RECESSION READY

FISCAL POLICIES TO STABILIZE THE AMERICAN ECONOMY

EDITED BY
HEATHER BOUSHEY, RYAN NUNN, AND JAY SHAMBAUGH

THE HAMILTON PROJECT

Washington Center for Equitable Growth

Recession Ready:

Fiscal Policies to Stabilize the American Economy

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BROOKINGS

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The policy proposals included in this volume are proposals from the authors. As emphasized in The Hamilton Project's original strategy paper, the Project was designed in part to provide a forum for leading thinkers across the nation to put forward innovative and potentially important economic policy ideas that share the Project's broad goals of promoting economic growth, broad-based participation in growth, and economic security. The authors are invited to express their own ideas in policy papers, whether or not the Project's staff or advisory council agrees with the specific proposals. These policy papers are offered in that spirit.

Table of Contents

Foreword

The Great Recession is remembered, and properly so, for its massive destruction of household wealth and job losses that reached over 800,000 in a single month. In just the fourth quarter of 2008, real GDP fell at an annual rate of 8.4 percent, while economies across the world were savaged by problems as bad as or worse than our own. Remembered too are the scars left by the economy's punishing decline: an uneven recovery, many workers who remain disconnected from the job market, an increased debt level, and permanent losses in GDP.

We should also recall how bold and decisive policy actions quickly stopped and reversed the decline. Thanks to a massive countercyclical fiscal stimulus, unprecedented Federal Reserve monetary policy actions, and bold steps to stabilize the financial system, GDP resumed growing in the 3rd quarter of 2009 and rose vigorously in the 4th. Economists estimate that, by 2011, real GDP was 16 percent higher and unemployment was almost seven percentage points lower than they would have been had such firepower not been deployed.[1]

The economic expansion that started almost ten years ago continues to this day.

Policymakers should know that the "stimulus," derided as an "8-letter word"[2] in the overheated political debates at the time, worked; though not every program performed equally well. So, they should examine the findings of mainstream economists who have documented the effectiveness and limitations of the policies which steered our economy away from the abyss.

1. Blinder, Alan S., and Mark Zandi. 2015. *The Financial Crisis: Lessons for the Next One.* Washington, DC: Center on Budget and Policy Priorities.
2. Geithner, Timothy. 2014. *Stress Test: Reflections on Financial Crises.* New York, NY: The Crown Publishing Group, 453.

Recessions are inevitable. Policymakers who might rely on Federal Reserve policy as the lone response to recession should think again; we know that fiscal stimulus is effective. Furthermore, economic conditions have changed; were the U.S. economy to fall into recession in this current low interest rate environment, the Fed's monetary policy options would be far more limited than they were in 2009, and a higher debt level could complicate the use of discretionary stimulus. Consequently, policymakers should learn about proposals to help the next recovery start faster, make job creation stronger, and restore confidence to businesses and households so they resume investing and spending again. Enacting these proposals in fully reasoned detail before the next recession strikes will help us avoid the delays and risks associated with writing stimulus legislation in the middle of a meltdown.

This volume—a joint project by The Hamilton Project and the Washington Center for Equitable Growth—focuses on the workhorse antirecession programs known as "automatic stabilizers."

As defined by the Congressional Budget Office, "automatic stabilizers are the automatic increases in revenues and decreases in outlays in the federal budget that occur when the economy strengthens, and the opposite changes that occur when the economy weakens."[3] Our tax system is an automatic stabilizer because revenues decline with income. On the spending side, the most-familiar automatic stabilizers include unemployment insurance, Medicaid, and the Supplemental Nutrition Assistance Program. These programs direct benefits to the people and places most deeply affected by economic shocks, and to the beneficiaries most likely to spend rather than save, helping households meet basic needs while providing stimulus that in turn saves or creates jobs. The boost to the economy from such automatic stabilizers can be timely, aimed at populations impacted by the downturn, and designed to end when conditions improve.

Our institutions recruited a distinguished group of scholars who could build on lessons learned from the Great Recession and create actionable proposals for deploying automatic stabilizers, in the form of reformed or entirely new programs, to fight the next economic downturn.

Some proposals suggest ways to make more automatic those programs that were often previously used for discretionary stimulus: direct payments to individuals, aid to states, and transportation spending. Other proposals suggest reforms to existing safety net programs to make them more-effective automatic stabilizers.

3 Edelberg, Wendy. 2016, March 21. "Fiscal Policy and Automatic Stabilizers." Presentation at the Hutchins Center on Fiscal and Monetary Policy at the Brookings Institution, Washington, DC.

These proposals share several strengths in common. They are evidence-based, actionable, and familiar. They improve and reform the automatic stabilizers that have proven effective in fighting the thirteen recessions that have hit the United States since 1929. In confronting economic downturns for which there are no "magic bullets," they demonstrate different approaches available to policymakers for alleviating the pain visited upon households and for restoring the economy to health as rapidly as possible. They all contain triggers, which assure markets that neither excess spending nor premature austerity will harm the economy going forward. By debating these policies and, ideally, enacting the best of them now, policymakers can effectively hedge against the delay and gridlock that have so often ensnared urgent responses to national crises.

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Introduction

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A constant in the history of economics is that countries encounter recessions. Since World War II, the U.S. economy has been in a recession for about one of every seven months and for at least one month in roughly one-third of the years over that period. Recessions have many causes—financial markets crashing, monetary policy tightening, consumers cutting spending, firms lowering investment, oil prices shifting—but at some point, economic expansions end and the economy begins to contract.

This volume lays out a set of changes to fiscal programs to improve the policy response to a recession in the United States. It starts from three main premises, which are described in more detail in the following chapter:

- First, recessions are costly. Individuals lose jobs and income. The economy wastes resources and can sometimes even face a permanently lower output path.
- Second, fiscal policy is an effective aspect of the government's part of a response to a recession. Expansionary fiscal policy can increase output; it can increase the utilization of resources; and in particular, when monetary policy has reduced interest rates to zero, it can meaningfully shift the economy's trajectory upwards.
- Third, increasing the automatic nature of fiscal policy would be helpful. Increasing spending quickly could lead to a shallower and shorter recession.

Using evidence-based automatic "triggers" to alter the course of spending would be a more-effective way to deliver stimulus to the economy than waiting for policymakers to act. Such well-crafted automatic stabilizers are the best way to deliver fiscal stimulus in a timely, targeted, and temporary way. There will likely still be a need for discretionary policy; but by automating certain parts of the response, the United States can improve its macroeconomic outcomes.

The first chapter lays out the case for automatic stabilizers in detail. An important point is that we have sufficient data to discern when a recession is starting in real time, which is a solid foundation for implementing automatic

stabilizers. Some stabilizers respond as underlying fundamentals shift—for example, regular unemployment insurance spending rises as more workers lose their jobs, so policymakers do not need to switch on this policy. But one can also tell when a recession is unfolding and more-robust measures are necessary—such as extended unemployment benefits. The policy rule articulated by Claudia Sahm in this volume would generally go into effect within a few months of the start of a recession. A rule like this is both quite timely and far more effective at signaling recessions than other metrics. In a subsequent chapter, Matt Fiedler, Jason Furman, and Wilson Powell III suggest triggers that could be used at the state level as well.

Although automatic stabilizers do exist, they are relatively small in the United States compared with those in other countries. At the same time, there have been frequent discretionary policy changes made in the face of economic downturns to push more money into the economy via tax cuts, direct payments, or increased spending. In the second chapter of this volume, Louise Sheiner and Michael Ng highlight the extent of the U.S. budget's cyclicality over time. Whereas federal taxes provide a substantial amount of automatic stabilization—and discretionary federal policy is also strongly countercyclical—state and local fiscal policy is slightly procyclical.

The remaining six chapters of the book make concrete proposals for adjusting U.S. fiscal policy to expand the implementation of automatic stabilizers and make them more effective. The first two proposals entail creating new policies that are based on evidence from discretionary policies used in prior recessions. Both aim to avoid damaging contractionary responses to recessions, first on the part of households, and second on the part of state governments.

In the third chapter, Claudia Sahm suggests making an automatic direct payment to qualified households during economic downturns. Such payments have been used before in a variety of ways, through either temporary tax cuts or direct payments, but not in an automated fashion. Sahm demonstrates the effectiveness of such programs and shows how an automated set of payments could have been made earlier and more predictably than discretionary payments in the past. Given the large share of consumption in the U.S. economy and the propensity for consumption to fall during a recession, such a policy could be an important way to combat any sizable fall in demand in the economy.

