to rising health care costs, spending on other mandatory programs such as the Supplemental Nutrition Assistance Program (SNAP), unemployment insurance, Temporary Assistance for Needy Families (TANF) and Pell Grants is projected to decline as a share of GDP, from 3.9 percent in 2015 to 3.4 percent in 2026.

In dollar terms, Social Security and Medicare alone are projected to account for 45 percent of total outlays in 2026, while net interest will account for another 13 percent. Defense and nondefense discretionary spending are each projected to account for about 11 percent of total outlays in 2026, down from 16 percent in 2015.

Increases in spending on Social Security and Medicare account for nearly half (48 percent) of the projected increase in total nominal outlays between 2016 and 2026. Net interest accounts for another 23 percent of the projected increase in outlays. By contrast, nominal increases in nondefense discretionary spending are projected to account for just 4 percent of the increase in outlays over the next decade.[106]

Some imply that rising deficits and debt stem from runaway government spending, or excessive waste, fraud and abuse. However, it is clear that deficits are projected to rise largely because of a long-anticipated increase in older Americans as a share of the population, which significantly increases spending on Social Security and Medicare, along with rising health care costs. For decades, there has been a broad bipartisan commitment to protecting older Americans from being impoverished or unable to obtain medical care.

There has been significant progress in recent years in reducing excess growth in health care costs, in part due to cost-control measures included in the ACA as well as the permanent Medicare Sustainable Growth Rate (SGR) fix passed last year.[107] The impact is reflected in lower long-term projections for Medicare spending as a share of GDP. In 2007, CBO projected that Medicare spending would be 14.8 percent of GDP in 2082.[108] However, CBO now estimates that Medicare spending will be 8.9 percent of GDP in 2082.[109] Repeated Republican efforts to repeal the Affordable Care Act, if successful, would undercut this progress and lead to increases in deficits.[110]

In the early 2000s, President George W. Bush and Republican-led Congresses knew the coming demographic wave would strain the federal budget. However, they squandered the surpluses that had

been accumulated during the final years of the Clinton administration on tax cuts tilted toward the wealthy and borrowed heavily to pay for wars in Iraq and Afghanistan.[111]

Long-term demographic trends will continue to strain the federal budget in coming years, in particular by increasing the portion of the deficit that is attributable to Social Security and Medicare obligations. Policymakers will be forced to grapple with this, even though it is driven in large part by factors beyond their control.

Slowdown in Labor Productivity Growth

Labor productivity growth is a key engine of economic growth. Large increases in productivity during the decades following World War II coupled with substantial increases in the size of the workforce helped make the U.S. economy the most powerful in the world. While the slowdown in the growth of the working-age population is virtually certain to continue to exert downward pressure on economic growth in the years ahead, the contribution of labor productivity to growth remains an open question.

In recent years, labor productivity growth has slowed in the United States and in other advanced economies around the world.[112] Though recent trends are reason for concern, it is too soon to know whether persistently low labor productivity growth is likely, or whether productivity growth will accelerate as the economy continues to heal from the Great Recession. The answer may depend to a large extent on policy choices.

Framing the issue: There are two principal ways to raise the economy’s output: either increase the number of workers or increase output per worker. The amount of real output per hour of labor is known as labor productivity. Productivity is largely driven by market forces—competition encourages companies to try to produce goods and services as efficiently as possible. However, government can play a large role in driving productivity growth as well by making long-term investments in education, infrastructure, and research and development.

Higher labor productivity is particularly important because, in general, if workers produce more, this leads to increases in real wages and living standards. However, this process does not happen automatically. A decrease in the power of labor or an increase in the market power of firms can keep workers from sharing in the benefits of productivity growth. In recent decades, labor productivity growth has outstripped growth in wages for most workers.[113]

Moreover, productivity improvements, in particular those stemming from technological advancements, have affected different categories of workers in different ways. Automation has contributed to job losses concentrated among those with lower levels of education, while it has led to higher wages for those toward the top of the income spectrum.[114] There is clearly work to do to ensure that workers reap the fruits of their labor and that workers up and down the income spectrum benefit from productivity growth. This topic is discussed later in this report.

Nonetheless, labor productivity growth is effectively a prerequisite for growth in real wages and living standards, and increasing it should be a priority for policymakers.

Drivers of increases in labor productivity: Labor productivity growth can come from three categories of sources. First, it can come via capital deepening, meaning that each worker has more machines, tools and other capital to work with, which allows them to produce more. Second, workers can be more productive if they have more human capital, for example higher levels of education and training. Finally, labor productivity can increase through improvements in total factor productivity (TFP), a nebulous but critical concept that essentially means that more can be produced with the same levels of labor and capital inputs. Innovation—new technologies and processes that make workers more efficient—is generally considered to be the foremost driver of TFP growth.[115] Better matching of workers with positions that align with their skills and experience can also raise TFP.

Historically, other drivers of labor productivity growth in the United States include the arrival of immigrants who complement native-born workers' skills and often develop new innovations, entrepreneurs who launch businesses and patent new products, building out of transportation and other infrastructure networks, and expanding international trade.

The Federal government has played an invaluable role in raising labor productivity. Investments in the interstate highway system have helped to connect workers with jobs and allow businesses to move their products to market. From land-grant colleges and universities to the GI Bill to Pell Grants, public investments have helped more Americans get an education. And federal investments in research and development have laid the groundwork for numerous breakthrough innovations from Whirlwind (among the first digital computers) to ARPANET (the basis for the Internet) to the mapping of the human genome.[116]

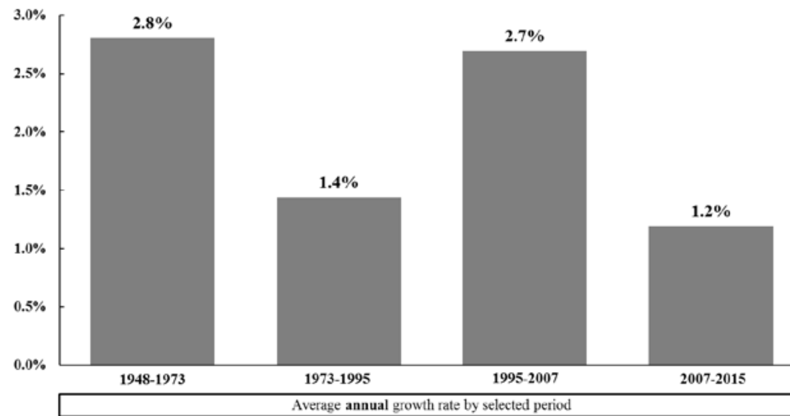
In each of these cases, the government has a role to play because of shortcomings in private markets, which economists call "market failures." The private sector alone does not invest at socially desirable levels in infrastructure, education or research and development because those are to a large extent public goods with spillover effects that cannot be captured by individual businesses.[117] They are all areas where government investment is necessary for the betterment of the country.

Trends in labor productivity growth: It is important to measure productivity over extended time periods because it is a volatile data series. Fluctuations on a quarter-to-quarter or even year-to-year basis are not necessarily indicative of underlying trends. The postwar period can be divided into several periods with distinct levels of productivity growth (see **Figure 19**). From 1948 to 1973, labor productivity in the nonfarm business sector grew at a rate of 2.8 percent per year, in part due to World War II-era innovations filtering their way into civilian applications.[118] The postwar boom faded in the 1970s and 80s, with labor productivity growing at an

average annual rate of 1.4 percent over the 1973 to 1995 period, half the rate of the earlier decades.

In the 1990s, innovations in information technology accelerated and new products from computer software to telecommunications equipment made their way through the economy. This led labor productivity growth to accelerate to an average annual rate of 2.7 percent from 1995 to 2007. However, since the onset of the Great Recession in 2007, growth has slowed to just 1.2 percent per year.

Figure 19. Labor Productivity Growth Has Declined in Recent Years
Average annual growth rate in labor productivity in the nonfarm business sector, 1948-2015



Source: JEC Democratic staff calculations using data from the Bureau of Labor Statistics
Notes: Calculations are made using annual averages for real output per hour of all persons in the business sector; data are preliminary for Q4-2015

Analyzing the recent slowdown: Some argue that the recent slowdown in observed labor productivity is an artifact of data mismeasurement—in particular an inability to fully capture the value of quality improvements and real output in the digital sector.[119] However, recent research shows that this is unlikely to be more than a modest contributor to the trend.[120] Several key factors that may be driving the slowdown are described below.

<u>Low business capital investment.</u> Typically over the postwar period, capital intensity (the amount of capital per hour of labor) and labor quality have made consistently positive—and generally

stable—contributions to productivity growth, with movements in headline labor productivity driven largely by fluctuations in TFP growth.[121] However, capital intensity actually declined from 2010 to 2014, constituting a drag on productivity growth.[122] Lower rates of capital investment stem to a great extent from lower aggregate demand in the aftermath of the Great Recession.[123] Had demand been higher, there would have been a greater incentive for businesses to invest in ways to increase output.

Possible drop off in innovation. Annual TFP growth has only been about half its historical average since 2007, further dragging down labor productivity growth.[124] Some suggest that the slowdown in productivity growth over about the past decade has occurred because the benefits from the information technology revolution have started to fade, and new innovations have not been sufficient to provide a further boost to productivity growth.[125] This may be due in part to decreased government investment in research and development, which has historically played an important role in the innovation process. While federal research and development spending as a share of GDP exceeded 1 percent every year from 1956 to 1992, it has been below 1 percent every year since then.

