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# The Great Recession and Lessons for Policymaking

Gary Burtless  
*Brookings Institution*



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Macroeconomic Policy**

Eskander Alvi, editor

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# **Confronting Policy Challenges of the Great Recession**

## **Lessons for Macroeconomic Policy**

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*Editor*

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# 3

## The Great Recession and Lessons for Policymaking

Gary Burtless  
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This chapter addresses a straightforward question: What policy lessons can we draw from the Great Recession? At the time of this writing in late 2014, the lessons have more academic than practical interest to policymakers in Washington. Most decision-makers are more concerned about the next election than they are about warnings from an experience that is unlikely to soon be repeated. However, examining the experience may be useful when considering policies to prevent or manage a future downturn.

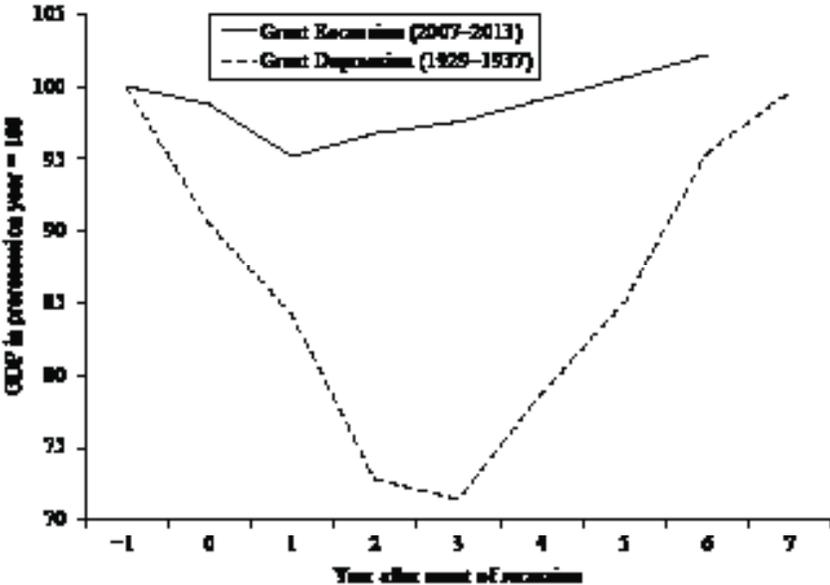
The Great Recession produced the worst economic slump since the Great Depression. Compared with other post–World War II recessions, the one in 2008–2009 was particularly severe and the recovery from it unusually sluggish. This is clear from a glance at job market statistics: the spike in the unemployment rate—5.5 percentage points between the first half of 2007 and October 2009—was the biggest the country experienced in the postwar era; the persistence of high joblessness was uncommonly severe; and the unemployment rate remained above 8 percent for 43 consecutive months. The only postwar rival in terms of severity was the recession during the Reagan administration, which began in the summer of 1981. The unemployment rate in the 1980s remained above 8 percent for only 27 consecutive months.

The consequences of the Great Recession for job losers and new job entrants were unusually harsh. Over the entire postwar era before the Great Recession, the median duration of unemployment reached a peak of just 12.3 weeks, which occurred in May 1983 during the recovery from the Reagan recession. In the recent slump, the median duration of unemployment reached a peak more than twice as high, 25 weeks, and it remained above 13 weeks for an astonishing 67 consecutive

months. The BLS employment report for November 2014 showed that the median unemployment duration for that month fell below 13 weeks for the first time since March 2009.

As painful as it was, however, the Great Recession was not remotely as severe as the Great Depression, which was “great” in its depth and duration. The peak unemployment rate in the 1930s was 25 percent, compared to just 10 percent during and after the Great Recession. Between the fall of 1929 and the spring of 1933, the U.S. economy shrank for 43 consecutive months, whereas in the recent recession the economy shrank for just 18 months. At the end of the 1929–1933 downturn, real GDP per person was about 29 percent smaller than it was just before the Depression began (Figure 3.1), compared to about 5 percent between 2007 and 2009. In the Great Depression, per capita GDP did not return to its pre-Depression level until 1937, a span of eight years; it

**Figure 3.1 U.S. Gross Domestic Product per Person in the Great Depression and Great Recession**



SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

took a little less than five years after the Great Recession for per capita GDP to surpass its prerecession peak.

The Great Depression saw personal consumption per person fall 21 percent below its pre-Depression level. In the worst year of the Depression, the typical American consumed about one-fifth fewer goods and services than in the last pre-Depression year. In the Great Recession, per capita real consumption fell just 4 percent. Whatever the shortcomings of macroeconomic policymaking in recent years, the fact is that the U.S. economy performed far better between 2007 and 2014 than it did in the decade that began in 1929. U.S. macro policies in the recent downturn also delivered better results than the ones devised by policymakers in most other rich countries. Nonetheless, “It could have been worse” is not a winning political slogan, a fact emphatically confirmed by U.S. voters in the three elections after the recovery began. “It could have been worse” is, however, a fair assessment of fiscal policymaking over the past seven years. The question this chapter poses is, “How could it have been better?”

## **BACKGROUND**

The federal government did not stand still in the face of the severe contraction in late 2008. It dealt promptly with the financial crisis that triggered the downturn. In fact, the rescue of ailing financial institutions was mostly accomplished within a year after the worst phase of the crisis. My critique focuses mostly on fiscal rather than monetary policy. Fiscal policy is where U.S. policymakers, as well as those in much of the industrialized world, fell furthest below the mark. Still, it is worth remembering that an emergency law passed by Congress in October 2008 and an extraordinary series of steps by the Federal Reserve Board (Fed) in 2008 and early 2009 were needed to keep the U.S. financial system functioning.

### **Monetary Policy**

Already worried by signs of financial market instability, the Fed began to cut short-term interest rates in the summer of 2007, when the

economy was still growing and the stock market climbing. By May 2008, the central bank reduced its policy interest rate from 5.25 percent to 2.0 percent. On September 15, 2008, Lehman Brothers, the nation's fourth-largest investment bank, declared bankruptcy. The bank's collapse triggered a worldwide panic and started the worst phase of the financial crisis. In response, the Federal Reserve lowered its policy interest rate still further. By the end of 2008 the federal funds rate, which is the interest rate banks use to make overnight loans to one another, was cut to its lowest level of the modern era. In the 16 months after August 2007, the Fed cut its benchmark short-term rate by 5.1 points, to essentially zero.

The Fed also extended extraordinary credits to both banks and non-bank institutions in exchange for high-quality collateral. This emergency measure was needed to keep credit flowing in markets where ordinary lending had practically ceased. Without this step many solvent financial and nonfinancial companies would have been forced to either enter bankruptcy or sharply curtail their normal operations. Many firms would have been cut off from routine short-term borrowing. By keeping credit flowing in the middle of a panic, the Fed kept the financial market crisis from metastasizing into something much worse. The real economy took a beating, but if credit markets had completely seized up, the damage could have been catastrophic. Providing liquidity in a crisis is a classic role of a well-functioning central bank.

When the Fed pushed its policy interest rate to zero in late 2008, it exhausted the standard measures used by central banks to encourage borrowing and spur growth. With safe, short-term interest rates close to zero, the Fed either had to watch from the sidelines or take unconventional steps to encourage lending and borrowing. One of the main tools it used after late 2008 was quantitative easing. This strategy involves the Fed's purchase of longer-term Treasury securities than it ordinarily holds, as well as purchases of private market securities, including mortgage-backed securities. These purchases can potentially reduce market interest rates on intermediate- and longer-term private securities. Through the fall of 2014 the Fed purchased \$1.6 trillion in Treasury bonds and \$1.7 trillion in mortgage-backed securities in three different sequences, all in an effort to push down intermediate- and long-term interest rates.

The logic behind this strategy is that by reducing longer-term interest rates the Fed might encourage some consumers and firms who oth-

erwise would not have borrowed funds to do so. Their borrowing can in turn give a boost to business investment, new home building, and purchases of consumer durable goods, such as cars. Experts on monetary policy, consumer spending, and business investment have not reached a consensus on whether this policy has worked. What seems clear is that the Fed was pushed to adopt unconventional policies because Congress failed to adopt a fiscal policy that is appropriate when the economy is operating far below its potential and when short-term interest rates on safe securities are close to zero.

### **Fiscal Policy**

With prodding from two presidents, Congress authorized a series of fiscal policy measures to boost consumer incomes, induce businesses to expand investment, and protect state-level spending on health, education, and public infrastructure. Most of the special government measures in response to the Great Recession were familiar ones: Temporary tax reductions to boost consumer incomes and encourage business investment; extensions of unemployment benefits and liberalization of other government transfer programs, including food stamps and social assistance; and increased federal appropriations for new government investment in buildings, roads, and science and technology projects. The special fiscal measures included some unusual measures as well. For the first time, the federal government paid for generous insurance subsidies for laid-off workers who lost health insurance when they lost their jobs. It also provided unusually liberal grants to state governments to encourage them to maintain or increase spending on core state obligations, such as K–12 education and health care for the indigent. President Obama used funds authorized under the Troubled Asset Relief Program (TARP) to finance emergency lending and fast-track bankruptcy funding to preserve General Motors, Chrysler, and many auto supply companies. A small share of emergency stimulus appropriations was used to fund or provide loans to projects aimed at improving energy efficiency and reducing carbon emissions.