In the fourth chapter, Matt Fiedler, Jason Furman, and Wilson Powell III suggest a way to provide funds to states to avoid sharp, procyclical cutbacks at the state and local levels. During a recession, the federal government is in principle able to counteract declines in economic activity by increasing

spending, even while revenues decline—making up the difference with additional borrowing. However, a large portion of U.S. public spending occurs at the state and local levels, where borrowing is much more difficult and declines in tax revenues generally lead to declines in spending. Fiedler, Furman, and Powell address this concern in the context of Federal Medical Assistance Percentage formula funds, which were adjusted during the Great Recession and could be automatically adjusted to provide state-level fiscal support during future recessions.

There are also several current programs that could be adjusted to improve their effectiveness as automatic stabilizers. In the fifth chapter, Andrew Haughwout proposes setting up and maintaining a list of potential transportation infrastructure projects whose funding could be ramped up during downturns. Though Congress has often used transportation infrastructure as a method to generate spending during a downturn, this process could instead be automated by changing the spending rules for the BUILD program (formerly the TIGER grant program) so that the federal government would fund more projects during downturns and fewer during a boom. Because BUILD is constantly awarding funds, states would have projects ready to be funded and would be familiar with the funding stream, allowing for timely spending.

The programs that make up the social safety net constitute an important set of automatic stabilizers in the current U.S. policy mix. Because these programs provide resources to people with little or no income, the need for the benefits they provide rises along with the unemployment rate. As currently implemented, unemployment benefit spending and Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) spending automatically rise as more people are unemployed or as their incomes fall. These programs, along with Temporary Assistance for Needy Families (TANF)—which is currently capped in nominal dollars by federal law—could be restructured in ways that would help them accomplish their core goals and serve as better stabilizers for the economy.

The unemployment insurance (UI) system is a core part of the U.S. response to both individual employment loss and overall labor market disruptions. By insuring workers against job loss, UI partially protects them from important risks while also mitigating the decline in consumption that occurs during a recession. In the sixth chapter, Gabriel Chodorow-Reich and John Coglianese propose changes to improve the take-up of UI, increase its benefits during recessions, and make its extended benefit formulas more responsive to changes in the labor market. These changes would enhance the already sizable role that UI plays in stabilization policy.

After federal welfare reform of 1996, the federal program that provides cash to families in need was block-granted, and funds were capped at their 1997 level. The newly created TANF program included a small emergency fund, which has been insufficient to allow TANF to function as needed for families or provide any cushion to the economy in a downturn. In the seventh chapter, Indivar Dutta-Gupta suggests shifting the structure of TANF so that it can expand in downturns as need rises and thus play a countercyclical role both for households and the economy. He also reviews the experience of TANF job subsidies enacted as part of the American Recovery and Reinvestment Act of 2009 and proposes expanding this approach, explaining how employment subsidies can play an important role as part of an overall policy response to economic downturns.

SNAP is the nation's most-important food support program—and it is also an automatic stabilizer that supports the economy during downturns. In the eighth chapter, Hilary Hoynes and Diane Whitmore Schanzenbach propose reforms to SNAP that would make it a more-effective automatic stabilizer and increase its ability to protect families during downturns. In particular, they focus on ensuring that families in need of food support are not tied to work requirements that may be impossible to meet in an economic downturn; they also suggest increasing SNAP benefits during a recession.

Overall, this set of proposals builds on the best available evidence and analysis. They use programs that have been effective parts of U.S. fiscal policy and have either been an important part of discretionary or automatic spending in prior downturns. The proposals suggest a clear path toward improved automatic stabilizers for the U.S. economy. These programs already exist or have been pursued in the past, suggesting they are feasible and realistic. Though these policies could be implemented separately, there is an advantage in thinking of them as a package. As described in the first chapter, these policies would affect the economy at different points in time, would assist different types of households, and would address differences in economic conditions across places.

Direct payments are fast and can be executed on a large scale, but are not targeted to struggling regions or households. Likewise, though payments to states can stabilize their budgets, they do not necessarily help individuals who have lost their job or lift consumption. Transportation spending is sometimes done over a slightly longer time frame, but this allows continued spending as the economy recovers. Finally, the safety net policies are likely the best targeted, both to individuals and regions, given that their spending rises wherever economic distress is highest. Unemployment insurance is more likely to help middle-income families, while TANF and SNAP are

targeted to low-income families. By setting up an array of stabilizers, policymakers can ensure that a wide range of families are supported and that demand in the economy is boosted across a variety of sectors.

Recessions exact a major toll on individuals, families, firms, and budgets throughout the United States. A key aspect of proper macroeconomic policymaking is to minimize losses by responding quickly and effectively to downturns. As discussed in the next chapter, lower interest rates have left the Federal Reserve with less room to cut rates in response to a downturn. This makes it all the more important that policymakers set in place the proper fiscal structures to make sure that fiscal policy plays an active and efficient role in combating recessions.

Economic forecasters rarely correctly call the timing of a recession. Perhaps the one thing they can all agree on, however, is that another economic downturn will come. A crucial part of preparing for the next recession is making sure fiscal policy institutions are ready to provide support when needed to minimize the damage the next recession could do.

The Damage Done by Recessions and How to Respond

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Ryan Nunn, *The Hamilton Project and the Brookings Institution*
Jimmy O'Donnell, *The Hamilton Project*
Jay Shambaugh, *The Hamilton Project, the Brookings Institution, and The George Washington University*

Abstract

From December 2007 to June 2009, the United States experienced the longest and most-severe recession since World War II. Although the Great Recession was particularly damaging, recessions occur frequently and are devastating to workers, families, and the overall economy. Historically, the United States has responded to these downturns with a combination of monetary and fiscal policies, the majority of which are discretionary. In this paper, we discuss some of the concerns about relying too much on discretionary policy, highlighting opportunities to make greater use of automatic fiscal stabilization. Automatic stabilizers are designed to expand during an economic downturn and contract during an expansion—providing timely and temporary fiscal stimulus. This paper assesses the various policy responses available to the federal government and argues that when well designed, automatic stabilizers can be an effective part of the policy tool kit for responding to recessions.

Introduction

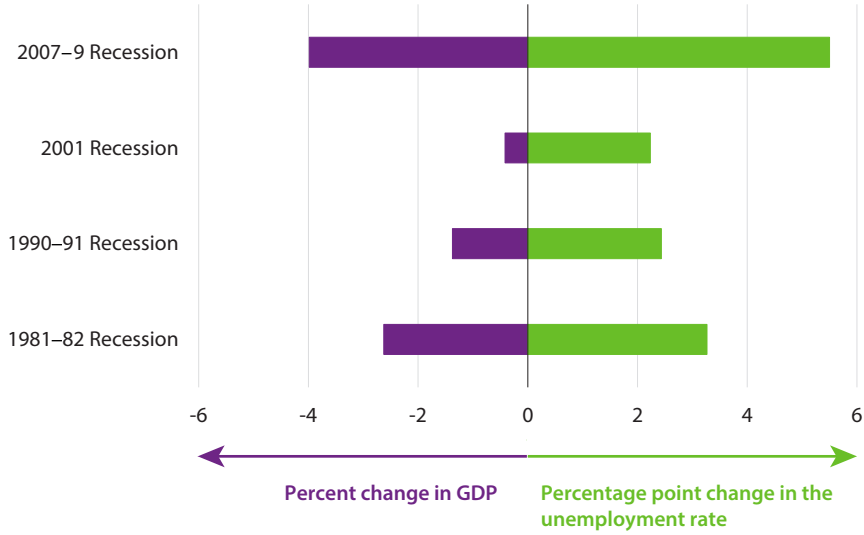
Recessions happen frequently—there have been 7 recessions in the last 50 years (National Bureau of Economic Research [NBER] n.d)—and they cause disruption and damage to individuals and communities. The Great Recession of 2007–9 was the most-severe economic downturn since the Great Depression. It did long-term damage to businesses; state, local, and federal budgets; and people's life trajectories. Its effects live on in diminished prosperity for many Americans. In the years since the Great Recession, economists have studied which policy responses worked and which ones did not, and two findings stand out: First, fiscal policy is an important tool to combat a recession; and second, it is crucial to have a quick and effective response to a recession to limit its longest-lasting and most-severe effects.

Recessions cause sizable damage in the short term and lead to millions of lost jobs and hundreds of billions of dollars in lost output. Over the last 4 recessions, as shown in figure 1, the unemployment rate rose 2 to 5 percentage points, leaving millions of workers without jobs. Output also fell on average by about 2 percent (roughly $400 billion as a share of the current economy).