Federal research and development spending increased in 2009 and 2010 in part due to the Recovery Act, a critical piece of legislation that served the dual purpose of supporting the recovery and laying the groundwork for long-term improvements in productivity. However, federal research and development spending has since fallen to its lowest level as a share of the GDP since the 1950s (0.7 percent in 2015), less than half its peak of 1.8 percent in the 1960s.

While, encouragingly, private business investment in research and development has picked up over the past couple of years, the decline in public investment is disconcerting. The government has a critical role to play in driving innovation in the U.S. economy, in particular by funding basic research, a public good that has substantial spillovers to the broader economy that individual businesses are unable to capture. Business expenditures, by

contrast, tend to be concentrated in development because it has more direct commercial applicability.[126]

One example of how the public and private sectors complement each other is in the field of biomedical research. Research funding from the Department of Health and Human Services (HHS), including the National Institutes of Health, goes to support basic and applied research rather than later-stage development.[127] Biotech firms then build upon the knowledge base that this research establishes to develop products that save lives and improve Americans' health and quality of life. For example, HHS-funded research led to the development of the first antiretroviral drug that increased life expectancy for HIV patients, AZT.[128]

Decline in startups. One possible contributor to the productivity slowdown is the decline in new business startups. New firms have been steadily declining as a share of all firms for decades.[129] This is worrisome because research shows that competition and dynamism in the business sector—with new, innovative firms replacing older firms—has a major impact on productivity growth.[130] By contrast, established firms may have less incentive to innovate in the absence of new market entrants.[131]

Encouragingly, an index measuring trends in startup activity compiled by the Kauffman Foundation halted its downward slide last year, increasing in 2015 by the most it had in two decades.[132] Nonetheless, it remains well below the level it was at during much of the 1990s and 2000s.

Increase in market power of existing firms. In general, it is a good thing when small firms grow into large firms that employ increasing numbers of workers. Large corporations can be more productive via economies of scale, and in certain instances having one firm or firms with substantial monopoly power in an industry can make economic sense because of network externalities (for example, in the case of telecommunications). But when large corporations increase their profits not by increasing their productivity but by stifling competition, this can be harmful.

As the *Report* discusses, some argue that an increase in market power of existing firms leads to barriers to entry for startup firms.[133] A recent paper by CEA Chairman Jason Furman and former OMB Director Peter Orszag found that the revenue share for the top 50 firms in three-quarters of all sectors of the economy increased over the 1997 to 2007 period.[134] To the extent that powerful incumbent firms influence the regulatory environment to the detriment of new challengers, this harms productivity.

The *Report* devotes a significant amount of space to this topic, which has received little public attention to date. While it is often assumed by economic theory that markets are perfectly competitive and that the free market will generate the most productivity and the best outcomes, in practice this does not always occur. Larger firms that enjoy a degree of monopoly power may be able to extract "economic rents"—profits beyond what are necessary to keep labor at work or capital invested—that not only harm productivity growth but also drive up prices for consumers and increase wage inequality. As the *Report* notes, this topic has been understudied by economists and merits further research.[135]

Plateauing of educational attainment. While rapid increases in educational attainment fueled human capital accumulation and productivity growth through much of the postwar period, the rate of increases has slowed over time. This is despite the increase in the demand for workers with higher levels of education and the wage premium these workers receive. As noted in the *Report*, the growth rate of the college-educated population slowed from 3.9 percent per year from 1960 to 1980 to 2.3 percent per year between 1980 and 2005.[136] The share of people ages 25 to 29 with a bachelor's degree or higher increased from 11 percent in 1960 to nearly 23 percent in 1980 to about 29 percent in 2005.[137] By 2014, that share had increased to 34 percent.

Skills mismatch. A related challenge could be a growing mismatch between workers and the education and skills needed for available jobs. Some surveys of businesses suggest that they are having difficulty finding workers with the skills they need for the

positions they have open.[138] One indicator of a possible skills mismatch is the still depressed level of "churn" in the labor market, the rate at which people switch jobs (often to go to positions that are better matches for them).[139] The *Report* discusses several possible reasons for this, including the decline in new entrepreneurial firms and obstacles to worker mobility such as housing regulations and occupational licensing.[140]

The Affordable Care Act seeks to enhance worker mobility and improve job matches by reducing "job lock."[141] In the past, workers may have chosen to remain in jobs that were not the best match for their skills and abilities in order to keep health insurance coverage. Decoupling quality, affordable health insurance from the employer model allows people to take more risks, move across the country in search of a new job that better suits their skills and interests, or even strike out on their own and start a new businesses, which could help to increase entrepreneurship.

A lack of family-friendly policies such as paid family leave can also exacerbate the skills matching challenge, for example if women or men leave jobs that were otherwise a good fit for them.[142]

Global perspective: Most of the trends discussed in this section are not unique to the United States—far from it. As a recent OECD report found, the slowdown in productivity growth in recent years is common across advanced economies.[143] So too are the trends toward lower capital investment growth, the plateauing of typical levels of educational attainment and the decline in business startups as a share of all firms. In fact, start up rates and growth in labor productivity overall has held up comparatively well in the United States relative to the vast majority of other advanced economies discussed in the OECD report.

One implication of this finding is that—despite the claims of some—tax and regulatory policies in the United States are not a major factor behind the productivity slowdown, since a similar trend is occurring in countries around the world with all manner of tax and regulatory systems.

Outlook for the future: Productivity is a critical engine of growth, and it will be even more important in the future given existing demographic trends. The big question moving forward is whether productivity growth can accelerate to rates approaching what the economy experienced in past decades, or whether there are structural factors fueling the slowdown that will be difficult to counteract. Economists are not in agreement on the answer. Robert Gordon, for example, has made the case that the innovations that drove solid productivity growth in the immediate postwar decades, from air conditioning to airplanes, were largely one-time factors stemming from the second industrial revolution, unlikely to be repeated moving forward. In the title of a recent paper, he raises the question "Is U.S. Economic Growth Over?"[144]

Conversely, both the OECD paper and CEA Chairman Jason Furman are more optimistic about the outlook for labor productivity growth—if policymakers can take appropriate steps to foster it.[145] Both have argued that the slowdown in business investment since the Great Recession can be traced largely to cyclical factors. With less demand for their products, businesses were less motivated to invest in methods that would increase productivity. The high fixed costs involved with many capital investments likely made them hesitant to invest even as the recovery has taken hold, due to lingering uncertainty.[146]

A positive sign for the future is that business investment in R&D has picked up recently. Should demand further strengthen, it is likely that capital investment will rise to boost labor productivity to meet heightened demand. The *Report* describes two developments in particular that show promise: robotics and digital communications technology.[147] In both cases, policymakers will need to work to address the potential impact on inequality that could arise from increasing innovation in these areas. Other sectors where innovation could further productivity growth and improvements in quality of life include clean energy and medicine.

For its part, the Congressional Budget Office, in its most recent 10-year Budget and Economic Outlook, noted that the deep

recession and its enduring consequences have led it to lower its estimate of potential TFP growth, a major contributor to decreases in its estimates of potential GDP growth overall over the coming decade.[148] However, CBO does expect potential labor productivity growth to accelerate toward the back-end of the 10-year window, increasing from a 0.9 percent average annual growth rate from 2008 to 2015 to a 1.5 percent rate from 2021 to 2026.[149]

The OECD report discusses several policy approaches to foster faster labor productivity growth around the world. These include: increasing public funding for basic research, improving the transmission of innovations from the most innovative firms to other firms throughout the economy, promoting competitive markets so that incumbent firms do not have an insurmountable advantage over often more innovative newcomers and enhancing lifelong education and training to reduce skill mismatches.[150] U.S. policymakers should consider these and other options discussed later in this report in order to boost labor productivity.

Rising Inequality

The size of the labor force and the productivity of workers are the two core components of economic growth. However, raising overall economic growth is not sufficient for all Americans to get ahead: policymakers must also work to ensure that economic gains are shared more broadly in the future than they have been in recent decades. The *Report* devotes its first chapter to describing the causes and consequences of inequality in the United States, and many of the policy proposals outlined in the *Report* and by the Obama administration in its FY 2017 budget would advance the critical goal of promoting shared prosperity.

This section summarizes key trends related to increased economic inequality in the United States. While many of these trends were exacerbated by the Great Recession, they have developed over decades. It then turns to a discussion of how economic well-being varies across the states. The section describes several factors that are driving inequality, including globalization, the reduced

bargaining power of labor and technological innovations that leave behind workers who do not have the skills to adapt to change. It concludes by underscoring that inequality—in particular inequality of opportunity—undermines overall economic growth.

Trends in economic inequality: President Obama has called growing inequality "the defining challenge of our time."[151] Former Fed Chairman Ben Bernanke has warned that rising inequality is "a very bad development…creating two societies."[152] His predecessor Chairman Alan Greenspan has said he considers income inequality "the most dangerous part of what's going on in the United States."[153] Most recently, current Fed Chair Janet Yellen cautioned that widening inequality leads to "stagnant living standards for the majority."[154]

Economic inequality takes three principal forms: inequality of income, inequality of wealth and inequality of opportunity. These three channels are discussed in the *Report*. They are also considered in more detail below.