It should be emphasized that an overwhelming percentage of stimulus dollars was spent on programs that would have been familiar to policymakers and economists in every recession since the early 1960s. This is true whether the administration was Democratic or Republican, liberal

or conservative. This is also true whether Congress was controlled by Democrats or Republicans, liberals or conservatives. The emphasis and overall scale of stimulus programs have differed depending on the political leanings of the party in control of Congress and the White House. However, Republican and conservative critics of recent fiscal policy are kidding themselves (and voters) when they claim to be horrified by the actual contents and additions to the deficit connected with the stimulus. Republicans were in control of either the White House or Congress (or both) in recessions in the mid-1970s, in the early 1980s, in 2001–2003, and in 2008. Many elements of the stimulus program adopted in 2009 and 2010 were also present in the fiscal policies adopted in those recessions—notably, big tax cuts, generous extensions of unemployment benefits, and extra outlays on public capital investment. In 2008–2009 the scale and speed of the additions to peacetime deficits were unprecedented, to be sure. But that is because after Lehman Brothers entered bankruptcy the nation faced the frightening prospect of financial market collapse. Even though the risk was reduced to a manageable level by spring 2009, the effects of the financial crisis on the real economy were obvious, severe, and still growing well into 2010.

The fact that most postwar administrations and Congresses would have pursued the same or a similar set of stimulus policies has not altered a basic reality. The popular political reaction to some of the best-known policies has been intensely hostile. In particular, the financial rescue of the nation's biggest banks and automakers inspired widespread public indignation. The federal bailout of big banks appeared to reward firms whose imprudent, even reckless behavior helped to create the crisis. Many voters may have incorrectly believed that an overwhelming share of public funds used to restore the economy was spent on bailouts for big banks and automakers. In fact, far more resources were devoted to temporary tax cuts for middle-income families, emergency relief for laid-off workers and their families, and generous grants to state and local governments. The confusion is understandable. After Democrats gained control of both the White House and Congress in January 2009, Republican opponents of fiscal stimulus were unrelenting in their criticism of selected components of the countercyclical program. Many liberal Democrats joined Republicans in fiercely criticizing the aid extended to big financial institutions. Voters may have wrongly inferred

that the controversial parts of the stimulus package consumed an outsized share of the program's cost.

The extreme and unbending hostility of political opponents to the fiscal measures has had practical consequences. First, fierce opposition from conservatives, including a handful of fiscally conservative Democrats, deterred the administration from proposing a stimulus package that was adequate given the magnitude of the shock to the economy. This opposition reduced the size of the stimulus the administration could persuade Congress to pass. Second, Republican gains in the House of Representatives in the 2010 election led to an unwinding of fiscal stimulus long before the economy had recovered from the recession. This was the single worst error in macroeconomic policymaking following the financial crisis in fall 2008. The fact that policymakers in other rich countries made even worse errors in both fiscal and monetary policy does not excuse the fiscal policy errors of U.S. decision makers. For reasons that may seem mysterious to future economic historians, members of Congress, opinion leaders, and ultimately voters decided that the "crisis" of rising public debt represented a more pressing challenge to the nation than soaring long-term unemployment and the underutilization of U.S. productive capacity. There is no evidence that people who buy and sell securities ever shared the view that the United States was accumulating an unsustainable debt burden. The government was able to sell indexed and unindexed short- and long-term Treasury at historically low interest rates throughout the crisis and its aftermath. Nonetheless, the fear of rising national debt pushed opinion leaders to urge Congress to adopt a more conservative fiscal policy after 2009 than would have seemed appropriate based on the historical record from 1929 to 2007.

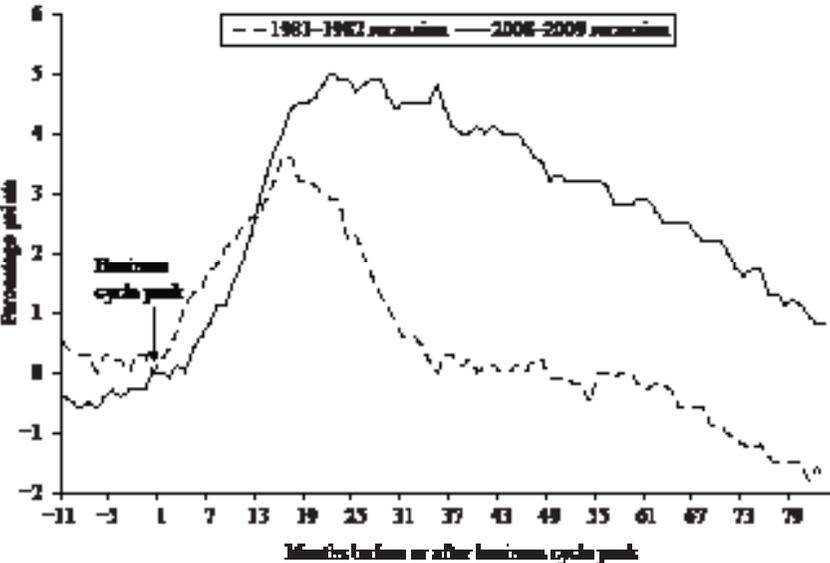
Fortunately, the private economy began to grow again in late 2009, and between 2010 and 2014, private sector payrolls grew faster than 200,000 a month. Unfortunately, the downturn was severe, and the growing working-age population needs 75,000 net new jobs every month just to keep the unemployment rate from rising. For the past four years, public sector spending and hiring have done little to speed the pace of recovery. In fact, in the three years through 2013, a drop in public employee payrolls offset about 6 percent of the job gains generated in the private sector. Reductions in public payrolls and also in govern-

ment consumption and investment created unnecessary headwinds for a weak recovery.

### Sharp Downturn, Weak Recovery

The labor market effects of the 2008–2009 recession were severe compared with those of any other postwar recession. More disturbingly, the recovery was unusually slow. It is enlightening to compare the recent recession with the one that began in 1981, which was the worst postwar downturn before the Great Recession. Figure 3.2 shows the trend in the unemployment rate before and after the onset of the two recessions. The unemployment rate in each case is measured relative to the rate at the business cycle peak as designated by the National Bureau of Economic Research.<sup>1</sup> The business cycle peak is indicated on the horizontal axis by “0” and other months by the number of months before or after the business cycle peak. The chart tracks the difference between the unem-

Figure 3.2 Change in Unemployment Rate in Two Postwar Recessions



SOURCE: U.S. Bureau of Labor Statistics.

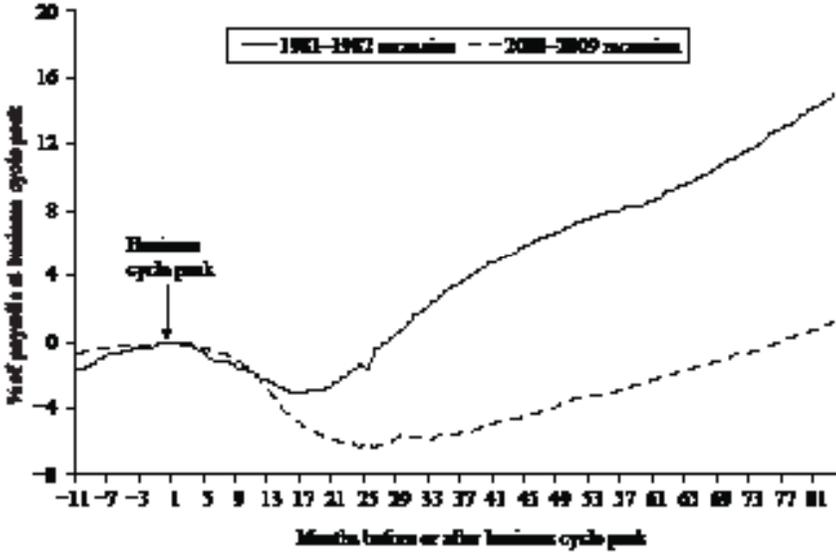
ployment rate in the indicated month and the rate at the business cycle peak. The estimates show unemployment changes in the year before the recession began up through the eighty-second month after the previous business cycle peak. The 1981–1982 recession initially saw a steeper rise in the unemployment rate. Slightly more than a year after the onset of the recession, however, the increase in joblessness was greater in the Great Recession, and the unemployment rate continued to rise for 22 months rather than just 16. Crucially, the decline in joblessness has been much slower in the most recent business cycle. By the thirty-fifth month, unemployment was back to its prerecession level in the 1981–1982 downturn but was still 4.8 percentage points higher than the prerecession level in the Great Recession. By the eighty-second month after the beginning of the Great Recession, unemployment was still 0.8 percentage points higher than it was when the recession began. At the comparable point after the Reagan recession, the jobless rate was 1.6 points below where it was when the recession began.

Figure 3.3 shows the same kind of comparison for the decline and recovery of payroll employment in the two recessions. The drop in employment was initially more severe in the 1981–1982 recession, but by the thirteenth month after the downturn began the percentage drop in payroll employment was greater in the Great Recession. In the eighteenth month after the onset of the 1981–1982 recession, employment began to recover. Employment did not begin to climb in the Great Recession until the twenty-eighth month after the business cycle peak in late 2007. By the eighty-second month after the beginning of the recession, payroll employment in the 1981–1982 recession was 14.6 percent above its prerecession peak. In the same month of the most recent business cycle, employment was only 0.8 percentage points above its prerecession peak. Not only were the labor market effects of the recent recession deeper than those of any other postwar recession, they have also lingered much longer.

### **Why Was the Recovery So Weak?**

The key event that triggered the steep slide in the 2008 economy was the near-death experience of the biggest U.S. financial institutions. Their brush with disaster interrupted normal credit flows and, more to the point, made credit-worthy households and businesses worry about

Figure 3.3 Change in Total Payroll Employment in Two Postwar Recessions



SOURCE: U.S. Bureau of Labor Statistics.

their future access to credit. Investors and businesses fled riskier assets and bid up the prices of the safest assets, particularly U.S. government debt.