By several measures, the Great Recession left the labor market in a prolonged period of weakness that lasted many years. In October 2009 the unemployment rate peaked at 10 percent, double the rate in 2007 and a level unmatched since 1983. The unemployment rate did not fall back below 5 percent until late 2016—over seven years after the recession officially ended. The long-term unemployment rate—defined as the fraction of people in the labor force who have been searching for at least 27 weeks—rose well above its December 2007 level of 0.9 percent and its previous high (in June 1983) of 2.6 percent, reaching an April 2010 peak of 4.4 percent. The long-term

FIGURE I.

Changes in Unemployment and GDP over the Last Four Recessions



Source: Bureau of Economic Analysis (BEA) 1981–2009; Current Population Survey, Bureau of Labor Statistics (BLS) 1981–2009; authors' calculations.

Note: GDP values represent the percent change in real GDP from the peak quarter to the trough quarter surrounding the given recession. Unemployment values represent the percentage-point difference in the seasonally adjusted unemployment rate from the trough quarter to the peak quarter surrounding the given recession. For this reason, the period of percent change may not line up perfectly with the NBER's official recession dates.

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unemployment rate did not fall below its prerecession level until March 2018; it currently stands at 0.8 percent (see figure 2).

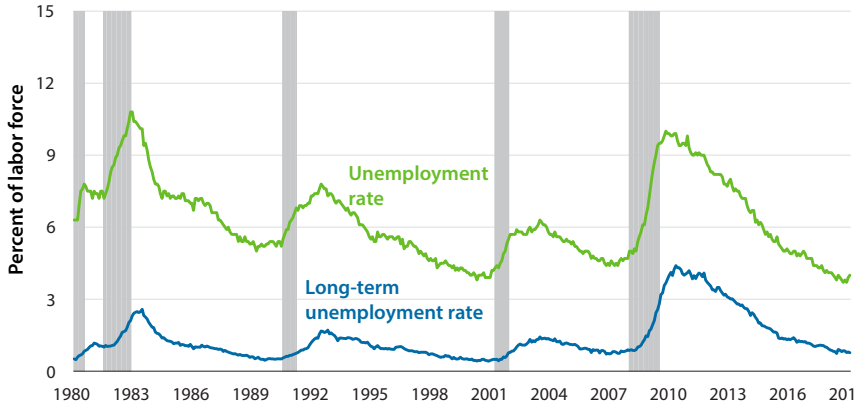
A broader measure of unemployment—which includes those without jobs who are not actively seeking work but who want a job and have searched for one in the past 12 months, and those who are working part time but want a full-time job—peaked at just above 17 percent in late 2009 and early 2010, and remained above 10 percent well into 2015 (Bureau of Labor Statistics [BLS] 2009–15; authors' calculations).

UNEQUAL EFFECTS OF RECESSIONS

The effects of this broad joblessness impose steep costs on the most-vulnerable individuals. When jobs are harder to come by, they are especially difficult to obtain for workers who face structural disadvantages. Unemployment rates for blacks and Hispanics are higher than for whites in both good and bad economic times, but when a recession strikes, the costs fall even more sharply on minorities. For example, the unemployment rate for blacks tends to be twice the rate for whites, and we can see this in the data: in 2007, the average black unemployment rate was 8.3 percent, more than double the 4.1 percent rate for whites. When the unemployment rate hit its peak of 10 percent in October 2009, white unemployment reached 9.2

FIGURE 2.

Unemployment and Long-Term Unemployment Rates, 1980–2019



Source: Current Population Survey, BLS 1980–2019; authors' calculations.

Note: Data are for persons age 16 and over. Long-term unemployed refers to persons who have been unemployed for 27 consecutive weeks or longer. Data are seasonally adjusted. Shaded bars denote recessions.

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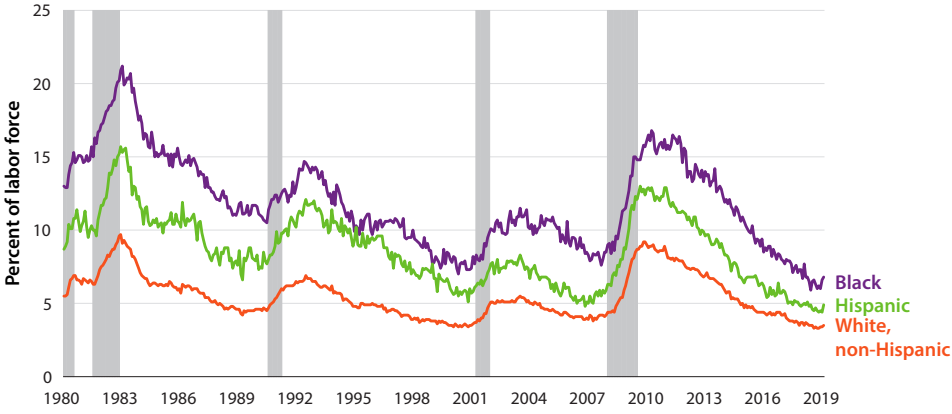
FIGURE 3.

Unemployment Rates by Race, 1980–2019



Source: Current Population Survey, BLS 1980–2019; authors' calculations.

Note: Data are for persons age 16 and over. Data are seasonally adjusted. Shaded bars denote recessions.

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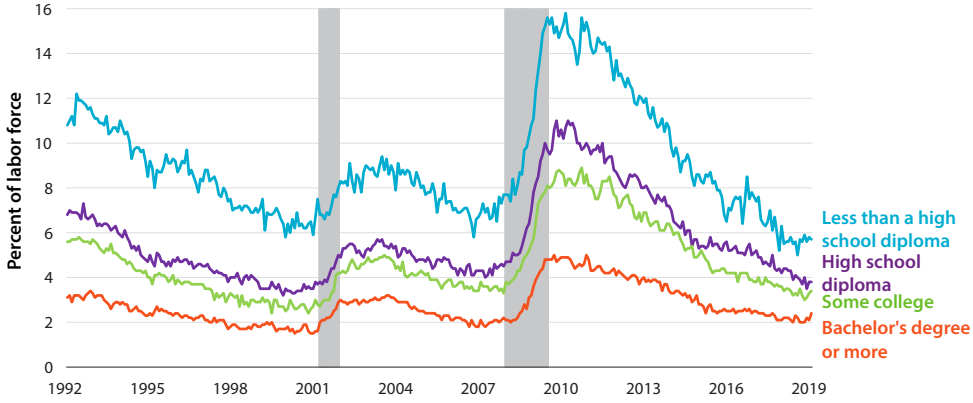
FIGURE 4.

Unemployment Rates by Educational Attainment, 1992–2019



Source: Current Population Survey, BLS 1992–2019; authors' calculations.

Note: Data are for persons age 25 and older. Some college indicates completion of high school and one or more postsecondary courses that did not result in a degree or award beyond an associate degree. Data are seasonally adjusted. Shaded bars denote recessions.

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percent while black unemployment hit a shockingly high 15.8 percent (see figure 3).[1]

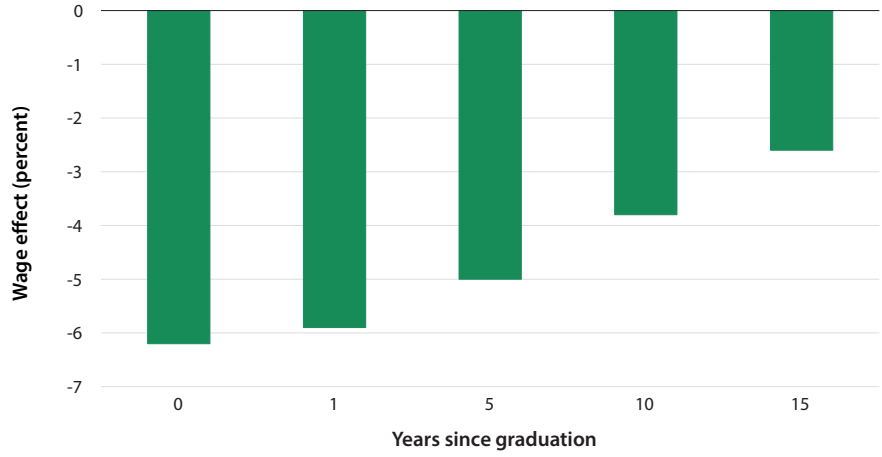
The unemployment gap between the educated and the less educated also widened during the Great Recession (see figure 4). Between 2007 and 2010, the unemployment rate for college graduates rose from 2.0 percent to 4.7 percent. For those with some college experience but not a four-year degree, the unemployment rate rose from 3.6 percent to 8.4 percent. For high school graduates who never attended college, the unemployment rate rose from 4.4 percent to 10.3 percent. And for high school dropouts, the unemployment rate spiked from 7.1 percent to 14.8 percent. The gap in unemployment rates between those with a college degree and those with less than a high school degree rose from 5 to 10 percentage points—evidence that the most vulnerable are most in danger of losing their jobs in a recession.