The trend of widening inequality predates the Great Recession. In fact, in the period immediately following the 2007 to 2009 downturn, there was by some measures a pause in the trend. Households at the upper end of the distribution were hit hard by large losses in wealth, while households outside the top of the distribution benefited from increased safety-net spending.[155] However, the trend toward widening inequality resumed during the recovery as the stock market soared and high-skilled workers made significant gains. Now, by many common measures of economic inequality, the gap between the haves and have-nots has reached near-record levels.

Economic inequality is a global challenge faced by nearly every country. But that challenge is particularly pronounced in the United States. The so-called Gatsby Curve—a plot showing the correlation between income inequality and economic mobility—shows the United States has far greater income inequality and far less economic mobility than many other advanced economies.[156]

Incomes. The years following the end of World War II marked a period of shared growth. Rapid labor productivity growth, in combination with the influx of women into the paid labor force, led to a decline in income inequality. Average income for households in the bottom 90 percent of the income distribution grew by 2.8 percent per year between 1948 and 1973, a pace that led incomes to double about once every generation.[157] During that time, the share of total income going to the bottom 90 percent increased slightly, and the share of income going to the top 1 percent decreased by almost one-third.[158]

Since the 1970s, the disparity in incomes between those at the top and bottom of the distribution has grown.[159] Incomes have risen more rapidly for the highest-income families, while they have stagnated or risen only slightly for the rest of families.[160] In 2014, income for families at the 95th percentile was about 60 percent higher than it was in 1973, while income for families in the middle (50th percentile) was about 20 percent higher. For the poorest fifth of families (20th percentile), income was virtually unchanged.[161]

As a result, income inequality has increased and the concentration of income at the top of the distribution has neared an all-time high. In 2014, 18 percent of all income went to the top 1 percent of earners.[162] And as it has been every year since 1987, that share is markedly higher than in other G-7 countries.[163]

The trend of a greater concentration of income at the very top of the distribution results from growing inequality in both labor income—wages, salaries and benefits—and capital income—capital gains, dividends and interest. An analysis by economists Thomas Piketty and Emmanuel Saez found that about two-thirds of the increase in the top 1 percent's share of income between 1970 and 2010 was due to increased inequality within labor income, while the remaining roughly one-third was due to increased inequality within capital income such as capital gains and dividends.[164] As the *Report* notes, policymakers in the recent past have focused almost exclusively on income from labor. But to

address inequality at a deeper level, policymakers must also consider inequality in capital income.[165]

CBO projects that earnings for higher-income individuals will continue to grow faster over the next 10 years, an indication that current trends in income inequality in the United States are not expected to reverse anytime soon.[166]

Wealth. If trends in income inequality are cause for concern, trends in wealth inequality are even more alarming. Limited data make measuring wealth inequality more difficult than income inequality.[167] However, the available sources of wealth data suggest that wealth, which is heavily influenced by income, is significantly more concentrated than income. The most recent Survey of Consumer Finances conducted by the Federal Reserve shows that the top 3 percent of households received 31 percent of before-tax income, but held 54 percent of wealth in the United States. The bottom 90 percent of households received 53 percent of before-tax income, but held only 25 percent of wealth.[168]

The share of wealth held by the very top of the distribution has been increasing consistently over about the past 25 years, while the share held by the bottom 90 percent has steadily fallen. As the *Report* notes, "the loss in wealth share experienced by the bottom 90 percent of households…is accounted for by the rise in share captured by the top 3 percent."[169]

Data which examine wealth at the very top of the distribution show that the growth in wealth inequality over the past several decades has been driven by the dramatic increase in the share of wealth held by the top 0.1 percent of households.[170] In other words, the very rich are pulling away from the rich, and the rich are pulling away from everyone else. Those 160,000 households in the top 0.1 percent combined to hold 22 percent of wealth in the United States in 2012, a more than threefold increase since 1979 and nearly matching what it was just before the Great Depression.[171]

Several factors contribute to the dramatic rise in wealth inequality, including uneven growth in incomes across the distribution and

disparities in savings rates. As the *Report* explains, economists Emmanuel Saez and Gabriel Zucman theorize that "income inequality has a 'snowballing effect' on the wealth distribution: a larger share of income is earned by top wealth holders, who then save at higher rates, which pushes wealth concentration up; this dynamic leads to rising capital-income concentration and contributes to even greater top income and wealth shares."

This becomes a self-perpetuating cycle, with the wealthy having an increasingly large advantage over everyone else, and passing along even greater opportunities to their children. In the meantime, the rest of the country falls further behind.

<u>Opportunity.</u> The American Dream was built on the premise of equal opportunity. However, as a result of many changes in the economy which are discussed in more detail below, large segments of the U.S. population face barriers to achieving their full economic potential, putting the American Dream increasingly out of reach.

Quantifying inequality of opportunity is difficult, if not impossible. However, measures of economic mobility—the likelihood that a child raised in one income group will move to a different income group as an adult—provide a useful way to gauge differences in opportunity. The odds of moving from the bottom to the top in the United States are not good. Forty-three percent of Americans raised in the bottom income quintile remain there as adults, while 40 percent of those raised in the top quintile maintain that status.[172] As President Obama has stated, "A child born into the bottom 20 percent has a less than 1-in-20 shot at making it to the top 20 [20 percent]."[173]

Economic mobility in the United States has continued to lag behind mobility in other advanced economies. A common metric used to measure economic mobility is the correlation between the earnings of fathers and sons (women's earnings across generations are more difficult to analyze because they may spend more time out of the labor force). Among OECD countries, the only ones that have higher correlations between the earnings of fathers and sons

are the United Kingdom, Italy, Chile and Slovenia.[174] In Denmark, Norway, Finland and Canada, the correlation between a father's and son's earnings is less than half of what it is in the United States.[175] A child born in the bottom income quintile in Canada is nearly twice as likely to reach the top quintile as child born in the bottom quintile in the United States.[176]

While economic mobility in the United States has remained about the same over the past 25 years, the cost of immobility has increased, since the lifetime gaps in earnings between those at the top and bottom have grown dramatically.[177]

Disparities in economic well-being: There are wide variations in economic well-being across the U.S. population. Those facing the largest gaps in opportunity generally have lower incomes and hold less wealth. Race, ethnicity, gender and education are all factors in economic well-being. Recent labor market developments for these groups are discussed in the "Overview of Macroeconomic Conditions" section earlier in this report.

In addition, during the 114th Congress, the Joint Economic Committee Democratic staff has published reports which provide a detailed examination of some of the groups that have borne the brunt of the rise in economic inequality in the United States. These include reports entitled *Economic Challenges in the Black Community*, *The Economic State of the Latino Community in America* and *How Working Mothers Contribute to the Economic Security of American Families*. The staff will continue to examine the economic barriers facing segments of the population.

Prospects for workers and their children depend in part on where they live. Rural economies in particular have often struggled in recent years. The following section highlights economic inequality across the states, focusing on jobs and unemployment, income, poverty, income inequality and economic mobility, which all vary significantly across the United States. In some cases these disparities have arisen in recent years, while in other instances they long predate the recent recession and recovery.

Jobs and unemployment. Differences in the employment situation across the states are in part due to differences in the mix of industries in each state, as well as differences in the typical level of education of the state's workers. Some states experienced severe job losses during the Great Recession, while employment in others declined more modestly. Approximately three-quarters of states have now recovered all of the private-sector jobs lost during the economic downturn.[178] Unemployment rates in December 2015 ranged from a low of 2.7 percent in North Dakota to a high of 6.8 percent in Mississippi.

Income. Compensation for middle-class workers, as measured by median household income in 2014 (the most recent year for which data are available), also varies widely by state, from a high of $76,200 in Maryland to less than half as much in Mississippi ($35,500). Median income is below $43,000 in four other states: West Virginia, Alabama, Louisiana and Kentucky. In addition to Maryland, median household income is more than $70,000 in three states: Connecticut, New Hampshire and Hawaii.

Poverty. Poverty rates range from a low of 7.2 percent in New Hampshire (2014 data) to a high of 23.1 percent in Louisiana. The poverty rate is highly correlated with the high school dropout rate. In Louisiana, about 19 percent of 18 to 24 year olds and roughly 16 percent of individuals 25 and older have less than a high school diploma. On the other hand, in New Hampshire, just over 11 percent of 18 to 24 year olds and roughly 8 percent of individuals 25 and older have less than a high school diploma.[179]

Income inequality. The wide variation in the poverty rate and median household income across states has contributed to a similar variation in income inequality. Income inequality, as measured by the 2014 Gini Index, is highest in the District of Columbia, New York and Connecticut. It is lowest in Nevada, Iowa and Indiana.[180]

Economic mobility. Economic mobility is more than four times as high in North Dakota as it is in Georgia, according to an economic analysis of data over a period of decades by the Equality of

Opportunity Project at Harvard University.[181] In seven states, less than 6 percent of children whose parents were in the bottom quintile of income reach the top quintile. In North Dakota and Wyoming, both of which have relatively high secondary education completion rates that number tops 15 percent.[182]

Drivers of inequality: As the *Report* describes, there is no single reason for rising inequality in the United States—multiple factors are at play.[183] Some inequality is the inevitable result of economic gains flowing to those who are most productive and that have skills that are most valued in the global economy. And to some extent, a degree of inequality is in fact a desirable reflection of a market economy that rewards skills, hard work and innovation.