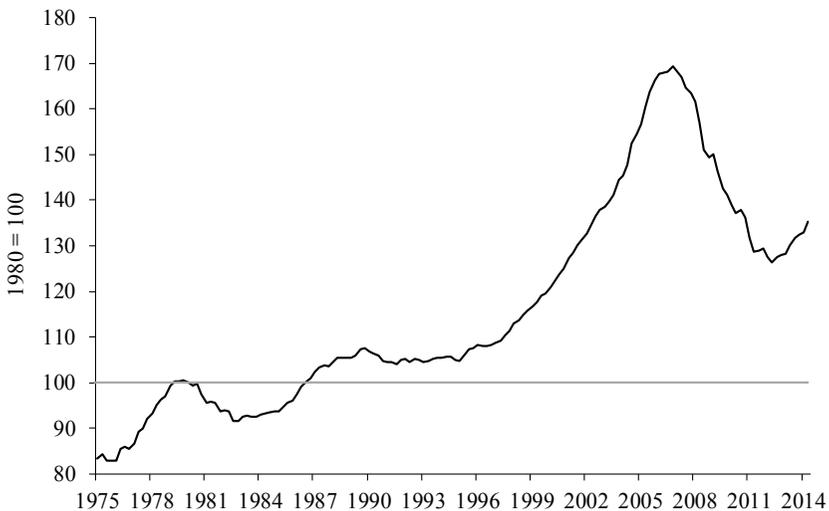
The underlying cause of financial institutions' weakness can be traced to the run-up in house and apartment prices followed by the steep slide in many parts of the country. The rise in prices encouraged households to borrow and increase their consumption more than they would have done based on their incomes alone. The accelerating decline in house prices after 2006 wiped out much or all of this extra wealth and simultaneously destroyed the credit-worthiness of a large percentage of households. Between 2007 and 2009 the combined effects of declining real estate and stock market prices erased \$19 trillion of household wealth—one-quarter of household net worth at the peak. This drop in wealth would be expected to reduce household consumption by \$450 billion a year if we assume, conservatively, that households boost annual consumption by \$4 for every \$100 increase in their net worth.

If many consumers spend an even larger percentage of their net gains from house price gains, the combined drop in house and stock prices would reduce consumer spending by \$750 billion per year.<sup>2</sup>

Figure 3.4 shows the rise and subsequent fall in home prices compared with all other prices in the U.S. economy. Between the late 1990s and 2006, house prices increased by half relative to other prices; by 2012 they lost about six-tenths of that gain. Between 2006 and the end of 2012, they fell one-quarter. Since many homeowners had borrowed heavily either to buy their homes or to convert their capital gains into ready spending money, a large percentage of them ended up with negative equity in their homes. If they also saw their incomes drop as a result of a bad job market, they simultaneously faced the risk of losing possession of their homes.

The surge in house prices between 2003 and 2006 was accompanied by a strong rise in stock prices. Appreciating stock values helped boost

**Figure 3.4 Index of Real U.S. House Prices, 1975–2014, Q1**



NOTE: Federal Housing Finance Agency index of U.S.-average house price is deflated using the GDP deflator.

SOURCE: Federal Housing Finance Agency and U.S. Department of Commerce, Bureau of Economic Analysis.

consumption among households that owned equities. When equity owners lost faith in U.S. financial institutions and then in the companies that depended on them, stock prices plunged. Equity prices fell about half between the fall of 2007 and the first quarter of 2009. The collapse of stock prices affected the net worth of a different group of households than those suffering sharp losses as a result of the housing collapse. Stockholders tend to be considerably richer on average than the typical homeowner. Nonetheless, wealthy Americans also consume, and their consumption is affected by the value of their wealth holdings.

The best summary measure of American's wealth holdings is the ratio of their household net worth to their disposable income. This ratio reached a peak of 6.5-to-1 in 2006 and then fell back to 5-to-1 in early 2009 (Figure 3.5). The deflation of the house price bubble, the loss of confidence in major financial institutions, and collapsing stock market valuations erased one-quarter of net household wealth. After 2007 consumption was no longer being turbo-charged by soaring household wealth; it was being pushed down by the drop in household net worth.

Most large nonfinancial businesses entered the recession with reasonably strong balance sheets. Except for short-term borrowing needs, many of them did not have a pressing need for credit to maintain their operations. But to persuade a business to invest, the business owner must also be persuaded that there will be a market for the added output that would be produced by new investment. Business managers and owners read the same news stories as the rest of us—after Lehman Brothers' collapse, they faced the chilling prospect of consumer retrenchment.

The drop in home prices extinguished many families' chances for added borrowing. But even families with ample wealth faced the reality that not only was their net worth no longer rising, it was sinking fast. In this environment, households consumed less, businesses sold less, and sensible business managers anticipated that household spending would remain low, erasing the potential payoff from new investment. If a firm is already operating at 30 percent below capacity, why spend funds to expand that capacity? Even with short- and intermediate-term interest rates at historical lows, the attractions of additional investment appeared meager.

The outlook improved when stock prices recovered and home prices began to rise again. Even so, the Federal Reserve's Survey of Consumer Finances suggests that average household net worth for middle- and

**Figure 3.5 Ratio of Net Household Wealth to Household Disposable Income, 1974–2014, Q2**



SOURCE: Board of Governors of the Federal Reserve System, Financial Accounts of the United States.

lower-income families was lower in late 2014 than it was in the late 1980s.<sup>3</sup> The top wealth holders are undoubtedly much better off today than they were in the aftermath of the Great Recession, but the same is not true of lower-income households whose 2007 wealth consisted mainly of the equity in their homes.

The dismal employment numbers I cite above, combined with appalling wealth losses, may lead some readers to wonder why per capita consumption fell “only” 4 percent from its peak prerecession level to its low point in the Great Recession. One answer is that the U.S. social safety net worked very well in the Great Recession. When we entered the recession, neither the Congress nor the president was interested in dismantling the safety net. In fact, President Obama and the 2009–2010 Congress enacted important and permanent additions to the safety net. Furthermore, Congress and two administrations acted promptly to shore up consumer incomes through a range of temporary tax cuts and enhancements of the safety net.

Even if policymakers do not act to boost the economy in a recession, the nation's permanent tax and transfer system has built-in stabilizers that automatically lessen the income losses suffered by the unemployed. Quantitatively, the biggest single item is federal tax payments, especially payroll and personal and corporate income taxes, which tend to fall faster than private incomes when recessions cause pretax incomes to shrink.

The second-biggest item is unemployment benefits. Experienced workers who lose their jobs through no fault of their own ordinarily qualify for up to six months of Unemployment Insurance benefits. In recessions, benefits can last longer depending on the severity of unemployment in a job loser's state of residence. Although U.S. unemployment benefits are low compared to those available in most other wealthy countries, workers earning the average wage typically qualify for benefits that compensate them for half the loss of their prelayoff earnings.<sup>4</sup> Because the number of laid-off workers qualifying for benefits rises steeply in a recession, the money spent on jobless benefits also increases sharply. In every recession since the late 1950s, Congress has authorized temporary emergency extensions of unemployment benefits, financed with federal funds. It did so again in 2008 and 2009, increasing the maximum duration of unemployment benefits to 99 weeks in states with the highest unemployment rates. In no previous recession had Congress authorized such a lengthy extension of benefits. In addition, Congress financed a temporary increase in weekly unemployment benefit checks, and it reduced the income tax levied on benefits. Between 2007 and 2010, annual outlays on unemployment benefits increased more than 4.5 times, rising from \$35 billion to \$160 billion.

In addition to temporary improvements in unemployment benefits, the federal government also authorized increases in monthly food stamp allotments, extra funding for state governments' social assistance programs for children, and a doubling of the prerecession budget for training the unemployed and hard-to-employ. Congress also enacted temporary measures to cut household payroll and income tax payments. For example, it increased the Earned Income and Child Tax Credits, and it authorized a temporary payroll tax credit of \$400 per worker and \$800 per couple in 2009 and 2010, with the credit phased out for upper income families. When the temporary tax cuts ended in 2011, they were replaced by a temporary cut in the Social Security payroll tax of 2 per-

centage points. Many low- and moderate-income families do not owe income or payroll taxes, and consequently did not benefit under these provisions. For some of these families—in particular, those receiving Social Security and veterans’ benefits—the 2009 stimulus bill granted one-time payments in lieu of the tax cuts.

Automatic income stabilization combined with generous temporary measures to shore up household income achieved their intended aim: Household net income fell proportionately far less than the drop in private income. This is illustrated in Figure 3.6, which shows the 2007–2014 trends in gross market income and disposable personal income. Trends in both income series are measured on a per capita basis as a percentage of estimated incomes in the fourth quarter of 2007, the last calendar quarter of the economic expansion that ended in 2007. Incomes in each period are converted into constant purchasing power units using the personal consumption expenditure deflator. The line in the chart

**Figure 3.6 Impact of the Great Recession on Pretax Market Income and Disposable Income, 2007Q1–2014Q3**

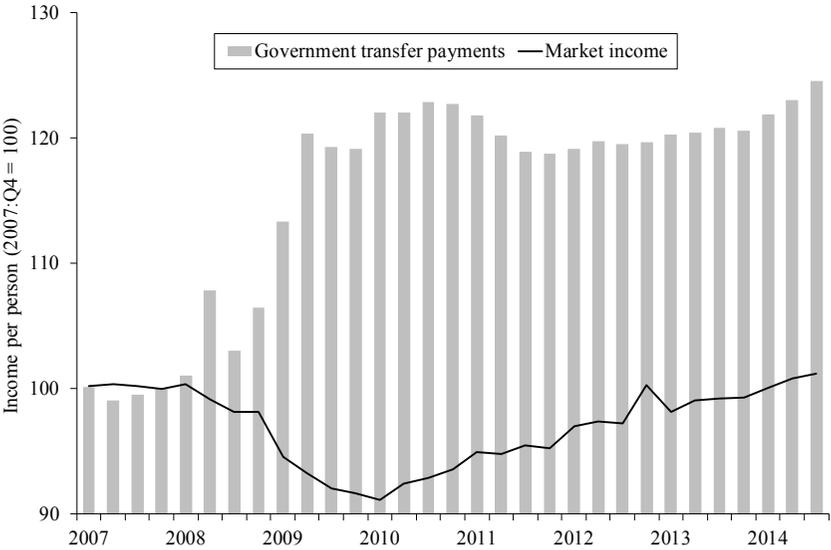


SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

shows the trend in pretax market income per person. Market income consists of gross labor compensation to employees, self-employment income of business owners, interest, dividends, rental payments, and other flows of pretax capital income. Per capita market income fell sharply in the recession, declining 8.8 percent by the first quarter of 2010. Spendable income, indicated by the bars in Figure 3.6, fell proportionately much less. Increases in government transfers and reduced personal taxes cushioned households' income loss. In the period with the worst income loss, the first quarter of 2010, disposable income per person was only 1.5 percent below its level at the end of the previous expansion.