HARM BEYOND IMMEDIATE JOB LOSSES

Some of the most-compelling evidence for the harm caused by recessions can be found in the experience of those who graduate from college during times of relatively high unemployment (see figure 5; Kahn 2010). These graduates' more-limited job opportunities and lower starting pay indicate

FIGURE 5.

Wages Losses from Graduating College during a Recession



Source: Kahn (2010) using the 1979 National Longitudinal Survey of Youth.

Note: The sample is restricted to white men who graduated from college between 1979 and 1989 and have both nonmissing Armed Forces Qualification Test (AFQT) scores and state identifiers. Estimates include controls for a quadratic in potential experience, the age-adjusted AFQT score, contemporaneous year effects, and the contemporaneous state unemployment rate.

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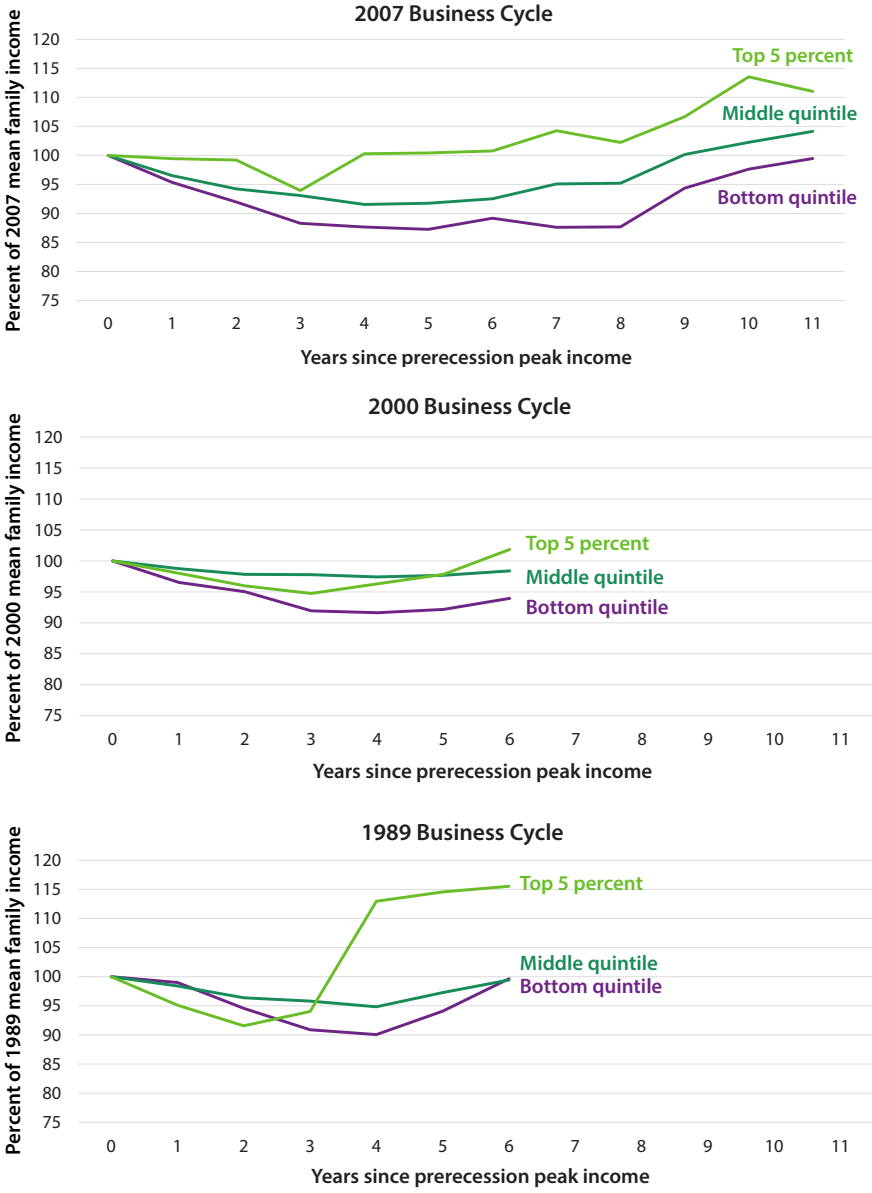
FIGURE 6.

Change in Mean Income of Selected Income Groups over the Previous Three Business Cycles



Source: Economic Policy Institute (2012) using the Current Population Survey.

Note: Data for each business cycle are indexed to 100 for the business cycle peak year in terms of income preceding the recession. The 1989 business cycle ran through 1995, the 2000 business cycle ran through 2006, and the 2007 business cycle ran through 2017.

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not only poor-quality job matches, but also a persistence of these poor matches as these individuals move up the job ladder over time. Many in the millennial generation graduated from college and entered the workforce around the time of the Great Recession, which the evidence suggests will cause large, negative, and persistent effects on their incomes. Today's young workers and their families are still living with the consequences of the Great Recession.

Although incomes across the distribution declined during the Great Recession, figure 6 shows a deeper decline and slower recovery for those outside the top—a pattern that applies to all three recent recessions. Middle-class mean incomes took nine years to recover to the prerecession levels of 2007, much longer than the four years it took for the top 5 percent to recover to their prerecession level of $384,000. Incomes for the bottom quintile have still not recovered. In addition to income gaps, wealth inequality widened as well. Compared with the top 10 percent, wealth of the bottom 90 percent fell more steeply during the Great Recession (principally due to the important role homeownership plays in their total wealth) and has failed to make any progress in recovering (Dettling, Hsu, and Llanes 2018).

Even though millennials have a higher propensity to save for retirement and to avoid credit card debt, they have fewer assets, a level of debt that is similar to those of previous generations at the same age, and are less well off. Recent cohorts suffered larger wealth losses (in percent terms) and rebounded more slowly from the Great Recession, making it even more difficult to accumulate the assets to eventually buy a home, pay for their children's college tuition, and finance their own retirement (Emmons, Kent, and Ricketts 2018; Kurz, Li, and Vine 2018).

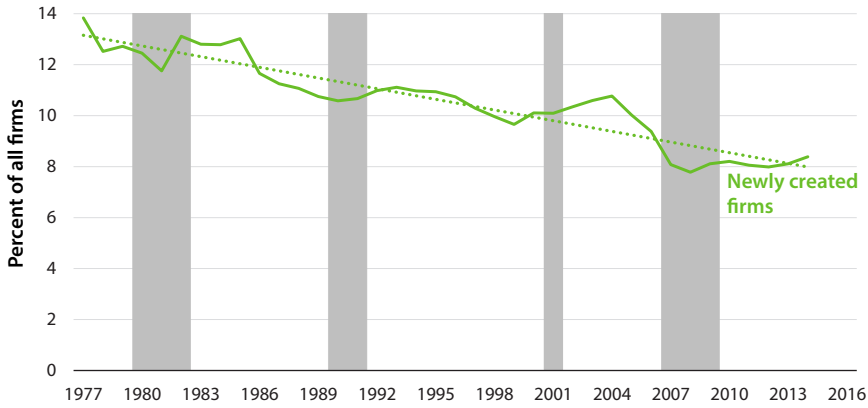
Recessions also tend to slow business formation. The firm start-up rate in the United States has been on a long downward trend for the last four decades, but there is also a cyclical pattern given that fewer new firms are formed during a downturn. Figure 7 shows the start-up rate over time as well as a trendline. Shortly before, during, and shortly after recessions, firm formation tends to be below the trend, recovering to the trend during longer expansions.

THE LASTING SCARS FROM RECESSIONS

There are a variety of ways that the recent recession likely had a lasting impact on the economy's long-term economic potential as well. On the firm side, recessions diminish private investments that yield long-run payoffs. When the economy is in a recession, investment falls as firms see little demand for the goods and services they might otherwise produce. During the Great Recession, investment fell by 21 percent, which was more than

FIGURE 7.

Start-up Rates for U.S. Firms, 1977–2014



Source: U.S. Census Bureau 1977–2014; authors' calculations.

Note: Dashed line is the linear trend. Shaded bars denote recessions.