But far too often, inequality of outcomes stems from inequality of opportunity. This reflects a lack of effective policies to help people build the skills they need to compete in an expanding, constantly-changing economy, as well as institutional structures that make it difficult for labor to share in the gains that accrue to businesses that become more productive. Several contributors to rising inequality are described below.

<u>Technological change.</u> Innovation fuels productivity growth, but workers often do not benefit evenly from new technologies. Some workers who have been put out of work by technological advancements have struggled to find new, stable jobs and may never fully recover. Increased automation has been particularly detrimental to workers in the low to middle end of the income distribution. At the same time, technologies tend to complement the skills of workers at the upper end of the distribution, leading to real wage gains for them. This is referred to by economists as "skill-biased technological change," and for much of the 1990s, there was a broad consensus among economists that it was the leading cause of increases in inequality in the United States.[184]

This consensus has since eroded, in part because other advanced economies have seen similar technological changes without experiencing the same degree of heightened inequality.[185] Nonetheless, economists Erik Brynjolfsson and Andrew McAfee

warn in their 2011 book entitled *Race against the Machine* that millions of workers could be left behind as technology continues to change the nature of work.[186] And the *Report* cites research showing that workers in lower income brackets may be most vulnerable to further job losses due to automation in the future.[187] Thus, in the absence of policy action to mitigate the consequences for certain categories of workers, technological change threatens to continue to exacerbate inequality in the years ahead.

<u>Globalization.</u> Much like innovation, globalization has substantial benefits for the U.S. economy in the aggregate—it allows the country to focus on its comparative advantages, opens up vast new markets for U.S. products and leads to decreases in consumer prices as well as increases in product variety.

However, it can also impose costs on some American workers. When businesses are able to offshore production to the countries with the lowest labor costs, it can lead to lost jobs and lower wages for workers in the United States. Economists have found that the increase in trade with China was particularly harmful to U.S. workers. Studies show that workers in regions with industries that were in more direct competition with China saw greater job losses and suffered long-term damage to their labor force participation and income prospects.[188] Thus, for millions of Americans, globalization presents a dilemma. It means, for instance, that workers can buy inexpensive clothes and flat screen televisions at big box stores, but at the same time it may put them at a greater risk of losing their jobs.

<u>Slowing growth in educational attainment.</u> Both technological change and globalization have opened up opportunities for workers with more education and skills. Unfortunately, increases in educational attainment for U.S. workers on the whole have stagnated in recent decades after achieving strong growth in the immediate postwar decades. According to economists Claudia Goldin and Lawrence Katz, who authored the book *The Race between Education and Technology*, the increase in the wage premium for college-educated workers from 1980 to 2005

stemmed from demand for workers with higher levels of education outstripping the supply of those workers.[189]

There are significant disparities in educational attainment across demographic and income groups. Among 25 to 29 year olds, about 41 percent of non-Hispanic white Americans have a bachelor's degree or higher compared to 22 percent of African Americans and 15 percent of Hispanics.[190] As the *Report* discusses, these disparities can stem from inequality of opportunity at a very early age, with wealthier families in a much stronger position to set their children up for success than families below or near the poverty level. By around the time they enter kindergarten, children in families below the poverty line are already about four times more likely to score "very low" on reading and math assessments than children in better-off families (those above 185 percent of the poverty level).[191]

Upgrading the education and skills of all Americans regardless of race, ethnicity or income level is essential to counteracting the effects of globalization and technological change on the prospects for many U.S. workers. Moreover, since today's workers are less likely to stay at the same employer for an extended period of time, employers may be less likely to invest in training their workforce.[192] This means that the responsibility for educating and training a skilled workforce falls even more to government.

Investing in everything from early education to teaching STEM (Science, Technology, Engineering and Math) and computer science in high schools to workforce training programs could all help to prepare U.S. workers to compete for higher-paying jobs. At the same time, these investments would help to raise the productivity level of the U.S. workforce as a whole, increasing real output and having long-term benefits for the nation overall.

<u>Economic rents and market power.</u> The contributors to inequality described above largely flow from productivity enhancements that have raised overall growth but hurt certain categories of workers. However, other drivers of inequality may in fact lower productivity and detract from overall economic growth. The

Report outlines this line of argument in its discussion of economic rents and market power.[193]

When firms achieve more market power, they have a greater ability to act as wage setters rather than wage takers. In the absence of mechanisms to help workers get their fair share of economic rents, firms may be able to hoard profits to the detriment of labor.[194] In other cases, when a small share of firms obtain substantially higher returns than the vast majority of firms, it can allow those firms to raise wages for their workers, while workers at other firms suffer.[195] This exacerbates inequality.

Declining unionization rates. For much of the 20th century, the labor movement was an important countervailing force that checked the power of firm owners and ensured that workers got their fair share of the benefits of economic growth. Collective bargaining allowed workers to negotiate for higher wages and benefits, and union workers typically earned more than non-union workers, up to 25 percent more according to estimates.[196] Research shows that workers in the lower and middle portions of the income distribution often benefited the most from unions.[197]

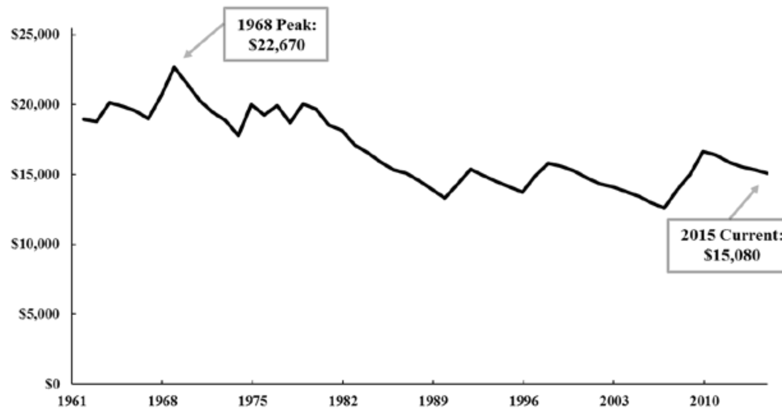
However, the share of U.S. workers who are members of labor unions has declined substantially over a period of decades. This has occurred for a number of reasons including global pressures that decreased unions' negotiating leverage to laws and judicial decisions that made it harder to organize. From the 1950s through the 1970s, one quarter or more of all workers were in labor unions, but that share has since fallen to just below 10 percent in 2014.[198] The decline has been especially pronounced for workers in the private sector, where unionization rates have plummeted from a high near 30 percent in the 1950s to less than 7 percent of workers in 2014.[199] Today, unionization rates vary considerably by industry and state, as many states have enacted so-called "right-to-work" laws that reduce the power of unions.[200]

As the *Report* notes, economic research shows that the decline in unionization is a major contributor to increasing inequality—

accounting for between one-fifth and one-third of the increase in inequality since the 1970s.[201]

Falling real value of the minimum wage. The minimum wage guards against income inequality by preventing wages at the lowest end of the income distribution from lagging too far behind wages for people in the middle and top of the distribution. It also keeps firms from exploiting workers that are the most vulnerable and have the least power to bargain over compensation.[202] However, the real (inflation-adjusted) value of the minimum wage has fallen considerably over time (see **Figure 20**). In 1968, a full-time minimum wage worker earned $22,670 in today's dollars. By 2015, that amount had fallen to $15,080. The nominal value of the minimum wage has not increased from $7.25 per hour since 2009.

Figure 20. Annual Earnings of a Full-Time Minimum Wage Worker
2015 dollars



Sources: JEC Democratic staff calculations using data from the U.S. Department of Labor and the U.S. Census Bureau

Notes: Real minimum wage is expressed in 2015 dollars using the CPI-U; assumes a worker is subject to the federal minimum wage and works 40 hours per week for 52 weeks a year

Insufficiently progressive tax code. Public policy seeks to mitigate extreme levels of inequality through the tax and transfer system. And in fact, the distribution of net income (after taxes and transfers) in the United States is substantially less inequitable than the pre-tax income distribution.[203] Nonetheless, research shows

that there has also been a sizable increase in net income inequality over the past several decades, suggesting that the tax and transfer system is not doing enough to counteract increasing inequality.[204]

One major contributor to this trend is that wealthy individuals and corporations tend to benefit disproportionately from exemptions and deductions in the tax code known as tax expenditures. According to a 2013 CBO report, more than 50 percent of the dollar value of the top 10 tax expenditures in the individual tax code goes to households in the top 20 percent of the income distribution, and 17 percent goes just to the top 1 percent.[205]

This spending through the tax code that largely benefits the wealthy also drives up the Federal budget deficit. In FY 2015, tax expenditures cost more than $1.2 trillion, more than twice as much as all discretionary spending and more than either Social Security or Medicare and Medicaid combined.[206]

Impact of inequality on growth: Some degree of inequality of outcomes is a necessary and desirable feature of a market economy. The ability to achieve higher income and wealth and pass it along to children and grandchildren drives people to work harder, take risks and innovate in ways that change the economy and the world for the better. It is at the core of the American Dream, and it has helped the U.S. economy to become the strongest in the world. Public policy should not undermine these basic incentives.