Figure 3.7 compares the trend in pretax market income with changes in the level of government transfers per person. The bars in the chart show the level of real government transfers per person, measured as a percentage of transfers per person in the final quarter of 2007. Note

**Figure 3.7 Trends in Pretax Market Income and Government Transfer Payments, 2007Q1–2014Q3**

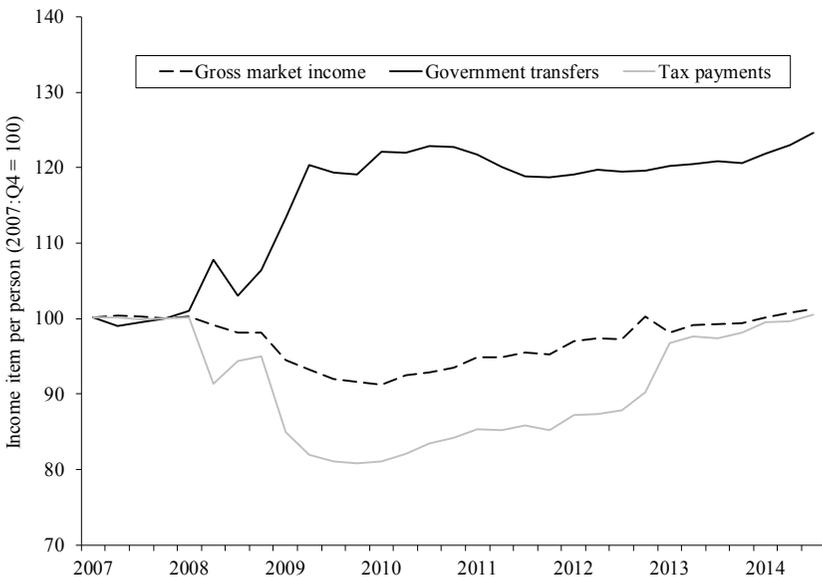


SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

the steep increase in transfers starting as early as the second quarter of 2008, when the Bush administration and Congress enacted the first countercyclical stimulus program. By the second quarter of 2009, transfer payments per person were 20 percent higher than in the quarter before the recession began.

Now consider all three components of disposable personal income, shown in Figure 3.8: 1) pretax market income (wages, fringe benefits, self-employment earnings, rent, interest, and dividends); 2) direct tax payments to the government (mainly social insurance and personal income tax payments); and 3) transfer payments received from the government. Measuring each of these variables relative to their levels in the last quarter of 2007, the trend lines in the chart show how per capita amounts changed over the period from 2007 through 2014:Q3. As a result of progressive income taxation and the temporary tax cuts effective over the period 2008–2012, personal tax payments fell, both

**Figure 3.8 Components of Real Disposable Personal Income per Person, 2007Q1–2014Q3**



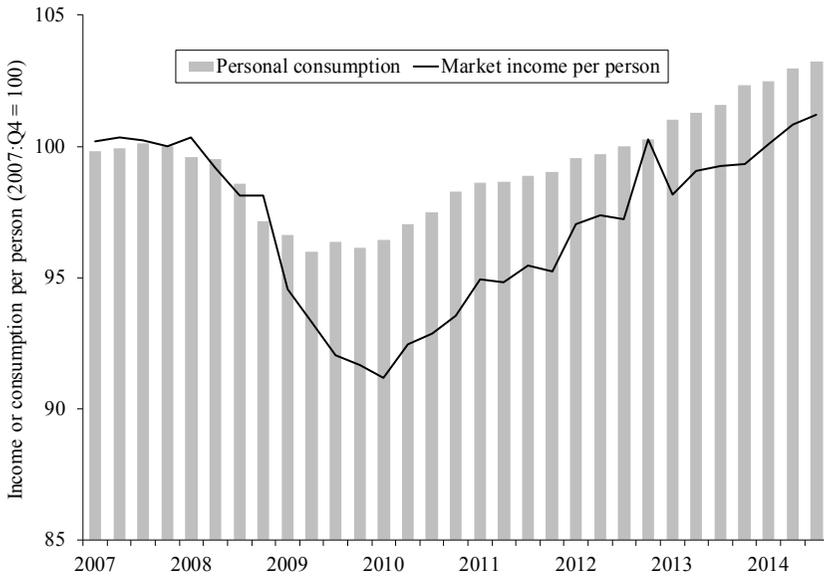
SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

absolutely and as a percentage of households' pretax incomes. By the third quarter of 2009, per capita tax payments fell almost 20 percent, about twice the proportional drop in pretax market income. The temporary tax cuts were phased out at the end of 2012, so the trend in tax payments after that year mirrors the trend in pretax market income. As noted above, the increase in real government transfers per person has not yet been phased out. Transfer payments continue to supplement family incomes more than they did before the Great Recession.

In view of the sharp increase in transfer income and the sizable temporary cuts in personal taxes, it should not be surprising that personal consumption fell much less than market income in the Great Recession, a pattern highlighted in Figure 3.9. The line in the figure traces the trend in pretax market income per person. Note that per capita market income fell nearly 9 percent between 2007 and the first quarter of 2010. The bars in the chart show the trend in real consumption expenditures per person, measured as a percent of the personal consumption level in the last quarter before the recession. Even at the worst point in the recession, the second quarter of 2009, personal consumption fell just 4 percent—a larger drop than the one we observed in per capita disposable income (see Figure 3.6). It is, however, far smaller than the drop in pretax market income. The stimulus program combined with automatic stabilizers undoubtedly worked in the sense that they dramatically reduced the decline in spendable incomes. By helping to hold up spendable income, they also lessened the drop in consumer expenditures. Recall that household net worth fell one-quarter while household market incomes fell one-eleventh. It represents a considerable achievement that per capita, real consumption fell only 4 percent below its previous peak in the worst quarter of the Great Recession.

The changes in tax burdens and in government transfers tended to favor low- and middle-income families, especially those with a laid-off worker, over families with higher incomes. The Congressional Budget Office (CBO) publishes periodic analyses of the distribution of federal tax burdens (e.g., CBO [2014]). The analyses distinguish three definitions of income: gross market incomes (including capital gains and an imputation to households of the undistributed income of corporations in which they have ownership share); pretax income (gross market income plus government transfers); and after-tax income (pretax income minus federal taxes, including payroll, income, and excise taxes). The most

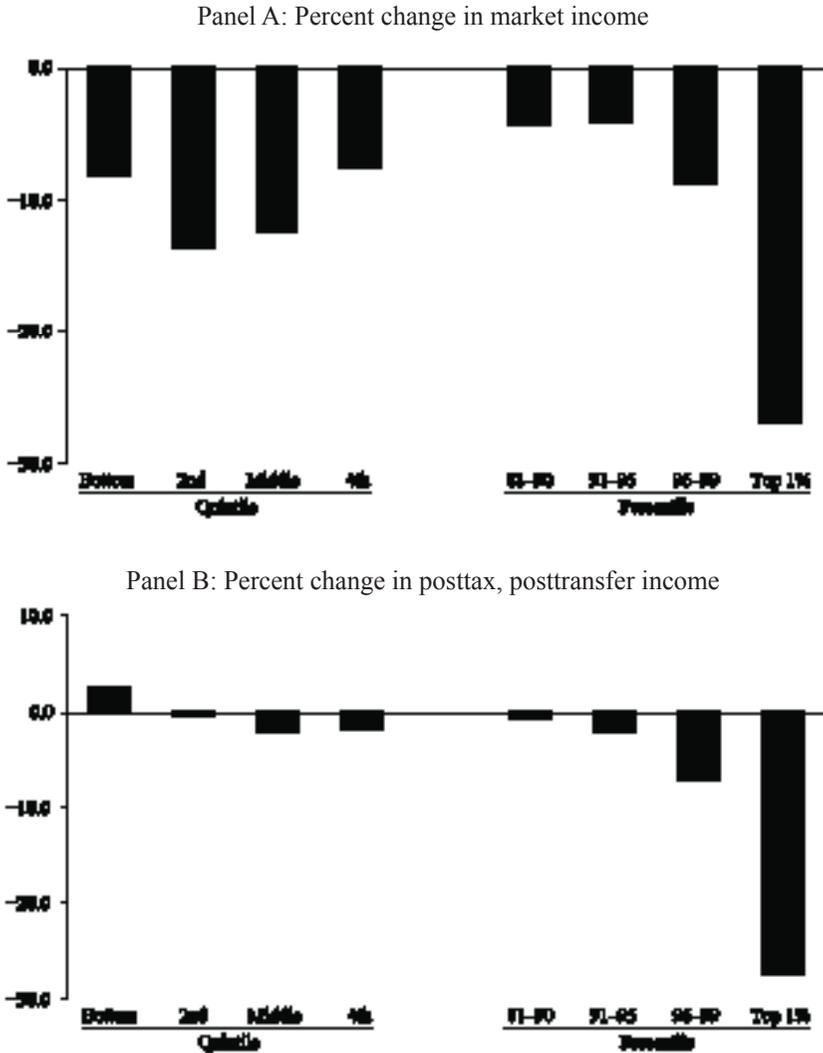
**Figure 3.9 Trends in Pretax Market Income and Personal Consumption Expenditures per Person, 2007Q1–2014Q3**



SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

recent published CBO data cover the period from 1979 through 2011, and they permit us to determine how incomes under these three definitions differ across the household income distribution and over time. CBO’s results for the period 2007–2011 permit us to see how gross market income and after-tax income (including government transfers) changed in different positions of the income distribution. Figure 3.10 shows the 2007–2011 change in pretax market income and after-tax income across the distribution. Households are ranked by the CBO based on their pretax market plus transfer income. Panel A shows percent changes in pretax market incomes; Panel B shows percent changes in after-tax incomes. Results on the left show income changes in the bottom four-fifths of the income distribution; results on the right show changes in the top fifth of the distribution. The latter results are subdivided into results for the 81st–90th income percentile, the 91st–95th

**Figure 3.10** Estimates of Changes in Market Income and Posttax, Posttransfer Income by Position in Household Income Distribution, 2007–2011



SOURCE: Congressional Budget Office (2014). Income groups are created by ranking households by their pretax income, adjusted for family size. Each fifth of the distribution contains an equal number of people.

percentile, the 96th–99th percentile, and the top 1 percent of pretax income recipients.

The biggest income losses were sustained by households in the top 1 percent of the income distribution. Those households saw a 27 percent drop in both their pre- and posttax incomes. In all other income groups the proportional drop in posttax, posttransfer income was substantially smaller than the drop in gross market income. Lower taxes and higher transfer payments erased all the market income losses suffered by households in the bottom two-fifths of the income distribution. According to CBO's estimates, households in the bottom one-fifth of the income distribution saw a small rise in their after-tax incomes even though they suffered an 8 percent drop in their average market incomes. (The CBO estimates show, however, that households in the bottom income group derive a large share of their total income from public transfers.) Middle- and lower-middle-income households saw large declines in their pretax market incomes, but when tax reductions and increased government transfers are taken into account, the percentage loss in net income was far smaller. Only near the top of the income distribution did households experience proportional losses in their after-tax incomes that were comparable to the reductions in their market incomes. The CBO income analysis thus confirms a little-known fact: The nation's social safety net as well as the special fiscal measures enacted early in the Great Recession offset a sizable fraction of the market income losses suffered by Americans in the bottom 95 percent of the income distribution. Even though many voters appear to have missed this beneficent effect of the stimulus program, the reduction in spendable income losses represents a signal achievement of U.S. fiscal policy in the Great Recession.

## **HOW DID FISCAL POLICY FAIL?**

If fiscal policy succeeded in offsetting much of the market income loss suffered by lower- and middle-income Americans, it nonetheless failed to create buoyant demand for goods and services produced in the United States. This failure is almost certainly connected to the fact that, even in the winter of 2009, few policymakers or public or pri-

vate forecasters anticipated the severity of the Great Recession. The United States had experienced severe recessions in the earlier postwar period—notably in 1974–1976 and 1980–1983—and it had seen weak recoveries after both the 1990 and 2001 recessions. But never before in the postwar period did the nation experience a severe recession followed by a painfully slow recovery. The Great Recession combined these two elements. Even in winter 2009, forecasters in the private sector, the CBO, the Federal Reserve, and the new Obama administration substantially underestimated the severity of the recession.<sup>5</sup> Their prediction errors were understandable—after all, they were based on the experience of other recessions in the postwar era.

The forecasting errors had unfortunate consequences. Because the reality turned out to be considerably worse than the forecast, naïve or unscrupulous critics tended to blame the disappointing outcome on the policies adopted by Congress and the Obama administration. As critics correctly pointed out, the actual trend in both output and employment turned out worse than the administration forecast. But rather than draw the correct inference—the downturn was worse than forecasters believed based on preliminary and incomplete statistics—critics of U.S. policy reached the profoundly wrong conclusion that countercyclical fiscal and monetary policy produced the disappointing shortfall.

Prudent policymakers, even if they accepted the consensus forecast, should have formulated a Plan B. They should have asked, “Suppose the outcome is much worse than we expect? Suppose unemployment rises more than forecast and payrolls rebound more slowly?” Under those circumstances, we should have expected long-term unemployment to increase substantially. Past experience shows that employers are reluctant to hire the long-term unemployed as long as there are plenty of short-term unemployed and new job seekers in the applicant queue. What policies would help deal with the swelling number of long-term unemployed? I do not think influential policymakers ever devised a Plan B. Once it was clear in summer 2009 that the financial system was on the road to recovery, the sense of crisis passed.

Some economists in the administration and many more who were advising Republican presidential aspirants and members of Congress turned to the task of trimming the deficit. They thought the crisis was over. For the growing number of long-term unemployed and the mil-

lions who would eventually join their ranks, a weak job market was or would become the central problem of their economic lives.

The simple explanation for stubbornly high unemployment was that there was too little aggregate demand for goods and services produced in the United States. The drop in overall demand due to shrunken household wealth, the sharp fall-off in the demand for new homes, and weaker business demand for new investment caused labor demand to fall far below the level needed to produce full employment. Using conventional monetary policy tools, there was little the Fed could do to boost demand once interest rates on safe short-term securities fell almost to zero. The usual policy remedy when the nation has exhausted standard monetary policy tools is to use fiscal policy to lift overall demand. The U.S. government boosted fiscal stimulus in 2008–2010 and then began to reduce that stimulus though the unemployment rate remained above 8 percent through August 2012.

### **Ingredients of Plan B**

A more sensible policy would have aimed at boosting the demand for jobless workers well past the date when Congress began cutting the fiscal stimulus. Since voters and lawmakers were concerned about additions to the national debt, fiscal policy should have focused on reducing the country's underemployment problem. This means that every \$100 added to the national debt to finance the plan should have increased by at least \$100 the amount employers spent on wages and fringe benefits of workers residing in this country. Boosting transfer payments to persons and cutting business and consumer taxes are not the most reliable ways to maximize the impact of additional public spending on labor compensation.

Consumers whose disposable incomes are increased by a tax cut may spend their extra incomes on goods produced in another country, they may reduce their indebtedness, or they may increase their bank balances. If financial institutions are unwilling to lend out the extra deposits for current consumption or investment, the additional \$100 in federal debt accumulated to provide the tax cut will not yield an additional \$100 of outlays on wages.

The same is true of tax cuts or benefit hikes that consumers use to buy products produced in China, Thailand, or Germany. When we

implement an emergency Plan B, it is with the understanding that we are trying to extricate the U.S. economy from a serious domestic crisis. We want the additions to debt to deal first and foremost with our domestic economic problem rather than the ones faced by the Chinese, Thai, or German governments. After 2009, voters and members of Congress became worried about the soaring national debt (wrongly, in my view). If we want to economize on the additions to the national debt while at the same time dealing with the shortfall in U.S. aggregate demand, we should adopt emergency policies that maximize the employment effect of each additional dollar of debt needed to deal with the shortfall. Added debt-financed spending should reduce the number of involuntarily unemployed Americans as much as possible. When there is persistent excess unemployment and widespread fear of taking on added debt, we want any additions to our debt to produce added labor income for workers in the United States rather than in other countries.

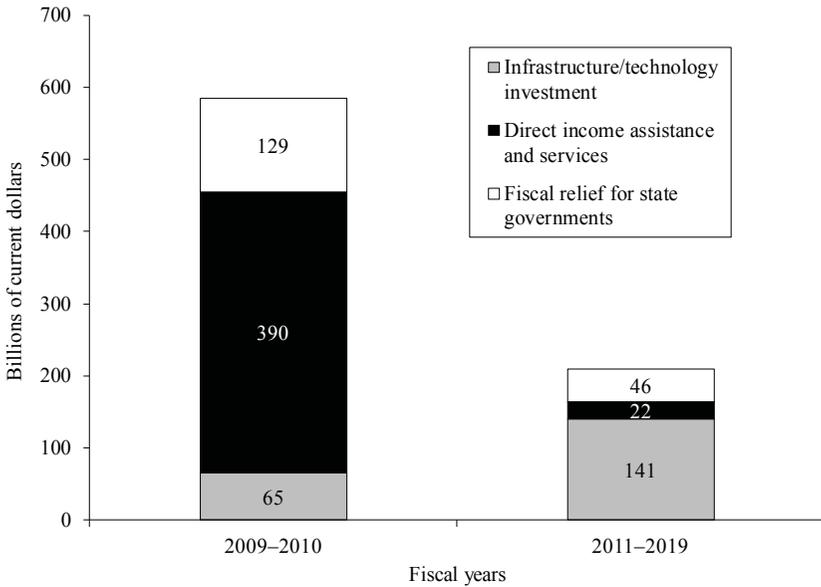
What policies could have achieved this goal? Investing in additional new or refurbished public infrastructure seems like a promising way to boost demand for U.S. workers. Both construction and durable manufacturing were badly hurt by the downturn. Payroll employment during the recession fell more than 20 percent in durable goods manufacturing and nearly 30 percent in the construction industry. Both industries were in fact already shrinking when the Great Recession began. Skilled and unskilled workers in these industries could have been put to work on useful public projects without depriving the private sector of workers whose talents were in short supply. Private sector demand for these workers was inadequate in 2009–2013 and remained inadequate through 2014.