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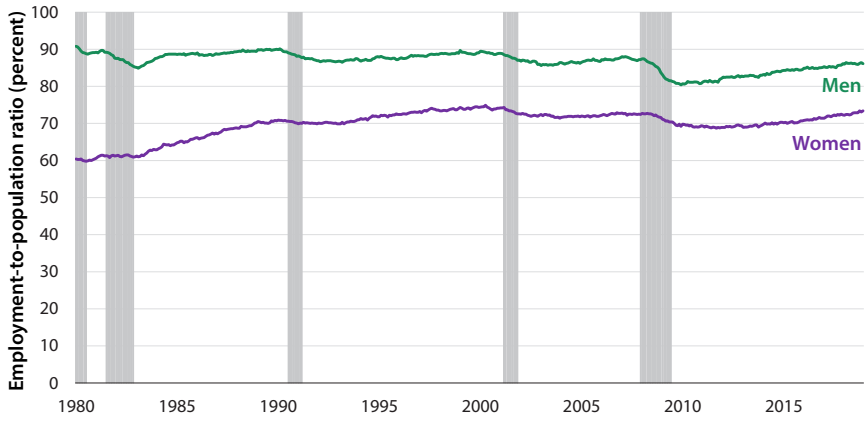
in previous, shallower recessions (Martin 2016). A reduction in investment leads to less capital per worker, and hence to lower labor productivity; but it can also mean fewer investments in the new technologies that can lift overall productivity over time. Combined, the effect can be to lower the trend of output—unless the decline in investment is made up for by higher investment levels during a sufficiently long expansion after the recession.

At the same time, the decline in tax revenue as incomes fall makes it harder to sustain public investment, especially at the state and local levels. During recessions, the federal government often steps in with deficit-financed investments, while at the state and local levels, public investment slows because most states are required to balance their budgets annually. Since 2008 states have mainly closed their budget gaps by reducing spending on public investments—such as education, health care, and employee compensation (Gordon 2012). Combined, these cuts threaten long-term productivity. Federal debt held by the public as a share of GDP jumped from 35 percent in 2006 to 72 percent by 2013 as the recession diminished both tax revenue and GDP and led to more spending. This higher debt level may compromise productive investments going forward.

On the labor market side, prolonged periods of labor market slack lead to dysfunctional job ladders and poor matches between workers and employers. A weak job market makes it harder for people to find jobs that will match their skills and will put them on a career ladder toward higher pay and more responsibility. Instead, many end up jobless, underemployed,

FIGURE 8.

Prime-Age Employment-to-Population Ratio, 1980–2019



Source: Current Population Survey, BLS 1980–2019; authors' calculations.

Note: Population is restricted to prime-age (age 25–54) persons. Shaded bars denote recessions.

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or stuck in jobs for which they are overqualified. Involuntary part-time work, often used as a measure of underemployment, only recovered to its prerecession low of 2.8 percent of the labor force in July 2018, more than a decade after the recession began (BLS 2007–18; authors' calculations).

Furthermore, one of the outcomes of a recession—especially a deep and protracted one like the Great Recession—is that people can end up completely leaving the labor force. We can see this in the share of prime-age Americans who are employed, which only recovered to its December 2007 prerecession level of 79.7 percent in late 2018 and is still well below its peak in 2000 of 81.9 percent (BLS 2000–18; see figure 8 for male and female employment rates).[2] Adjusting for demographic shifts such as the aging of the population, women's employment rate recovered to its prerecession level only in 2017, while men's employment rate remains below its prerecession level as of early 2019. Though the post-Great Recession expansion has been sufficiently long to lift the overall demographically adjusted employment-to-population ratio back to pre-crisis levels, a recovery can be incomplete if an expansion is too short-lived before another recession hits. This was the case after the 2001 recession. Moreover, the fact that the demographically adjusted employment rate is back to 2007 levels does not necessarily mean that the economy is at full employment in early 2019; if the labor market in 2007 was not fully healed from the 2001 recession, reaching this baseline reflects a labor market still below full employment.

All told, the most-recent recession had a lasting impact on people's economic outcomes, including employment, income, wealth, economic security, and business formation, as well as the capacity of government to make much-needed investments.

Why and How to Use Fiscal Policy during Economic Downturns

There is no tool in the current policy arsenal that can fully eliminate recessions and the damaging effects described above. But 20th-century economists, most notably John Maynard Keynes, developed a theory of the business cycle that provides a powerful framework for understanding recessions and points to a certain set of policy tools (Keynes 1936; Samuelson 1948). It has consequently come to guide the practical implementation of macroeconomic policy (Stein 1969).

Rather than seeing recessions as exclusively resulting from declines in productive potential (e.g., a deterioration in technology or an adverse shift in international terms of trade), Keynes' theory and its modern descendants have emphasized the role of aggregate demand: the sum of consumer consumption, business investment, government purchases, and net exports to the rest of the world. Aggregate demand falls when incomes fall or consumers, businesses, and government all try to save (rather than spend) at the same time. Because one person's spending is another's income, if there is too little spending relative to production, firms' sales decline, they cut back production, and employment falls, depressing demand. If individuals and financial institutions become more risk averse and if there is an abrupt shift toward saving or away from lending for investment, this can push the economy into a recession. Recessions can have many root causes—including falls in asset prices, shifts in risk tolerance, spikes in commodity prices, interest rate increases by the central bank, and global shocks—but they consistently involve a decline in the demand for goods and services in the economy.

As discussed above, output falls and the unemployment rate rises during a recession. The Great Recession of 2007–9 was unusual in its intensity (there was a 4.1 percent cumulative GDP loss; by contrast, the previous 10 recessions ranged from 0.3 to 3.7 percent cumulative GDP loss) and in its duration (it lasted 18 months rather than the previous range of 6 to 16 months; Labonte 2010). Recessions also differ in their aftereffects. Some recessions have been followed by quick, powerful recoveries (e.g., the recessions of the early 1980s) and others by slow, drawn-out recoveries (e.g., both recessions of the 2000s).

In part, these differences reflect both the different proximate causes of downturns and the different responses of policymakers. The recessions of the early 1980s were prompted by the Federal Reserve's monetary tightening, which was intended to bring inflation under control. The 2001 recession followed the bursting of an equity asset bubble. And the Great Recession was fundamentally connected to weaknesses of the financial and housing markets.

Effectively responding to a recession requires dealing with its idiosyncratic causes. For example, policymakers responded to the Great Recession by reforming financial and housing regulations, including new requirements for mortgage lenders and servicers (Silberman 2019).

These responses are aimed at long-run patterns in the economy—not a recession's immediate aftermath, when consumers are reluctant to spend, businesses reduce hiring and investments, and investors retreat to the safest assets. It is in these times that policy responses are often targeted at overall demand in the economy. Strong, coordinated monetary and fiscal measures are needed by the Federal Reserve and the federal government, respectively, to counterbalance the private-sector's reluctance or inability to spend and the procyclical spending behavior by states and localities.

We will return to the prospects for recession-fighting monetary policy in a later section, but here we focus on the evidence that some fiscal policies can mitigate recessions and support recoveries (see box 1). These fiscal policies are often referred to as stimulus, and in the simplest analysis, they all work in roughly the same fashion: the government cuts taxes and raises spending in some combination to replace a shortfall in private aggregate demand (Blinder 2016). Of course, the details of the government's actions (and their effectiveness as stimulus) vary considerably: governments may cut taxes to low- or high-income taxpayers or to businesses, and governments may spend by making purchases directly or by transferring resources to others.

Macroeconomic theory yields insights into the expected efficacy of different types of fiscal stimulus. For example, one core insight is that getting money into the hands of those most likely to spend it immediately is likely to be especially effective in combating a recession. Ultimately, however, these questions must be resolved by looking at the relevant data. Such research has been ongoing for many decades, but the unusual magnitude and duration of the Great Recession—along with the large fiscal actions undertaken to combat it—present a unique opportunity for researchers to learn more about what does and does not work as fiscal stimulus.

BOX I.

Discretionary and Automatic Fiscal Policy

Governments run surpluses or deficits, and in the United States, the budget is rarely balanced. Fiscal stimulus typically means raising spending or cutting taxes—via either discretionary policy choices or automatic stabilizers—both of which increase the deficit. (This change in the deficit, in addition to its level, is often the object of study.) Discretionary policy is put into place by policymakers after the need for stimulus is identified. For example, Congress responded to the Great Recession by enacting the American Recovery and Reinvestment Act of 2009 (ARRA), which included a wide range of fiscal stimulus, from infrastructure spending to tax cuts (see box 2 for further discussion). A series of additional discretionary measures were undertaken with an estimated nearly $700 billion in spending or tax cuts from 2009–12 (Council of Economic Advisers [CEA] 2014a). Box table 1 gives a sense of the range of post-ARRA discretionary policies.