However, when inequality is very high and deeply entrenched across generations, large numbers of people are effectively denied the chance to achieve the American Dream. As President Obama said in his State of the Union earlier this year, these trends "offend our uniquely American belief that everyone who works hard should get a fair shot."[207]

Economic inequality at the individual level undermines economic growth at the national level. Inequality of opportunity is especially corrosive, and as the *Report* notes, it can keep people from

achieving their full potential, depriving the economy of skilled workers and innovators.[208]

Recent economic research has found evidence of a link between higher inequality and lower growth. An International Monetary Fund study, for example, looked at cross-country evidence and determined that lower net inequality is associated with "faster and more durable" growth, and that policies that make the distribution of economic gains more equitable generally do not have a negative impact on growth.[209] An OECD analysis highlighted in the *Report* also found a connection between higher inequality and lower growth.[210]

Economist Joseph Stiglitz has written extensively about inequality, authoring a book entitled *The Price of Inequality: How Today's Divided Society Endangers Our Future*. In his work, he outlines a number of mechanisms through which inequality endangers growth. One is that many of those that have benefited the most are not in fact innovators and entrepreneurs but, rather, those in the financial sector.[211]

Another critical mechanism through which inequality impacts growth highlighted by Stiglitz and other economists is that lower- and middle-income Americans spend a higher share of their income than wealthier Americans do.[212] This is what economists refer to as having a higher "marginal propensity to consume." Simply put, the ultra-rich can only buy so many yachts, while many Americans are barely keeping up with basic living expenses and would spend more money if they had it.

Because nearly 70 percent of the U.S. economy is driven by consumer spending, increasing the incomes of those who are most likely to spend it promotes overall economic growth. Fiscal policies that target those with a higher marginal propensity to consume can also be more effective in reducing any remaining slack in the labor market as the economy continues to heal from the effects of the Great Recession.

Policy Approaches for Economic Growth and Shared Prosperity

All three key long-term challenges discussed above—bolstering labor force participation, improving labor productivity growth and reducing inequality—are complex and multifaceted. There are no easy solutions, and factors beyond the control of policymakers will often intervene. Nonetheless, Congress can take steps to address these major challenges facing the economy.

This chapter describes several approaches policymakers should consider, many of which are outlined in the *Report*. It is an illustrative but not exhaustive list. In some cases, certain policies can help the country meet two or even all three of the key challenges at the same time. Increasing access to education and training programs, for example, can build a more productive workforce, raise labor force participation rates and reduce inequality by making sure everyone has an opportunity to succeed.

This chapter also includes sections that focus on two key issues of concern. The first highlights immigration reform as a way to increase the size of the labor force and spur innovation and productivity growth. The second underscores the importance of expanding economic opportunity for women by removing barriers that prevent them from maximizing their economic potential.

Bolstering Labor Force Participation

As the discussions in both the *Report* and this Democratic response make clear, boosting labor force participation is central to economic growth. Current trends pose significant challenges to achieving robust labor force growth—namely, the aging of the population, the leveling off of women entering the paid workforce and the ongoing decline in labor force participation among working-age men.

However, there are steps Congress can take to mitigate the consequences of these long-term trends. Several policy options are outlined in this section, including increasing access to pro-family workplace policies, reforming the criminal justice system and investing in education and training for individuals who have been displaced because of globalization and technological change. These policies would reduce barriers to employment faced by segments of the population.

Immigration reform: Major reform of our country's immigration system would help expand the working-age population, countering the drop in labor force participation as a result members of the baby boomer generation entering retirement. An increase in legal immigration has already produced significant benefits for the U.S. economy by creating a larger working-age population. The productivity of these workers has also increased, in part because of technology innovation. Those benefits could be amplified with immigration reform that enables more foreign-born workers to enter the country legally. The effects of immigration on labor force participation, productivity and wages are discussed in detail at the end of this section.

Training displaced workers for new jobs: As noted in the *Report*, both technological change and globalization can confer substantial benefits to the nation as a whole, but they can also cause acute pain to displaced workers. This is especially true for workers in the manufacturing sector, many of whom have had no formal education beyond high school. High-quality training programs are a way to help some displaced workers find new jobs in the ever-evolving economy.

Education is essential for maintaining high rates of labor force participation. More educated workers have higher labor participation rates. Last year, only 67 percent of male high school graduates who have not gone to college were in the labor force. By comparison, nearly 80 percent of men with a college degree were in the labor force.

Training programs can help keep unemployed workers attached to the labor force, especially during economic downturns. Effective programs help displaced workers develop new skills that are needed in growing sectors of the economy. Research has shown that aligning training programs so that they teach the specific skills in demand by employers increases the likelihood of that training leading to jobs. This approach is embodied in the bipartisan Workforce Innovation and Opportunity Act that President Obama signed into law in 2014, which is serving as a roadmap for improving workforce training.

The benefits of an educated workforce extend beyond increased labor force participation and high earnings. American businesses also benefit from a greater supply of highly skilled workers, which helps them compete in a growing and global economy. One example is the administration's TechHire initiative, which empowers a diverse array of Americans with the skills needed for information technology jobs, including younger workers and those with disabilities.

Making it easier for Americans to balance work and family: A lack of family-friendly workplace policies—including paid leave, workplace flexibility and affordable quality child care—makes it difficult for both men and women to work while caring for their families. This central modern dilemma not only places stress on families, but it has larger economic effects because it lowers labor force participation.

The United States lags behind other countries in adopting family-friendly workplace policies. This has contributed to the decline of labor force participation among prime-age workers, and particularly women. More than one-half of workers are caregivers, including for children, elderly parents and relatives with disabilities.[213] The *2015 Economic Report of the President*, which devoted a chapter to economic benefits of such policies, notes that employers have been slow to adapt to the changes in family dynamics making it more difficult for men and women to meet the often conflicting demands of work and family.[214]

Paid family leave. Paid family leave would ensure that workers are able to take extended leave, with pay, to care for a new child, recover from a serious illness or care for an ill family member, and that they are able to return to their job afterward. Not only do all other developed countries guarantee leave with pay to new mothers, nearly all developing countries also guarantee paid maternity leave, with the exception of Papua New Guinea, according to the International Labour Organization.

Paid family leave has been shown to strengthen labor force attachment, reduce turnover and encourage workers to remain in jobs that are well-suited to their education and training. Analysis of the impact of California's first-in-the-nation paid family leave program on women's employment found that mothers of young children worked more hours and had higher earnings as a result of the program. The program was found to be especially beneficial to low-wage mothers because many could not afford to take leave without pay.[215]

Workplace flexibility. Only slightly more than half of workers have access to flexible work arrangements at their job. This flexibility most commonly is in the form of flexible schedules, but may also be arranged as telecommuting or job sharing.[216] Workplace flexibility gives individuals more control over how, when and where they work. This helps workers better meet family obligations—such as attending a meeting with a child's teacher or taking an elderly parent to the doctor—and remain in the workforce.

The Flexibility for Working Families Act is an example of legislation that could increase flexibility for workers by guaranteeing that workers have the right to request a work schedule that meets their needs.[217] Putting in place procedures for requesting alternative work arrangements could reduce the stigma or repercussions some workers fear about making such requests, including the risk of losing their job.[218]

Pro-family policies would also benefit American businesses. Some of the most successful companies in the United States have

instituted both paid leave and workplace flexibility in order to attract and retain highly-qualified workers. Yet many other firms are still not aware that family-friendly policies can lower turnover, improve recruitment and increase productivity. Incentivizing companies to adopt pro-family policies would benefit companies and their workers.

Affordable quality child care. Child care expenses are prohibitively expensive for many families, causing some parents to leave the labor force to care for their children. The yearly cost of center-based care for an infant ranges from a low of about $5,600 in Mississippi to a high of $22,400 in the District of Columbia.[219] In fact, in 33 states and DC, the annual cost exceeds the average cost of a year of in-state tuition at a four-year public university.[220]

As a result of those high costs, many families decide to put one parent's career on hold in order to care for young children. Women, who are often the secondary breadwinner in their household because they earn less, are more likely to make this sacrifice. According to a Pew Research Center survey, mothers are almost three times as likely as fathers to quit a job to care for a child or family member. Mothers are also more likely to reduce their hours, take a significant amount of time off and turn down a promotion.[221] However, although there is still a substantial gap, men's and women's roles are converging, with men and women more evenly participating in paid work and unpaid caregiving.[222] One-in-10 working fathers has left a job to care for a child or family member.