A federal policy of funding public infrastructure could only be effective in reducing joblessness if employers added net new jobs that otherwise would not have been created. A sizable share of public infrastructure is financed, built, or maintained by state and local governments. If the federal government provides \$100 billion to state governments for new infrastructure investment, it should place restrictions on the grants so states do not subtract \$100 billion from infrastructure investment they otherwise would have paid for themselves. Ensuring that grantees do not offset the intended effects of grants by undertaking less self-financed activity of the kind subsidized by the grants is a well-known problem in public finance. How can the national govern-

ment create incentives for state and local lawmakers to undertake new activities on their own with their own resources? Some methods have proven more effective than others. The federal government can place a floor on states' and localities' own spending on the activity it is trying to encourage. That floor can be linked to the prerecession level of state and local spending on the activity. States can then be penalized with reduced federal grant payments if state and local government outlays on the activity drops beneath the specified floor. This method of incentivizing state lawmakers is particularly effective if the increase in federal aid is expected to be temporary. Congress can also establish drop-dead dates for the expenditure of emergency federal aid. For example, Congress could have required that federal aid appropriated and authorized in 2009 must be spent no later than December 2013. Unexpended funds would then be returned to the Treasury, which could redistribute the funds to states that spent their stimulus grants on the designated activity and on schedule.

Most voters may have been under the impression that, aside from bank bailouts, the bulk of stimulus spending was devoted to infrastructure investment and maintenance projects. That is not the case. Consider the programs authorized by Congress in February 2009 as part of the American Recovery and Reinvestment Act (ARRA). Figure 3.11 presents a three-way breakdown of the fund allocations. The bottom portion of each bar shows the funds authorized for public infrastructure projects or grants and tax incentives for businesses and nonprofit organizations to invest in buildings and research and development. The appropriated funds are divided into two time periods, fiscal years 2009–2010 and 2011–2019. An overwhelming share of the total funds were expected to be spent in 2009–2010, that is, before October 2010. This is not the case, however, for the funds slated for infrastructure and R&D investments. Most of those capital expenditures were expected to be spent after 2010. These capital expenditures may be what many voters have in mind when they refer to “stimulus spending.” In fact, such spending was a minor part of the stimulus. The overwhelming share of stimulus funds were spent on temporary tax cuts and transfers to persons. The share devoted to those items is indicated in the middle portion of the bars. Actually, the chart understates the fraction of stimulus dollars devoted to tax cuts and transfer benefit increases because it excludes the sizable tax cuts and benefit improvements authorized in the last year

**Figure 3.11 Anticipated Stimulus Spending under the American Recovery and Reinvestment Act of 2009, 2009–2019**



SOURCE: Author’s tabulations of data from Congressional Budget Office (2009).

of the Bush administration and in the months after February 2009. It ignores all stimulus funds except those that were authorized under the ARRA program. Virtually all of the non-ARRA stimulus spending took the form of tax cuts and unemployment benefit expansions.

Why was so little money devoted to public capital projects, even though these have powerful advantages in ensuring that funds are used to buy goods and services produced in the United States? When the stimulus program was authorized, the Obama administration and well-informed members of Congress recognized they wanted the money to be spent quickly, when the slump was actually in progress. Informed policymakers were also aware of the difficulties of spending funds quickly when the money is allocated to new or refurbished public capital projects. It is hard to come up with a controversy-free list of projects on which to spend extra federal dollars. Even after a list of projects is chosen, it may take many months or even years before the resources

can be invested to complete the projects. States and local governments may game the federal rules so they obtain fiscal relief with federal aid rather than add to the number of worthwhile projects they undertake or complete.

Delays in selecting and beginning capital projects will delay the expenditure of capital project funds. Federal stimulus dollars may not actually get spent until the economic emergency is past, at which point the federal dollars will compete with private-sector dollars to obtain the resources needed to complete the long-delayed projects. Skilled workers, expensive machinery, and experienced managers may be in short supply when the federal aid dollars are finally spent. Instead of boosting aggregate demand when the economy is far below full employment, the funds may get spent when the economy is near full employment. In short, funds will be spent too late to speed the recovery and just in time to fuel inflation in a fully employed economy. In contrast, tax cuts and transfer increases can be temporary and targeted on population groups in greatest need of aid.

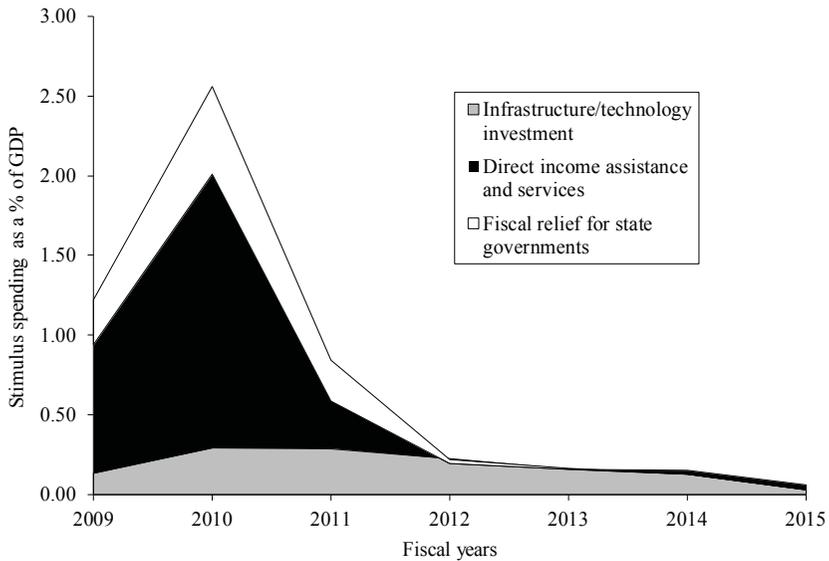
These are valid lessons from the nation's post-World War II experience with countercyclical public works programs. They represent costly and hard-won lessons, but they do not apply with much force when policymakers are looking for a Plan B, a strategy that will reduce excess unemployment when short-term interest rates are at or near zero. In those circumstances, monetary policy will be less effective in bringing the economy closer to full employment. When the shortfall from full employment is expected to last a long time, the advantages of a temporary public works program seem compelling. Even if state and local governments cannot immediately find or begin new shovel-ready projects, they should be capable of finding and beginning them within a couple of years. The limitations mentioned above might mean few dollars would have been spent on public capital projects in 2008 or 2009. As it turned out, however, the U.S. job market still needed a sizable boost in 2010—and in 2011, 2012, 2013, and 2014. The majority of states and thousands of local governments could have found worthwhile capital projects on which to spend emergency federal aid dollars over such a lengthy span of years. The risk that such a capital investment program would have generated excess inflation now seems far-fetched, but even if we assume that states only began spending their emergency public works money when the recovery was nearly complete, policymakers

can use many policy tools to reduce excess inflation. For example, the Fed could raise short-term interest rates, or Congress could raise tax rates or curb public spending on other discretionary budget items.

The third main budget category in the 2009 ARRA package was an allocation to aid state and local governments. Those funds are indicated by the top portion of the columns in Figure 3.11. The amount of money allocated to state aid in 2009–2010 was twice the level allocated to government capital projects and in research and development investment. Federal policymakers were worried in 2009 that a sharp decline in state and local revenues would push local lawmakers to cut benefits to the unemployed, trim health and education spending, and shrink public payrolls. The temporary fiscal relief from the federal government was large enough to offset a quarter to a third of the expected state and local budget imbalances that resulted from the recession. It is an open question whether this aid to state and local governments was effective in reducing employment losses in the downturn or in speeding growth in the recovery. Years of careful research will be needed to determine how states and localities spent the extra federal funds they received. State and local public employee payrolls increased modestly through the middle of 2010, and it seems likely these payroll gains would have been smaller in the absence of the temporary federal aid. State and local payrolls began to fall in 2010 at the same time private-sector employment began to recover. Public payrolls then continued to slide through the end of 2013, offsetting about one-seventh of the employment gains generated by private employers.

Figure 3.12 divides the ARRA stimulus package into the same three categories described in Figure 3.11 and shows the timing of spending on each item measured as a percentage of potential GDP in the indicated fiscal year. Total spending on the package was estimated to be \$835 billion spread over 10 years. Outlays were expected to peak in fiscal year 2010 and then slide steeply immediately thereafter. However, Congress later authorized further extensions in unemployment benefits and sizable (though shrinking) tax cuts after the expiration of those authorized in ARRA. Nearly all the later stimulus packages either cut Americans' taxes (income taxes and Social Security payroll taxes) or provided more generous unemployment benefits than are offered under regular state programs. Congress failed to authorize any more capital projects or additional fiscal relief for state and local governments. A

**Figure 3.12 Anticipated Stimulus Spending under the American Recovery and Reinvestment Act of 2009, 2009–2015**



SOURCE: Author's tabulations of data from Congressional Budget Office (2009).

visual adjustment in Figure 3.12 to reflect all the stimulus programs through 2014 rather than just the spending authorized under ARRA would show much higher funding in FYs 2011–2013 for direct income assistance, provided largely in the form of tax cuts and unemployment benefit increases.