BOX TABLE I.

Discretionary Fiscal Policies Enacted after ARRA, 2009–12

	Billions of dollars
Enacted in 2009	
Worker, Homeownership, and Business Assistance Act (HR 3548)	35
Supplemental Appropriations Act of 2009 (HR 2346) (Cash for Clunkers)	3
Defense Appropriations Act of 2010 (HR 3326) (Unemployment Insurance and COBRA)	18
Enacted in 2010	
Temporary Extension Act of 2010 (HR 4691)	9
Hiring Incentives to Restore Employment Act (HR 2847)	13
Continuing Extension Act of 2010 (HR 4851)	16
Unemployment Compensation Act of 2010 (HR 4213)	33
FAA Safety Improvement Act (HR 1586) (Education Jobs/FMAP Extension)	26
Small Business Jobs Act (HR 5297)	68
Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act (HR 44853)	309
Enacted in 2011	
Temporary Payroll Tax Cut Continuation Act (HR 3765)	28
Enacted in 2012	
Middle Class Tax Relief and Job Creation Act of 2012 (HR 3630)	98
American Taxpayer Relief Act of 2012 (HR 8)	17
Total	674

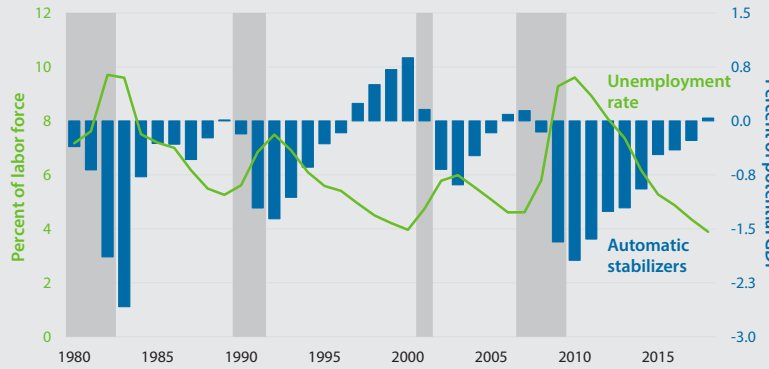
Source: Council of Economic Advisers 2014a.

Note: "ARRA" refers to the American Recovery and Reinvestment Act of 2009. Routine tax extenders have been removed from the cost estimates.

In contrast, an automatic stabilizer expands in response to an economic downturn and contracts in an expansion without the need for policymakers to take additional action. This may happen in one of two ways: a program might expand naturally as eligibility for the program increases, as with the Supplemental Nutrition Assistance Program (SNAP; formerly known as Food Stamps); or it may have explicit "triggers" that increase stimulus when predetermined conditions are satisfied and then decrease it when the economy recovers. For example, Extended Benefits trigger on and become available to UI recipients in states where the unemployment rate exceeds specific thresholds and then trigger off as conditions improve (or cease to worsen, in some cases). In addition, tax revenue rises when more people have jobs and falls when employment drops, also shifting the fiscal balance. Box figure 1 shows the Congressional Budget Office's (CBO) estimates for how much automatic stabilizers have shifted the budget over time—providing more fiscal stimulus in downturns like the 2008–11 period; and pushing the budget toward a surplus when the economy was booming in the late 1990s, reducing the amount of demand coming from the government sector when the economy was at or past full employment.[3]

BOX FIGURE I.

The Automatic Stabilizer Component of the Federal Budget Surplus or Deficit and the Unemployment Rate, 1980–2018



Source: Congressional Budget Office (CBO) 19980–2018; Current Population Survey, BLS 1980–2019; authors' calculations.

Note: CBO defines automatic stabilizers as "automatic changes in revenues and outlays that are attributable to cyclical movements in GDP and unemployment." CBO defines potential GDP as "the economy's maximum sustainable output." Shaded bars denote recessions.

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THE EFFECTIVENESS OF DIFFERENT TYPES OF FISCAL STIMULUS

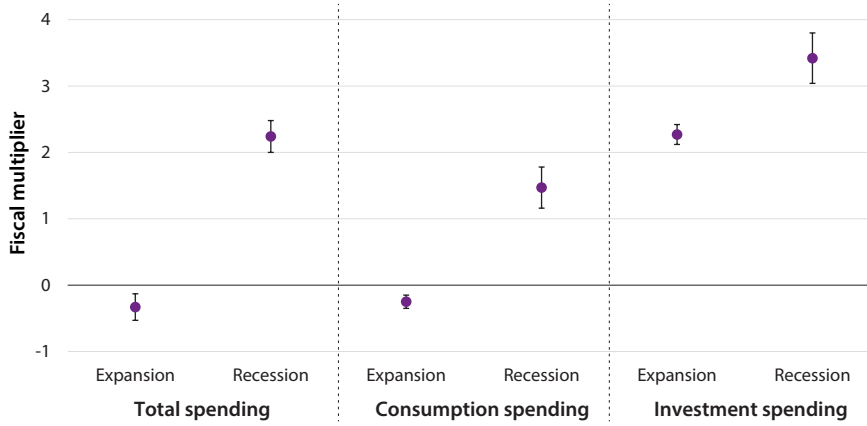
A simple metric for the effectiveness of stimulus—the fiscal multiplier—relates $1 in net government spending (i.e., either a tax reduction or a spending increase) to the amount of additional economic activity it causes. A multiplier of 0 would indicate that the stimulus had no impact on total economic activity (thus, its effect either is negligible or is offset by additional private sector saving), while a multiplier of 2 would indicate that $1 in stimulus yielded $2 in increased economic output. These effects are inclusive of the direct and indirect consequences of stimulus; for instance, an individual tax cut would directly lead to more spending by households, which would indirectly lead businesses to maintain or expand their operations.

Regardless of the vehicle used for fiscal stimulus—household or business tax cuts, infrastructure spending, transfers to state governments, and so forth—the prevailing macroeconomic conditions play a key role in determining how effective the stimulus will be. As suggested by the theory of the business cycle, fiscal stimulus likely has higher multipliers during recessions and other times when labor and capital are underutilized. Auerbach and Gorodnichenko (2012); Fazzari, Morley, and Panovska (2015); and Whalen and Reichling (2015) find that fiscal policy is more effective during a downturn.[4] Ramey and Zubairy (2018) find more-mixed results, concluding that differences in multipliers are only apparent when using certain methodological approaches, with multipliers generally below 1 in all circumstances. Figure 9 reports results from Auerbach and Gorodnichenko (2012), showing their estimates of fiscal multipliers in economic expansions and recessions, both for consumption and investment stimulus. They find that multipliers overall are substantially higher during recessions, with this difference apparent both for stimulus aimed at consumption (e.g., spending on community services) and for stimulus aimed at investment (e.g., infrastructure spending).

Fiscal multipliers also tend to be much larger when nominal interest rates are close to or at the zero lower bound (Christiano, Eichenbaum, and Rebelo 2011; DeLong and Summers 2012), in part because fiscal multipliers depend on how the Federal Reserve responds to stimulus. If the Federal Reserve tightens monetary policy in response to fiscal stimulus, it offsets some or all of the positive effect of the stimulus. This observation may be part of what underlies the gap in multipliers just discussed: during downturns, the Federal Reserve could be less eager to offset fiscal stimulus, particularly when the federal funds rate—a benchmark short-term interest rate controlled by the Federal Reserve—is close to zero and monetary policymakers would have preferred to reduce interest rates.

FIGURE 9.

Fiscal Multipliers by Type of Spending and Stage of Business Cycle



Source: Auerbach and Gorodnichenko 2012.

Note: The point estimates represent the range of output multipliers for a $1 increase in government spending. Bars show one standard error above and below a given point estimate.

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DeLong and Summers (2012) also emphasize that if there is considerable slack in the economy—posing a danger of permanently lowered output if it persists—then stimulus can effectively be self-funding by increasing output in the long run by more than any associated budgetary cost. Even if the precise conditions they discuss do not hold, their result highlights the importance of reemploying workers and moving toward potential output quickly if there is the potential for long-term damage to an economy from a protracted recession.