As the *Report* outlines, the President's FY 2017 budget would help make child care affordable for more families by tripling the maximum child care tax credit to $3,000 for children under the age of five. Prior research has shown that reducing child care costs increases mothers' employment, with a particularly pronounced effect on single mothers' employment.[223]

The *Report* devotes an entire chapter to the need to address the inequalities faced by many children in their early years. It argues

that increasing enrollment in quality child care programs has clear benefits to the economy through boosting labor force participation among parents of young children. By allowing more parents to maintain jobs, it would increase the financial resources parents in lower and middle income families have available to devote to their children. Disparities in family resources have been shown to contribute to gaps in achievement among children from opposite ends of the income distribution.[224]

Increasing enrollment in quality child care would also capitalize on the critical time in young children's cognitive development when their brains are developing most rapidly, increasing the returns to investments in children's education when they are older. Moreover, the benefits to investments in children at a young age accrue over a lifetime, including through higher earnings and lower crime rates, and have significant positive benefits for the national economy.[225]

Reforming the U.S. sentencing system: There is now a consensus, ranging from the American Civil Liberties Union on the left to the Koch brothers on the right, that incarceration rates are too high and the costs to the United States of incarcerating 2.2 million Americans too great.[226] As economist Joseph Stiglitz has pointed out, a year in prison can cost more than a year at Harvard.[227]

Reforming the criminal justice system could lead to higher rates of labor force participation and employment, especially among low-income workers, men and minorities who have been incarcerated at disproportionate rates. As the *Report* notes, in 2014 more than 65 percent of sentenced prisoners were minorities. Polling suggests that roughly one-third of prime working-age men who do not have a job have a criminal record.[228]

<u>Incarceration rates are excessively high</u>. From the mid-1980s through the 1990s, the federal government and many states passed legislation that increased the severity of punishments for a wide range of crimes, some of which were nonviolent offenses. These included mandatory minimum sentencing, "three strikes" and life

without the possibility of parole laws. These changes led to skyrocketing incarceration rates and longer prison terms.

Since the 1980s, the incarceration rate (now 690 per 100,000) has more than tripled.[229] The United States currently has the highest incarceration rate in the world.[230] With less than 5 percent of the world's population, the United States accounts for 25 percent of the world's prison population.[231] As a result, the United States' spending on its prison system has also exploded. The United States spends over $80 billion annually on its federal and state prisons and local jails—more than four times the amount it spent in 1980.[232]

Long-term effects of incarceration. Too many offenders now remain in prison long after they pose a threat to society. Many are living behind bars well into their 60s. Still others are locked up for non-violent offenses that in previous eras would not have resulted in a prison sentence.

Being incarcerated has lasting economic impacts on offenders and their family members. While time in prison results in time out of the workforce, it also negatively affects employment and earnings prospects for individuals after they have been released from prison. Recent "ban the box" initiatives, which have been adopted by many states and cities to prevent employers from asking job applicants about their criminal histories, may help to reduce the negative impact on employment of having a criminal record. President Obama recently directed federal employers to not ask about the criminal histories of potential government employees at early stages of the application and hiring process.

Bipartisan legislation in the Senate attempts to reform the system. The Sentencing Reform and Corrections Act of 2015 would reduce mandatory sentences for certain drug crimes including reducing the "three-strike" mandatory life sentence to 25 years, make retroactive the Fair Sentencing Act of 2010, which reduced the disparity in sentencing between crack and powder cocaine, and expand the existing federal "safety valve" that allows judges to impose shorter sentences for non-violent drug offenders.

Reforming the Immigration System

Immigration reform can strengthen the economy by increasing the size of the labor force, by spurring innovation and productivity growth and by reducing the federal budget deficit. A CBO analysis of the bipartisan Border Security, Economic Opportunity, and Immigration Modernization Act passed by the U.S. Senate in 2013 found that immigration reform would boost real GDP by 3.3 percent after 10 years, and by 5.4 percent after 20 years, relative to current law.[233]

One of the most important economic goals of immigration reform would be to counteract the structural challenges of an aging native-born population. In past decades, the growth of the working-age population has been a main driver of GDP growth. However, with the baby boomer generation moving into ages in which people typically retire, and with the U.S. birth rate at record lows, the working-age population (ages 25 to 54) has stagnated and is projected to only grow slowly in the coming decade.[234] Expanding the size of the U.S. population and workforce via increased immigration would strengthen economic growth.

The United States is already benefiting from an influx of legal immigrants, but these benefits could be magnified if immigration were permitted at a higher level. In 2014, 13.3 percent (42.4 million) of the U.S. population was foreign-born; including the U.S.-born children of immigrants brings that number closer to 80 million.[235] Of the foreign-born population, nearly 60 percent were of prime working age, compared with 37.1 percent of the native-born population.[236] In fact, the foreign-born account for more than half of the growth in the U.S. labor force since 2007. Allowing more legal immigrants to enter the United States would further expand the workforce and increase economic growth.

In addition to expanding the size of the workforce, immigrants contribute in several ways to the growth of the economy. They are often entrepreneurial, with over one in 10 immigrants in the workforce owning a business. Among those firms that hire

employees, they hire an average of 8 employees, providing jobs both to other immigrants and to the native-born.[237]

Immigrants contribute significantly to innovation, a key component of productivity growth. One study estimates that immigration of foreign STEM workers may explain between 30 and 50 percent of aggregate productivity growth between 1990 and 2010.[238] Another study finds that of over 900 respondents to a survey of award-winning innovators and patent applicants, more than a third were foreign-born and an additional 10 percent reported having at least one foreign-born parent.[239] Immigrants also account for over 30 percent of all U.S. Nobel Prize laureates.[240]

Immigration reform also can boost productivity by offering unauthorized immigrants a path to legalization. This would empower currently unauthorized workers to seek higher-paying jobs that are a better match for their skills. American workers could benefit from those productivity gains through higher wages.

It is sometimes argued that immigrants depress the wages of native-born Americans. This may be partly true for the least-skilled immigrants, especially unauthorized immigrants who work off the books for less than the minimum wage. To the extent that competition from unauthorized workers is holding down the wages, granting these workers a path to legalization and ultimately citizenship could diminish such pressure.

Legal immigrants mostly have a positive effect. Although immigration may reduce wages and employment for particular categories of U.S. born workers in the short run, in the long run there is clear evidence that immigration boosts productivity and average wages for all workers, with no adverse effect on the employment of natives.[241]

There are several different ways by which immigration can boost employment and wages of natives. For example, one study estimates that by boosting demand for locally-provided services, each new immigrant creates 1.2 jobs for local workers, most of

whom are natives.[242] Another study finds that increases in foreign-born STEM workers are associated with wage gains for both college-educated and non-college-educated natives.[243]

Immigration reform is also likely to reduce the federal deficit, the growth of which is largely driven by the aging of the U.S. population and the growing costs of Medicare and Social Security. Because immigrants are more likely to be of working age, they contribute to social insurance programs such as Medicare or Social Security. However, they typically won't receive these benefits for a number of years so their contributions help shore up funding streams for these programs.[244] Unauthorized immigrants in particular have been shown to shore up funding for the Social Security Trust Fund.[245] Moreover, even though many immigrants pay taxes that go into public assistance programs such as Medicaid, they are ineligible to qualify for them for a number of years.[246]

Immigration also has an indirect effect on the federal deficit, by boosting GDP via a larger labor force and gains in productivity. For example, one study finds that the presence of all immigrant workers (whether legal or unauthorized) in the labor market increases GDP by an estimated 11 percent ($1.6 trillion) each year.[247]

Raising Labor Productivity Growth

Given the demographic challenges the economy faces, producing more output per worker will be critical to economic growth in the years ahead. Increasing labor productivity is also effectively a prerequisite for achieving real wage increases and a better quality of life for American workers, even if productivity growth alone is not sufficient to ensure that benefits are shared broadly with workers throughout the economy.

There are myriad ways to raise labor productivity but no silver bullets. As economist Paul Krugman writes, "…nobody knows the secret of raising productivity growth."[248] But keeping in mind the

three components of labor productivity growth—capital deepening, labor quality improvements and total factor productivity (TFP) growth—provides a useful framework for thinking about policy approaches. Policies should promote capital investment, enhance workers' education and skills, and boost TFP growth by spurring innovation. Making needed investments in infrastructure is also critical to increasing productivity growth.

Several policy approaches outlined in the *Report* that would help to achieve these goals are described below.

Preparing workers for the jobs of the future: Improving access to high-quality education and training is essential, not only to raise human capital and create the most productive workforce possible, but also to make sure that technological innovations that raise productivity do not leave American workers behind. As the *Report* notes, the decline in prime-age men's labor force participation over the past several decades as the economy has transitioned away from manufacturing and many middle-income jobs have been automated suggests that policy has not been sufficiently supportive of lifelong education and training in the past.[249]

As the President stated in his State of the Union address earlier this year, "Say a hardworking American loses his job—we shouldn't just make sure he can get unemployment insurance; we should make sure that program encourages him to retrain for a business that's ready to hire him."[250] The Workforce Innovation and Opportunity Act (WIOA), enacted in 2014, represents a significant effort to modernize and reform the country's workforce training programs to reorient them toward preparing workers for the jobs of the future. The Obama administration's FY 2017 budget includes a number of additional proposals to train or retrain workers for jobs, for example by increasing funding for apprenticeship programs and creating a program to reach out to the long-term unemployed and those who have dropped out of the labor force to help them connect with training programs.[251]

The President's plan to make two years of community college free-for-all responsible students would further bolster preparation

for the jobs of the future. Additional steps to improve the caliber of the U.S. workforce by promoting access to education and training at all levels—from early education to college and beyond—are discussed in other parts of the policy section of this report, since expanding access to education impacts not only productivity but also workforce participation and the distribution of benefits.