The composition of spending authorized under the stimulus packages makes public hostility to the spending puzzling. In January 2010, CNN conducted a poll asking Americans about their views of the stimulus program passed less than a year earlier (CNN 2010). The poll results showed that about 75 percent of Americans thought at least half of the stimulus dollars were “wasted” and 45 percent thought “most” or “nearly all” of the stimulus dollars had been wasted. When one considers how the stimulus outlays were allocated, this view seems extremely odd. Most of the stimulus dollars were spent directly on them, that is, the poll respondents themselves. By far the biggest slice of stimulus outlays was devoted to personal income tax cuts (lower tax withhold-

ings or bigger refund checks). Lower direct taxes boosted after-tax incomes for at least 80 percent of American households. Other portions of the package funded extensions in unemployment benefits, hikes in food stamps, and a variety of tax credits for low-income wage earners or families rearing children. If these stimulus dollars were wasted, most of the waste was being done by the poll respondents themselves.

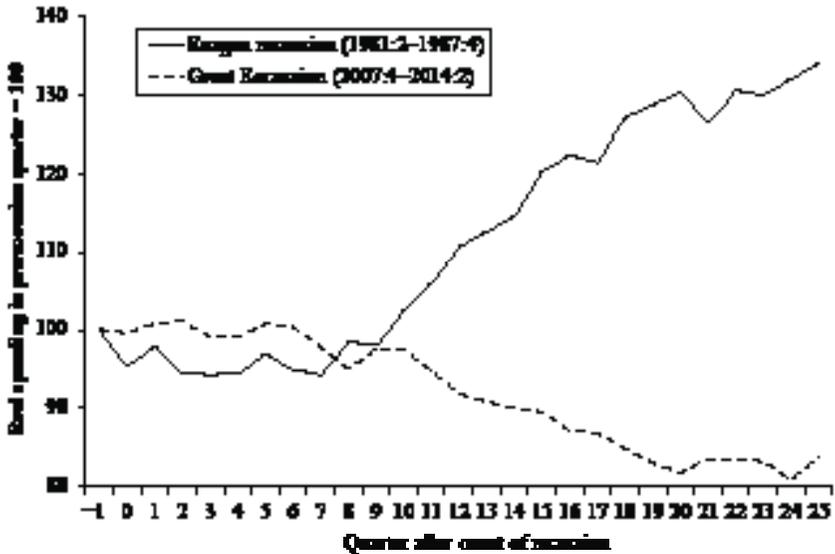
Another slice of stimulus spending, at least in 2009 and 2010, went to grants in aid for state spending on education and Medicaid. It is likely that only part of this aid was used by states to increase or maintain their spending on education and health benefits. A large portion was probably used for general budgetary support and indirectly to help states avoid imposing tax hikes. If polling respondents were correct and “more than half” or “nearly all” of these stimulus dollars were wasted, the blame lies not with Congress or the president but with state and local lawmakers and governors, who were provided with an additional \$130 billion in federal aid with which they could maintain state and local spending or delay tax increases on local residents.

Since voters rarely object to tax reductions or transfer increases that directly benefit themselves, I suspect many poll respondents believed—erroneously—that most stimulus spending was used to pay for unpopular bank and automaker bailouts, wasteful public works projects, or generously subsidized loans to politically connected businesses. The fact that very little stimulus money was spent in this way was probably known to only a small minority of voters.

## **GOVERNMENT CONSUMPTION AND INVESTMENT**

Many Americans may be under the impression that the federal government is still spending large amounts of money on what is popularly referred to as stimulus. Aside from very modest extra spending on transfer payments, this is not the case. Spending on public investment—roads, bridges, school and college buildings, ports, medical labs, and sewer systems—is done at the state and local level. The federal government is primarily responsible for investment in defense. Figure 3.13 shows the trend in real spending on state and local government investment in the two worst recessions of the postwar era. The solid

**Figure 3.13 State and Local Government Investment in Two Postwar Recessions**

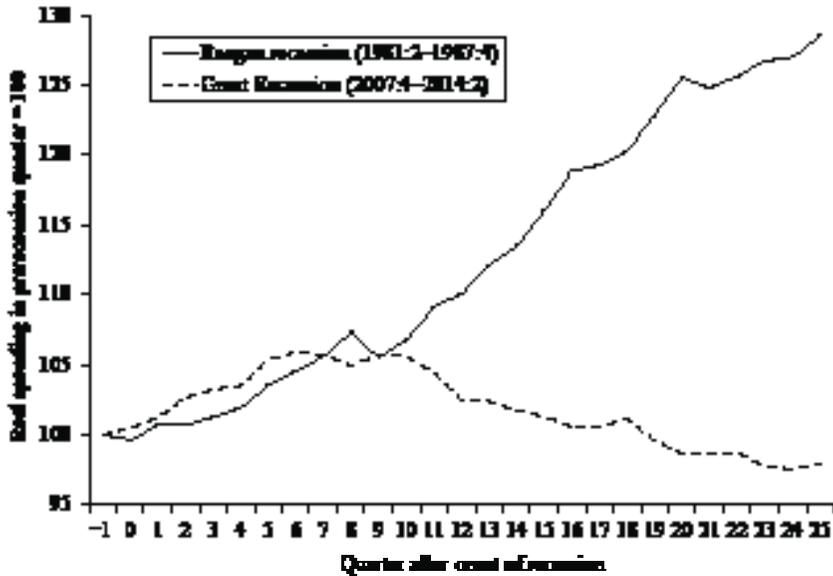


SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

line shows the trend in real state and local spending on public investment during and after the recession of the early 1980s, and the dashed line shows the same trend during and after the Great Recession. In the recent recession, state spending on public investment projects held up well when federal stimulus dollars were directly supporting state budgets, but state and local investment began to shrink starting in the seventh quarter after the onset of the recession. State and local investment spending has recently been one-fifth below its prerecession level. In contrast, it shrank about 5 percent during the recession in the early 1980s but then began to recover. Six years after the start of the recession, state and local investment spending was one-third higher than it was prior.

Statistics on total government outlays on final consumption and investment are equally depressing. Figure 3.14 shows the trend in this form of public spending at all levels of government—federal, state,

**Figure 3.14 Total Government Final Consumption and Gross Investment in Two Postwar Recessions**



SOURCE: Dept. of Commerce, Bureau of Economic Analysis, National Income and Product Accounts.

and local. This spending includes not only national defense and non-defense investment, but also the compensation payments to government employees and contractors. The solid line in the chart shows the trend in spending in the recession of the 1980s. Even though the national government in that era was politically conservative, real spending rose steadily and substantially during and after the economic downturn. In the Great Recession, the stimulus packages initially pushed up government consumption and investment outlays, but by the tenth quarter after the onset of the recession, spending already began to decline. By the nineteenth quarter after the recession began, government consumption and investment was 2 percent below its prerecession level. At the same point in the recovery from the 1980s recession, real spending was 27 percent higher than it was before the recession began. During the Great Recession, shrinking government budgets during the recovery tended to depress overall demand; during the 1980s recession, steady increases

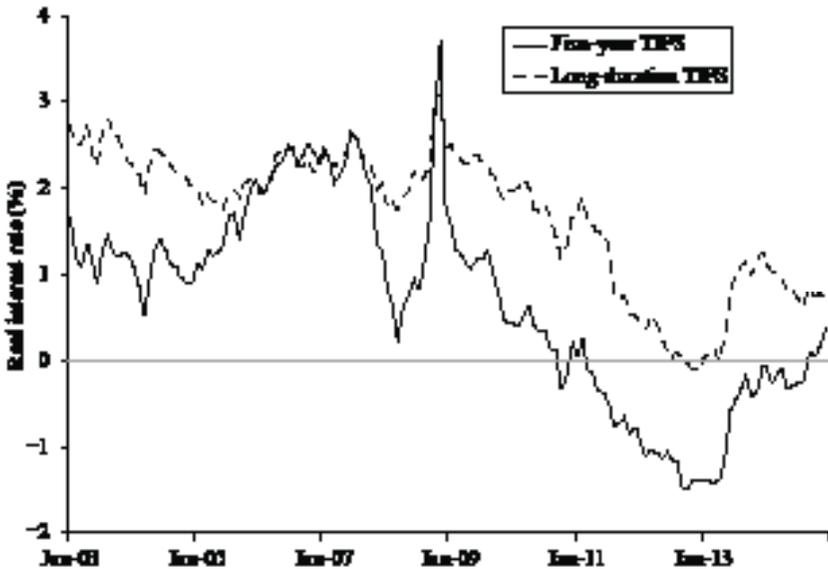
in government spending throughout the recovery boosted aggregate demand. Even though unemployment remained high and utilization of the capital stock low, policymakers began to shrink public consumption and investment soon after 2009. By 2013 real government spending on these items was smaller than it was when the recession began.

Starting in 2010 advocates of government austerity may have believed it was prudent to refrain from borrowing additional funds because savers inside and outside the United States were growing frightened of the nation's mounting public debt. Some stimulus critics feared that current and future U.S. taxpayers would have to pay extraordinarily high interest rates to borrow the funds needed to finance public budgets. This fear seems nonsensical in view of the interest rates actually paid on U.S. government debt. One indicator of the burden future taxpayers will have to pay is the real interest rate savers demand in order to hold U.S. Treasury securities. The world's savers do not demand that the United States pay much interest on its public debt. Figure 3.15 shows the trend in real interest rates on five-year and long-duration indexed U.S. Treasury securities. For most of the 2011–2014 period, the five-year indexed bond offered a yield of less than 0 percent. Savers offered to lend the federal government funds for five years and receive interest payments that did not even compensate them for the change in the price level. The chart also displays the trend in real yields on long-duration inflation-indexed Treasury securities.<sup>6</sup> In the first four years after the financial crisis the yield on these long-duration securities fell from 2.5 percent to 0.0 percent. In the last quarter of 2012 savers in effect offered to hold federal debt without receiving any real compensation at all. Based on the evidence in Figure 3.15, it is hard to see any evidence that savers were losing confidence in the government's ability to repay its debt.