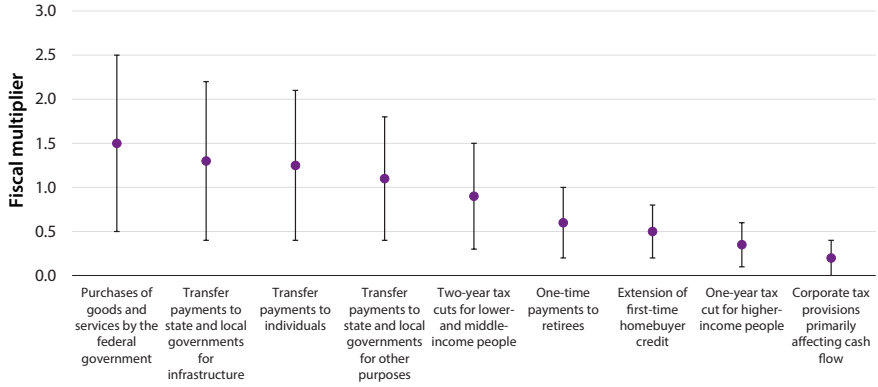
ESTIMATES OF FISCAL MULTIPLIERS FOR DIFFERENT TYPES OF STIMULUS

There are many ways for governments to cut taxes and spend money, some of which are more likely to yield increased economic activity. Governments can make transfer payments to individuals and households (and, in the case of the federal government, to state and local governments). Governments can purchase goods and services, either as investment or consumption. And governments can cut taxes for individuals, families, and businesses.

A core finding is that stimulus targeted to those more likely to spend it (a population that overlaps with but is not identical to the low-income population) has higher multipliers (Coenon et al. 2012; Johnson, Parker, and Souleles 2006; Oh and Reis 2011). By this standard, tax cuts or transfers aimed at lower-income households tend to have relatively high multipliers.

FIGURE 10.

Fiscal Multipliers by Type of Program in ARRA



Source: Whalen and Reichling 2015; authors' calculations.

Note: "ARRA" refers to the American Recovery and Reinvestment Act of 2009. These estimates were produced for CBO's analysis of the American Recovery and Reinvestment Act of 2009. The point estimates represent the midpoint of the CBO's high and low estimates. Bars represent the high and low estimates.

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Reflecting these findings, Whalen and Reichling's (2015) assessment of evidence on fiscal stimulus finds a range of estimated multipliers for different types of government activity (see figure 10).[5] Purchases of goods and services by the federal government, transfer payments to state and local governments for infrastructure, and transfer payments to individuals tend to be the most-effective forms of stimulus, with multiplier estimates ranging from 0.4 to 2.5. Within the set of potential tax cuts, reductions for lower- and middle-income taxpayers are most effective, with multiplier estimates ranging from 0.3 to 1.5. Cashin et al. (2018) and the Hutchins Center on Fiscal and Monetary Policy's Fiscal Impact Measure are two examples of attempts to systematically assess the combined effects of fiscal policies on aggregate demand using these and other fiscal multipliers estimated in the larger research literature.

Most types of fiscal stimulus can be administered at both the federal and state levels. However, fiscal multipliers, even those for the same program, can vary depending on the geographic scope of the stimulus. On the one hand, stimulus that is delivered in a single state will typically have positive spillovers for other states, such that any multipliers at the state level would be underestimates of the total impact. On the other hand, stimulus delivered in a single state is less likely to generate a monetary policy response if it is targeted and does not measurably move national aggregate data. Economists are therefore careful to distinguish between findings that

derive from cross-state variation (e.g., Chodorow-Reich 2019; Nakamura and Steinsson 2014; Serrato and Wingender 2016; Wilson 2012) and those that derive from changes in national policy (Blinder and Zandi 2015; Owyang, Ramey, and Zubairy 2013). In a recent survey, Chodorow-Reich (2019) assesses the empirical and theoretical bodies of literature on both cross-sectional and national fiscal multipliers, finding a preferred estimate of 1.8 for the former and a lower bound of 1.7 for the latter (assuming no monetary policy response).

What Have We Learned about Fiscal Stimulus from the Great Recession and Its Aftermath?

It is vital that policymakers extract the relevant lessons from the Great Recession and the fiscal policies that were implemented to counteract it, even if it is not likely that the next recession will be as severe or prolonged. Assessed as a package, did the major fiscal programs go into effect at the appropriate times? Who did the programs assist? And what were the economic effects of the fiscal stimulus?

The bulk of the U.S. fiscal response was discretionary, much of which was contained in ARRA (see box 2 for a summary of its chief components). This policy response was largely effective (CBO 2011; Chodorow-Reich et al. 2012; Conley and Dupor 2013; Dupor and McCrory 2018; Dupor and Mehkari 2016; Feyrer and Sacerdote 2011; Wilson 2012). It played an important role in softening the recession and speeding up the economic recovery (Blinder and Zandi 2016), but it was not perfect—in particular, it was not sufficiently large and prolonged to exhaust all useful stimulus opportunities.

By the CBO's estimate, ARRA caused an increase in real GDP of between 1.5 and 4.2 percent in 2010 above what it otherwise would have been without ARRA (CBO 2011). Primarily through enhancements to the federal share of Medicaid spending, ARRA also replaced 24 percent of the shortfall in state budgets from 2008 through fiscal year 2012 (McNichol 2012).

As part of ARRA, Congress stipulated that the CEA had to produce reports evaluating ARRA's effects. CEA's estimates suggest that ARRA generated 6 million job-years through the end of 2012, with a peak impact on employment of about 2.5 million in the third quarter of 2010, and that GDP was roughly 2.5 percent higher in mid-2010 due to ARRA. These estimates are consistent with those of CBO and outside forecasters (CEA 2014b).

As noted in box 1, though, a series of discretionary measures were passed in addition to ARRA. In early 2008, Congress and the Bush administration passed a sizable direct payment to individuals (see Sahm 2019 for summary

BOX 2.

Highlights of the American Recovery and Reinvestment Act

On February 17, 2009, President Barack Obama signed the American Recovery and Reinvestment Act (ARRA) into law. This massive bill sought to stimulate the U.S. economy, which was mired in the worst economic recession since World War II. As shown in box table 2, ARRA injected stimulus into the U.S. economy through a variety of channels, including tax cuts and spending increases. The lion's share of these spending increases was in the form of transfers to individuals through social safety net programs (e.g., expanded unemployment insurance or increased SNAP benefits), transfers to state and local governments (e.g., increased federal shares of state Medicaid spending), or increased infrastructure spending.

BOX TABLE 2.

Fiscal Impact of ARRA, FY 2009–13

	2009	2010	2011	2012	2013	Total through 2013
	(Billions of dollars)					
Individual tax cuts	42.9	91.3	46.6	0.4	0.4	181.7
AMT relief	13.8	69.6	-14.4	0.0	0.0	69.0
Business tax incentives	23.1	18.2	-5.9	-3.7	-2.9	28.8
State fiscal relief	43.8	63.3	26.0	6.0	4.0	143.0
Aid to directly impacted individuals	31.8	49.5	15.5	8.8	5.9	111.5
Public investment outlays	25.1	94.0	82.0	39.9	29.6	270.5
Total	180.5	385.8	149.9	51.4	37.0	804.6

Source: Council of Economic Advisers 2014b.

Note: "ARRA" refers o the American Recovery and Reinvestment Act of 2009. "AMT Relief" refers to Alternative Minimum Tax relief. Items may not add to total due to rounding.

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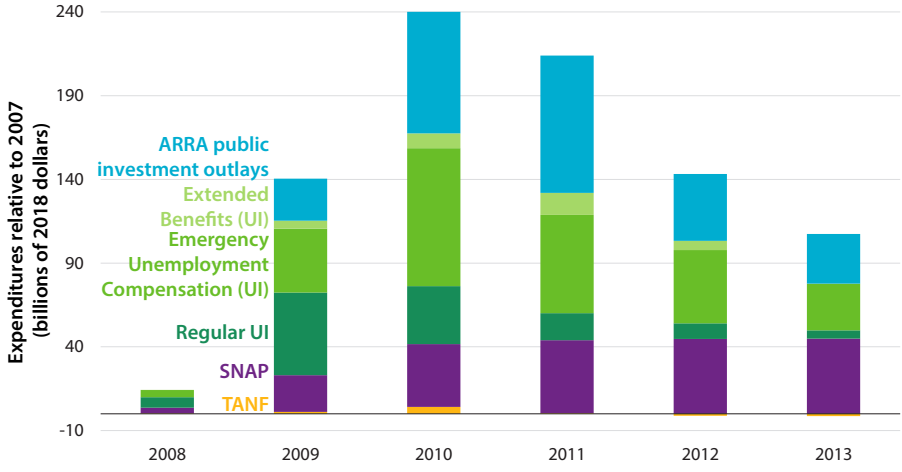
of direct payments and their effects). After ARRA, a series of additional measures were implemented—ranging from cuts in the Social Security tax, to aid to states to hire teachers, to hiring credits, to broader tax cuts, to a series of extensions of the unemployment insurance program.[6]

TARGETING AND TIMELINES

Countercyclical fiscal policies—discretionary or automatic—operate on different timelines in the wake of a recession. Though it is vital that fiscal stimulus be timely and temporary, it is also important that it be sustained as long as the need remains. With this in mind, we examine in figure 11 how spending varied over the 2007–13 period on UI (broken out into regular UI, Emergency Unemployment Compensation [EUC], and Extended Benefits [EB]), SNAP, and Temporary Assistance for Needy Families (TANF); we also show the public outlays for investment that were part of ARRA. Some of this spending was automatic (e.g., the increase in regular UI compensation), while other spending was part of ARRA or other discretionary measures (e.g., EUC and some of the SNAP increase). As another chapter in this volume by Louise Sheiner and Michael Ng (2019) documents, fiscal policy turned contractionary in the United States on net

FIGURE II.