Investing in infrastructure: Investing in infrastructure has an upfront cost, and some policymakers resist increasing spending for it despite the long-term benefits, often expressing concerns about the national debt. But as economist Larry Summers has pointed out, not repairing crumbling infrastructure places a serious burden on members of the next generation, forcing them to spend billions in the far off future, while denying them the benefits of increased productivity in the intervening years.[252]

The *Report* provides a thorough analysis of the benefits of infrastructure investment for the economy, and it outlines policy approaches to address America's infrastructure needs.

As the *Report* points out, well-functioning infrastructure—from roads and bridges to locks and dams to water systems and high-speed broadband networks—is critical to productivity growth. High-quality infrastructure reduces the amount of time it takes for workers to get to their jobs, for businesses to move their goods to market and for ideas to spread around the world. Improving America's infrastructure is essential to long-term competitiveness. With interest rates currently at very low levels, investing in infrastructure right now is a relative bargain. In addition, it would have the added benefit of stimulating the economy at a time when it is still recovering from the Great Recession.

The private sector cannot provide the country with the level of infrastructure it needs, despite the fact that it is essential for U.S. businesses to survive in the highly competitive global economy. This is because infrastructure is generally considered by economists to be a public good, meaning that its benefits cannot be captured fully by a given firm and it will be undersupplied in

the absence of government action. The federal government in particular plays a necessary role in financing infrastructure since networks often cross state and municipal lines.[253]

The recently enacted Fixing America's Surface Transportation (FAST) Act provides some measure of stability to surface transportation policy, authorizing about $306 billion in spending for highways, transit, rail and safety over the next five years.[254] However, this level of funding falls well short of what infrastructure experts believe is needed.[255] In its FY 2017 budget, the Obama administration proposes to make major investments in modernizing U.S. infrastructure to put it on a par with other major industrialized nations.[256] The 21st Century Clean Transportation Plan would increase investments in clean infrastructure by 50 percent, helping to reduce both congestion and carbon pollution.

Public investment in research and development: Innovation is a core driver of productivity growth, and spurring new innovations by investing in research and development is an important function of government. As described above, government funding for basic research is particularly critical, since there are sizable economic spillovers that private firms cannot fully capture. Private business research and development spending tends to be tilted toward later-stage development of products with more immediate commercial applicability. However, without public investment in early-stage, basic research, the innovation pipeline risks breaking down.

The Bipartisan Budget Act of 2015 modestly increased budget caps in FY 2016, allowing for an increase in federal research and development investment this year.[257] However, the current level remains woefully insufficient—both in comparison to historical levels of spending as a share of GDP and with regard to the challenges the country faces. In its FY 2017 budget, the Obama administration proposes dedicating $4 billion in mandatory spending to research and development on top of discretionary spending levels.[258] Sequester-level spending caps would return by FY 2018 in the absence of further action, which would constrain research and development spending.

The *Report* and the President's FY 2017 budget highlight two areas in particular where federal research and development investment should be focused: medical research and clean energy. The President's budget proposes funding that would allow for nearly 10,000 new research grants at the National Institutes of Health (NIH), as well as putting clean energy research and development on a path to double over five years.[259] These investments would help to save lives and combat the challenges of global climate change while spurring investments that increase the productivity and well-being of American workers.

Promoting entrepreneurship: Startups have long been an engine of innovation for the U.S. economy, making recent trends toward a decline in new firms as a share of all businesses worrisome. The *Report* describes a variety of approaches to spur entrepreneurship, including the administration's "Startup in a Day" initiative, designed to help communities streamline regulatory requirements for starting a business.[260] Improving access to sources of debt and equity capital for startup businesses is particularly important for helping entrepreneurs to turn their ideas into businesses. Small business lending was greatly affected by the financial crisis and has yet to return to levels that prevailed before the downturn.[261]

The *Report* emphasizes the impact that inequality of opportunity can have on entrepreneurship, innovation and productivity by "preventing potential innovators from full economic participation."[262] In addition, it notes that immigrants have been especially entrepreneurial, founding more than half of technology and engineering firms in Silicon Valley between 1995 and 2005 that went on to have more than 1 million dollars in sales in 2006.[263] Comprehensive immigration reform, therefore, is a promising approach to spurring innovation and entrepreneurship.

Cracking down on abuses of market power: An important theme developed in the *Report* is that "economic rents" may be distorting the economy in ways that detract from productivity growth. As the *Report* describes, rents can occur when, for example, "uncompetitive markets yield monopoly profits or

preferential regulation protects entities from competition."[264] Corporate lobbying for regulations that make it difficult for startup firms to compete and an over-proliferation of occupational licensing are forms of barriers to entry for new competitors. Since startups often spur innovation that improves productivity and reduces costs to consumers, overconcentration in industries can be detrimental to growth.

As the *Report* notes, in many cases, antitrust regulations that would prevent market power from leading to unproductive rents already exist—they just need to be enforced more rigorously.[265] Reforming the patent system, zoning and land use regulations, and occupational licensing requirements would also help to reduce the power of incumbent firms and pave the way for competition from innovative startups. In some cases, reforming these regulations would require action at the state or local level.

Reforming the business tax code: Corporate tax reform can boost productivity by increasing the quantity and quality of private investment in the United States.[266]

Under current law, the federal tax a business pays can vary depending on its location, its industry, the composition of its asset base, the particular means it uses to finance investment and its organizational form. Such differences can distort economic decisions, since they can lead businesses to invest in ways that minimize their tax exposure without necessarily maximizing the productive return on their investments. The use of tax planning strategies to avoid paying U.S. taxes may cost the government revenue equal to 30 percent of corporate tax receipts.[267] That strains the federal budget and, if not addressed, could lead to higher taxes on domestic businesses that do not pursue tax avoidance strategies as well as families.

It is estimated that large corporations are holding more than $2 trillion in profits offshore in order to avoid paying taxes on them.[268] This keeps this money from being put to productive use in the United States.

By reducing marginal tax rates on corporations while broadening the tax base on which those rates are applied, corporate tax reform could reduce inefficiencies in the current tax system and spur productive investment. While there is considerable disagreement about the details, there is broad bipartisan support for reforming and simplifying the corporate tax code to bolster U.S. competitiveness. The Obama administration has proposed a comprehensive plan for corporate tax reform that would decrease inequities and inefficiencies in the current system.

Promoting Share Prosperity

Income inequality in the United States was at its lowest point in the 1960s and has been rising for several decades. The United States has one of the largest disparities in incomes among advanced countries, according to the OECD.[269] Not only that, income inequality in the United States is worse than in Georgia, Turkey and Iran.[270] By one measure of income inequality, the United States ranks below Nigeria.[271]

Since 1980, the average income for the top 1 percent of households has grown more than seven times as fast as it has for the average household.[272] The widening gap between the rich and everyone else will not be reversed overnight. However, a sustained policy focus could expand opportunity, reduce income inequality and boost economic growth.

There are a number of actions policymakers can take to ensure that more Americans reap the benefits of future economic growth. The policies discussed in this section target three broad goals: increasing wages; protecting individuals during times of economic hardship; and leveling the playing field from children's earliest years to college. It also includes a special focus on expanding economic opportunity for women, which was highlighted in the *Report*.

Helping low-income workers earn a living: Many American families do not earn enough to pay for the rising costs of housing, education, child care and other necessities. Three million workers earn at or below the federal minimum wage of $7.25 per hour.[273] That rate has not been increased since 2009 and the real value of the minimum wage is lower today than it was in 1968. A parent who works full time year-round and is paid the federal minimum wage earns approximately $15,000 a year, $5,000 lower than the poverty level for a family of three.[274] Raising the wage to $12, as proposed by Democrats in Congress, would help to lift millions out of poverty.[275]

The Earned Income Tax Credit (EITC) supports the earnings of low-income workers and has been proven to lift people out of poverty and increase labor force participation among single mothers.[276] It has also been shown to have long-term positive effects on children's educational achievement which increase the chances of attending college and leads to higher earnings.[277]

An overwhelming number of Democrats support the EITC, joined by a significant number of Republicans who back it because it provides strong economic incentives to work. In 2013, the EITC improved the economic position of approximately 27.8 million people, lifting 6.2 million individuals out of poverty and lessening the severity of poverty for an additional 21.6 million, including 7.8 million children.[278] One proposal, highlighted in the 2015 ERP, would double the EITC for workers without children to $1,000 from the current maximum credit of $500. Presently, the average credit for a family with children is about 10 times the benefit for a family without children.[279]

Increasing bargaining power for workers: The percentage of American workers belonging to a union has declined significantly over a period of decades. At least one in four workers were union members during the 1950s through 1970s. By 2014, that share had declined precipitously—to less than one in 10 workers.

Historically, unions have played a critical role in helping workers secure higher wages and safe working conditions. Research referenced in the *Report* finds that declining unionization since the 1970s accounts for between one-fifth and one-third of the increase in inequality during this time.[280]

Further declines are not inevitable. Public policies that encourage higher rates of union membership and support collective bargaining can provide leverage to workers in their wage negotiations, promoting stronger wage growth.