If the government can find investment projects that are expected to yield benefits that exceed 1 or 2 percent a year over the next 15–20 years, it would be worthwhile to invest in those projects. Savers were offering (and continue to offer) the federal government funds at historically low interest rates at the same time the nation had millions of unemployed workers and a sizable amount of unused productive capacity.

It is hard to believe the country cannot identify infrastructure projects with payoffs that are expected to yield 1 or 2 percent a year. According to the World Economic Forum's most recent *Global Competitiveness Report* (Schwab 2013), infrastructure in the United States

**Figure 3.15 Real Yields on U.S. Treasury Inflation-Indexed Securities, 2003–2014**



SOURCE: Board of Governors of the U.S. Federal Reserve System.

ranks fifteenth among the countries graded. This is a somewhat higher rank than Austria and a lower rank than Korea and Taiwan. Each of the other countries has substantially lower average incomes than the United States, so one might expect the United States to have substantially better infrastructure.

The fact that it does not suggests there are many attractive opportunities to improve or add to U.S. infrastructure. It is easy to identify types of infrastructure that need improvement or repair. Every four years the American Society of Civil Engineers offers a detailed assessment of U.S. infrastructure, detailing its strengths and shortcomings across a number of categories, including dams, drinking water systems, wastewater, bridges, inland waterways, and ports (see, for example, American Society of Civil Engineers [2013]). The report pinpoints areas where current spending on maintenance falls short of the level needed to keep the infrastructure operating at a constant level. For many kinds of infrastructure, of course, a growing population and heavier demands

require that we invest in new facilities. There was no better time for such investment than the years immediately following the financial crisis. The government's borrowing cost for investment spending was near a historical low, and the labor and capital resources needed to produce additional investment were not being used by households and private businesses. The failure to use fiscal policy, particularly public investment policy, to bring the nation closer to full employment after 2009, represents the most notable failure of policymaking in the Great Recession. It produced unnecessary suffering for the nation's long-term unemployed, and it wasted a rare opportunity to improve or rebuild the nation's public infrastructure at very low cost.

## **EXPLANATIONS**

Policymakers failed to use fiscal policy adequately to deal with the slump that followed the 2008 financial crisis. At least two factors contributed to this failure. First, technical forecasts of the economic fallout from the crisis understated its ultimate severity. Many analysts may have believed that when confidence in financial institutions and financial markets was restored, the nonfinancial economy would rebound quickly as normal credit flows resumed. For tens of millions of households, however, a functioning financial system did not restore their access to credit. For many, their primary asset was their home, and that home was worth much less after 2007 than it was before. Fixing the financial system did not repair the balance sheets of households that borrowed heavily to purchase homes that lost a large share of their value.

By the time forecasters and decision-makers recognized that consumer and business demand would not rebound quickly, the political window for enacting an appropriately scaled fiscal program had closed. Many voters accepted the verdict that the stimulus program had failed. More to the point, they elected politicians to the House of Representatives committed to the idea that additional stimulus would put the creditworthiness of the United States at risk. Many politicians who were most committed to addressing the nation's unemployment problem through fiscal policy lost in the 2010, 2012, and 2014 elections.

Of course, the belief that a stimulus program is needed depends crucially on the weight one assigns to the well-being of jobless workers and the underemployed. If the distress of the unemployed ranks at the top of voters' concerns, policymakers may be willing to adopt strong antirecession measures, even if the policies carry some risk or have unpopular side effects such as a larger public debt. In many western democracies voters care most intensely about the unemployed when long-term unemployment is a plausible risk they face themselves. At that point, job loss is not a risk facing some anonymous stranger. It is a risk that represents a real possibility for themselves or a family member, neighbor, or friend. The Great Recession was like other postwar recessions, both in the United States and in other rich democracies. Workers' fear of losing their job spiked with the layoff rate and the number of front-page stories about new mass layoffs. These stories fall off the front page and out of the news cycle when the layoff rate declines, as it inevitably does. The suffering of the unemployed slips from voters' consciousness and seems less urgent to policymakers.

We saw this in Western Europe in the late 1980s, and I suspect our great-grandparents also saw it in the late 1930s. In late-1980s Europe and late-1930s America, the unemployment rate remained stubbornly high, but layoffs were no longer an immediate concern of workers who managed to hang on to their jobs or find new ones. The simple fact is that a high level of long-term unemployment is not mainly the result of a high current layoff rate but rather the result of the failure of private and public employers to create enough new jobs to reemploy long-time job seekers and to provide plentiful work opportunities for school leavers. Even when the unemployment rate holds steady at 15 percent, it takes a great deal of empathy on the part of voters who are safely employed to place a high weight on the welfare of strangers who have been without work for a long time. Workers' altruism toward the unemployed gets a lift when the layoff rate soars, but when this moment passes, as it did after 2009, the welfare of the unemployed sinks lower among the concerns of both voters and elected officials. After the moment passes, it may be hard to persuade voters that further sacrifices for the unemployed are needed.

Although voters' fears about the economic consequences of a larger public debt were baseless, they may have been decisive in shifting the priorities of policymakers toward fiscal austerity and away from further

stimulus. That shift slowed the recovery and worsened the prospects of the long-term unemployed as well as young adults trying to begin their careers. While those two groups experienced unnecessary additional pain as a result of the pivot toward austerity, it is hard to see how the policy shift had a beneficial payoff for the voters whose election day choices produced the policy shift.

## Notes

1. <http://www.nber.org/cycles.html> (accessed October 29, 2014).
2. Atif, Rao, and Sufi (2013) offer a somewhat larger estimate of the expected loss in consumption based on their finding that households with lower net worth and higher leverage ratios cut spending more aggressively in response to a decline in wealth.
3. [http://www.federalreserve.gov/econresdata/scf/files/scf2013\\_tables\\_internal\\_real.xls](http://www.federalreserve.gov/econresdata/scf/files/scf2013_tables_internal_real.xls) (accessed December 1, 2014).
4. Workers earning less than the average wage obtain compensation for a larger fraction of their earnings loss, while those earning higher wages receive proportionately less generous compensation (Burtless and Gordon 2011; Immervoll and Richardson 2013).
5. In February 2009 the White House published a comparison of the 2009 and 2010 projections of a number of forecasters. The administration predicted a year-over-year change in GDP of  $-1.2$  percent; the CBO's prediction was  $-0.9$  percent; and the consensus Blue Chip forecast was  $-1.6$  percent. The actual change in real GDP was  $-2.8$  percent (the White House 2009).
6. This represents the average bid yields for all Treasury inflation-protected securities with remaining terms to maturity of 10 years or more.

## References

- American Society of Civil Engineers. 2013. *2013 Report Card for America's Infrastructure*. Reston, VA: ASCE. <http://infrastructurereportcard.org> (accessed August 30, 2016).
- Atif, Mian, Kamalesh Rao, and Amir Sufi. 2013. "Household Balance Sheets, Consumption, and the Economic Slump." *Quarterly Journal of Economics* 128(4): 1687–1726.
- Board of Governors of the Federal Reserve System. n.d. Survey of Consumer Finances. Table 4: Family Net Worth by Selected Characteristics of Families, 1989–2013 Surveys. Washington, DC: Board of Governors of the Fed-

- eral Reserve System. [http://www.federalreserve.gov/econresdata/scf/files/scf2013\\_tables\\_internal\\_real.xls](http://www.federalreserve.gov/econresdata/scf/files/scf2013_tables_internal_real.xls) (accessed August 30, 2016).
- Burtless, Gary, and Tracy Gordon. 2011. "The Federal Stimulus Programs and Their Effects." In *The Great Recession*, David B. Grusky, Bruce Western, and Christopher Wimer, eds. New York: Russell Sage Foundation, pp. 249–293.
- CNN. 2010. "CNN Poll: Three of Four Americans Say Much of Stimulus Money Wasted." January 25. <http://www.cnn.com/2010/POLITICS/01/25/poll.stimulus.money/> and <http://i2.cdn.turner.com/cnn/2010/images/01/25/rellg.pdf> (accessed August 30, 2016).
- Congressional Budget Office (CBO). 2009. "Letter to the Honorable Nancy Pelosi," Tables 1 and 2. February 13. Washington, DC: CBO. <https://www.cbo.gov/sites/default/files/111th-congress-2009-2010/costestimate/hr1conference0.pdf> (accessed September 21, 2017).
- . 2014. "The Distribution of Household Income and Federal Taxes, 2011." Washington, DC: CBO. <http://www.cbo.gov/publication/49440> (accessed August 30, 2016).
- Immervoll, Herwig, and Linda Richardson. 2013. "Redistribution Policy in Europe and the United States: Is the Great Recession a 'Game Changer' for Working-age Families?" OECD Social, Employment, and Migration Working Paper No. 150. Paris: OECD.
- National Bureau of Economic Research. N.d. "U.S. Business Cycle Expansions and Contractions." Cambridge, MA: NBER. <http://www.nber.org/cycles.html> (accessed August 30, 2016).
- Schwab, Klaus. 2013. *The Global Competitiveness Report, 2013–2014*. Geneva: World Economic Forum. [http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2013-2014.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-2014.pdf) (check link).
- White House. 2009. "Economic Projections and the Budget Outlook." Washington, DC: White House. [http://www.whitehouse.gov/assets/documents/Economic\\_Projections\\_and\\_the\\_Budget\\_Outlook.pdf](http://www.whitehouse.gov/assets/documents/Economic_Projections_and_the_Budget_Outlook.pdf) (accessed August 30, 2016).