Protecting individuals in times of economic hardship: Millions of Americans will endure a period of unemployment at some time during their working lives. However, unemployment, injury or illness should not be a pathway to poverty.

The longer a worker is unemployed, the harder it is to find the kind of job he or she had previously. Encouraging states to retrain unemployed workers more effectively for in-demand jobs would help shorten unemployment spells and mitigate the lasting effects of long-term unemployment.

The present system could also be modified to increase incentives to work and to hasten workers' return to a full-time job. Currently, when a worker is receiving unemployment insurance income, there is a disincentive for workers who lose their job to accept a new job that pays less. A wage insurance system would support workers who accept a lower-paying job for a period of time, moving them out of unemployment and keeping them attached to the labor force.

Preserving the Affordable Care Act: The ACA represents a major effort to protect Americans from hardship and keep medical costs from bankrupting families and driving up inequality. Nearly 18 million Americans have gained health insurance coverage through the ACA, including more than 3 million young adults who are able to remain on their parents' coverage.[281] Protecting these gains and the additional protections contained in the legislation, such as the ban on lifetime limits, is vital to continued

improvement in health care outcomes and to slowing the growth of health care costs.

The ACA also has other important economic benefits. Notably, Americans are no longer forced to stay in their jobs because they are scared of losing their health insurance. This is particularly important for people with "pre-existing" conditions—even if they could get health insurance in a new job they could be prevented from receiving benefits for those illnesses. The ACA bans clauses denying reimbursement for pre-existing conditions.

Reducing what's called "job lock" allows people to take jobs that better match their skills and boosts overall productivity in the economy. By having health care coverage that is portable, individuals are able to start their own businesses, go back to school or pursue new opportunities. This also may make them more productive, furthering economic growth.

The same kind of portability that the ACA has enabled for health insurance coverage can be extended to retirement and other benefits traditionally based on employment. Workers would be able to take their retirement savings with them from one job to the next. This would particularly help the increasing number of Americans engaged in contract or freelance work, because it would enable them to pursue a range of employment opportunities while also saving for retirement and accessing other important benefits and protections. This would ensure that workers are able to pursue opportunities for which they are best suited, making them more productive.

Leveling the playing field from children's earliest years to college: The *Report* devotes considerable attention to the large body of research which demonstrates that government investment in early childhood programs has substantial long-term benefits. These long-term benefits resulting from programs such as Head Start, the Supplemental Nutrition Assistance Program (SNAP), Women, Infants and Children (WIC) and Medicaid, include higher rates of education, higher earnings and lower mortality rates. Public investment in early childhood programs is not merely

altruistic, it provides benefits that even the biggest deficit-hawks can appreciate: lower crime rates, lower incarceration rates, and lower reliance on welfare. This also translates into increased national productivity and economic growth.

Universal access to pre-kindergarten education would help to reduce the inequality of opportunity in early years that contributes to significant disparities in employment, income, health and education in later years. Research cited in the *Report* finds that parents in the top income quintile spend seven times as much as families in the bottom quintile on books, camps, lessons and other enrichment activities. Providing early childhood education for all families will help to provide a common base of educational experience that will serve as a critical platform for learning and development as children age.

All Americans should have a shot at a college education. For years, education has been a gateway to a middle-class life. But, as a college has become even more important for success, the costs of higher education have risen. Many Americans can no longer afford a college education, and student debt levels have exploded. Roughly 70 percent of college seniors graduated with debt in 2014, owing an average of almost $29,000 per borrower.[282]

The federal government, states, colleges, and universities all have a role to play in making higher education more affordable and more accessible. The Obama administration's proposals such as free tuition for students at community colleges, increased investments in Pell Grants and simplifying student aid forms would help to ensure that education is accessible not just to those at the top of the income spectrum.

The Obama administration's proposals such as making two years of community college free for students, strengthening Pell Grants, increasing investments in the nation's Historically Black Colleges and Universities, and simplifying student aid forms would help to ensure that higher education is accessible not just to those at the top of the income spectrum.

Expanding Economic Opportunity for Women

As the *Report* makes clear, addressing economic inequality is critical for economic growth. It also notes that "unequal outcomes that arise from unequal opportunities—barriers that keep some individuals from realizing their full potential—are a detriment to growth and fairness."[283] This is unfortunately true for many U.S. women today—as barriers in the form of outdated workplace policies prevent them from maximizing their economic potential.

The share of women in the labor force has grown dramatically in the last 50 years. In 1963, only 44 percent of prime working-age women (ages 25 to 54) were in the labor force. Today, about 75 percent of prime working-age women are in the labor force. More than two-thirds of mothers with children under the age of 18 are in the labor force.[284]

However, little accommodation has been made for the fact that a large percentage of women now work and they also remain the primary caregivers for children. For too many women, the lack of policies to support their dual roles keeps them out of the labor force or limits them to working part time, diminishing their earning power. In effect, women are penalized for being mothers.

Measuring the impact on women and their families: One useful measure of the impact on women's earning potential is the "gender pay gap." It compares the median annual earnings of a woman working full time, year-round and her male counterpart. Data show that the typical woman earns only 79 cents for every dollar earned by her male counterpart.[285] That leaves a 21-percent difference in earnings, or $10,800 per year. Over the span of a career, that yearly difference could accumulate to about half a million dollars.[286]

The gender pay gap typically starts off small for young women at the start of their career, but due in part to career interruptions and part-time work the pay gap becomes substantially larger for older women. The fact that the pay gap increases over time is thought to be due directly to the women interrupting their careers to have

children and then getting paid less than their former colleagues when returning to work.

Women even suffer from the perception by employers that they *might* have children. And women who do have children and return to work face a “mommy penalty”—earning less than women without children. Fathers, on the other hand, often benefit from a “daddy bonus,”—and earn more than men without children, which may reflect concern from their employers that they are supporting a family.[287]

Lower income over the course of a woman’s life also can jeopardize her financial security in retirement. In 2014, the median annual income of women ages 65 and older was just $17,400—56 percent of men’s the same age.[288] In other words, women face a 44 percent income gap in retirement—more than twice the overall gender pay gap. Moreover, women are 1.6 times as likely as men to live in poverty once they reach age 65, and nearly twice as likely to live in poverty when they reach age 75.[289]

Lower pay for women hurts American families: Women’s earnings are more crucial than ever for many families because of increased pressures resulting from the rising costs of raising a family. Child care, education and health care costs have increased substantially in the past quarter century, and families increasingly rely on women’s earnings to make ends meet. In the typical household with children, women contribute nearly 40 percent of their family’s earnings. And of families with a mother working outside the home, than about one-third depend solely on her wages. For these reasons, millions of American families stand to benefit from policies that would help women reach their full economic potential.

In addition, making it easier for more women to work full time in the paid labor force could reduce income inequality and lift many women out of poverty, which would reduce government spending on programs such as Medicaid and the Supplemental Nutrition Assistance Program (SNAP).[290]

Maximizing women's potential is important for the economy: Women's increasing role in the workforce has had a dramatic effect on economic growth. According to the *Report*, "Our [U.S.] economy is $2.0 trillion, or 13.5 percent, larger than it would have been without women's increased participation in the labor force and hours worked since 1970."[291]

The Organisation for Economic Co-operation and Development (OECD) finds that reducing the difference between men's and women's labor force participation in the United States by half by 2030 could increase economic growth (per capita GDP) by 0.2 percent. Fully closing the gap could increase growth by 0.5 percent.[292]

The United States lags behind other countries in adopting "pro-family" policies to lower the barriers that prevent women from achieving their economic potential. For example, the United States is the only advanced country that does not guarantee paid maternity leave and one of just a handful of countries without a national paid sick leave policy. The United States also ranks near the bottom of OECD countries on for public spending on child care and pre-primary education as a share of GDP, contributing to the high out-of-pocket child care costs American families face.

U.S. women would directly benefit from policies which effectively reduce the costs of caregiving. Expanding access to paid family and sick leave, improving workplace flexibility and valuing unpaid caregiving would all allow more women to remain in the paid labor force throughout their prime working years. This would not only boost women's earning potential and strengthen the financial security of American families, but it also would have positive effects on productivity and economic growth.

The economy could benefit by making it easier for women to remain in the workforce after they have children. Drawing more women into the labor force also has the potential to increase productivity by using labor resources more efficiently. Boosting their earnings would put more money into the hands of women and

their families who in turn spend it, generating additional consumer demand.

Conclusion

The *Report* and this response use extensive data to analyze the state of the economy and to assess the outlook for future growth. It is clear from the data that the economy continued to strengthen in 2015 and is now on much stronger footing than when the Obama administration began seven years ago. Prospects for future growth are bright.

Nevertheless, the economy faces a number of long-term structural challenges such as the aging of the labor force and increased globalization. These challenges emerged long before the Great Recession and have been anticipated by economists for decades. Several policies to address these challenges are detailed in the *Report* and have been discussed in this response. Underpinning these policies is the need to increase the size and productivity of the U.S. labor force.

In his recent letter to shareholders, Warren Buffett wrote, “For 240 years it’s been a terrible mistake to bet against America, and now is no time to start.” He is right. Most recently, the United States has led the global recovery from the Great Recession. With smart investments and responsible policies, the United States will continue to chart the path forward, driving innovation and economic growth.

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