Cumulative Change in Spending on Selected Federal Programs, 2007–13



Source: CEA 2014a; U.S. Department of Health and Human Services 2007–13; U.S. Department of Agriculture 2007–13; U.S. Department of Labor 2007–13a; U.S. Department of Labor 2007–13b; authors' calculations.

Note: Values represent change in spending relative to their 2007 levels. "ARRA" refers to the American Recovery and Reinvestment Act of 2009. Data are for the fiscal year. Values are adjusted to 2018 dollars using the CPI-U-RS. EUC officially ended in December of calendar year 2013.

after 2011, even as the unemployment rate was still quite elevated. This is reflected within the set of programs we examine in the annualized spending declines following 2010. Thus, while fiscal policy in these programs was providing more economic support relative to 2007, steady reduction in stimulus represented a drag on growth.

Although spending on regular UI benefits rose in 2009 and then declined, increases in extended UI benefits (EUC and EB) occurred through 2010. Total SNAP expenditures rose continuously through 2013. Throughout this period, TANF expenditures were roughly stable, failing to respond to the recession at all. The increased spending on the safety net programs shown in figure 11 was over $150 billion at its peak and was in fact larger than the ARRA public investment spending. The safety net is one of the crucial ways in which the government injects spending during an economic slowdown. Real expenditures for Medicaid (not shown) continued to grow since the Great Recession began, although recent research has indicated that the growth rate for Medicaid spending per enrollee has slowed in recent years (Holahan and McMorrow 2019).

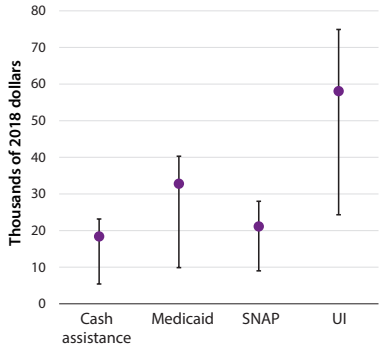
These fiscal policies also targeted very different populations. As discussed above, recessions do not affect all groups in the same way—moreover, fiscal stimulus is not equally effective when delivered to all groups. To better explain the likely effects of stimulus, it is necessary to explore the different ways in which people of different incomes, races and ethnicities, gender, and educational attainment were affected by major social safety net programs.

Using the March Supplement to the Current Population Survey (CPS), we focused on recipients' income levels in 2010—just after the Great Recession—to assess who was reached by each program. Though it is well known that the CPS underestimates recipiency of various benefits (Meyer, Mok, and Sullivan 2009), it can provide a good estimate of the demographics of those who reported receiving different benefits. Figure 12a depicts the mean total family income of program recipients (including cash benefits), showing that UI recipients had average family incomes of nearly $60,000, whereas cash welfare recipients had average family incomes below $20,000. Although cash welfare (including state-funded benefits), SNAP, and Medicaid all reach participants with lower incomes than UI does, it is important to remember that UI has a unique ability to reach people who have suffered a job loss and its ensuing unexpected economic difficulties. And income transfers to those individuals can be especially important for maintaining consumption spending (Gruber 1997).

We also explore the racial and gender balance of social safety net programs (not shown). UI is much more likely than other programs to be received by

FIGURE 12A.

Mean Family Income for Selected Federal Programs

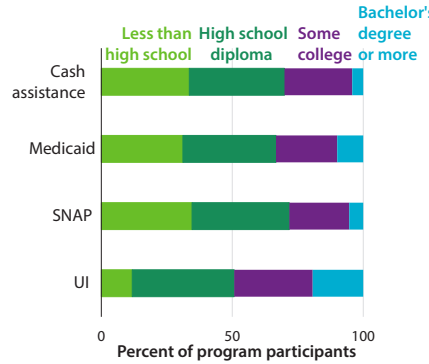


Source: Current Population Survey Annual Social and Economic Supplement, BLS 2010; authors' calculations.

Note: Data are for 2010. The values represent person-weighted total family income for individuals who report a nonzero amount of income for a given safety net program. The point estimates represent the mean total family income, and the tails reflect the 25th and 75th percentile values.

FIGURE 12B.

Educational Attainment of Participants for Selected Federal Programs



Source: Current Population Survey Annual Social and Economic Supplement, BLS 2010; authors' calculations.

Note: Data are from 2010. Respondents identified as recipients of a given program if they reported receiving some income from that program.

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white non-Hispanics (66 percent of participants), while slightly below half of SNAP recipients are white non-Hispanics. Similar gaps are apparent in the participation of men and women. Consistent with eligibility requirements that emphasize previous employment, UI is disproportionately taken up by men (63 percent of recipients are male), while other programs are disproportionately taken up by women (especially cash welfare at 85 percent female) who are more likely to qualify by virtue of being custodial parents.

Figure 12b focuses on educational attainment of program recipients, showing again that UI is unusual. SNAP, cash welfare, and Medicaid are all overwhelmingly used by people with less than a four-year college degree, while nearly one in five UI participants have at least a four-year degree, and roughly half have at least some college education. In addition, very few recipients of UI have less than a high school degree, while over 30 percent of recipients in the other programs do.[7]

The Limits of Monetary Policy

Fiscal policy is not the only means of counteracting recessions, and indeed monetary policy is an important tool for stabilization. Monetary policy in the United States is implemented by policymakers with technical expertise

who have a high degree of independence and autonomy (Alesina and Summers 1993), which safeguards their ability to conduct evidence-based policy. Because of this, the Federal Reserve may find it easier to commit to appropriate long-run policy (e.g., raising the federal funds rate when conditions improve), even while implementing aggressive rate reduction in the near term. In contrast, skeptics about fiscal stimulus worry that it will not be fully unwound (e.g., as the 2001 tax cuts were not) when macroeconomic conditions improve.

Another advantage is that monetary policymakers can respond quickly to changing economic conditions; Taylor (2000) shows that historically the Federal Reserve has been able to quickly reduce interest rates during downturns. Deliberating over fiscal stimulus, enacting legislation, and waiting for stimulus to be disbursed usually takes longer than is required for the Federal Reserve to meet and implement monetary easing. Relatedly, Taylor (2000) argues that the Federal Reserve can reverse course more easily as conditions evolve than can Congress and the administration, which must go through a lengthier process to authorize changes in discretionary fiscal policy. Automatic fiscal stabilizers perform better on this score than discretionary policy.

Conversely, monetary policy works with long and variable lags (Friedman 1972; Havranek and Rusnak 2013). Once interest rates change, it takes time for firms and consumers to respond to the changed incentives to borrow or spend. As such, rapidly introduced fiscal policy can in some cases have a more-immediate effect than monetary policy.

Because the Federal Reserve can change course quickly, it is generally considered the "last mover" in any response to economic conditions. Because it can act quickly, the central bank can adjust course after fiscal policy is set. This means that there will always be a possibility that fiscal changes can be offset by monetary policy actions; expansionary fiscal policy can be met with a contractionary monetary policy response if the fiscal policy is pushing the economy past a growth rate that the central bank sees as sustainable. Indeed, fiscal multipliers vary depending on the actions of the central bank (Christiano et al. 2011; Coenen et al. 2012; Davig and Leeper 2011; Hall 2009). However, when the Federal Reserve is constrained by limited monetary space—that is, when the federal funds rate is close to zero and other tools are limited—the magnitude of these offsetting monetary actions will be minimal (Whalen and Reichling 2015).

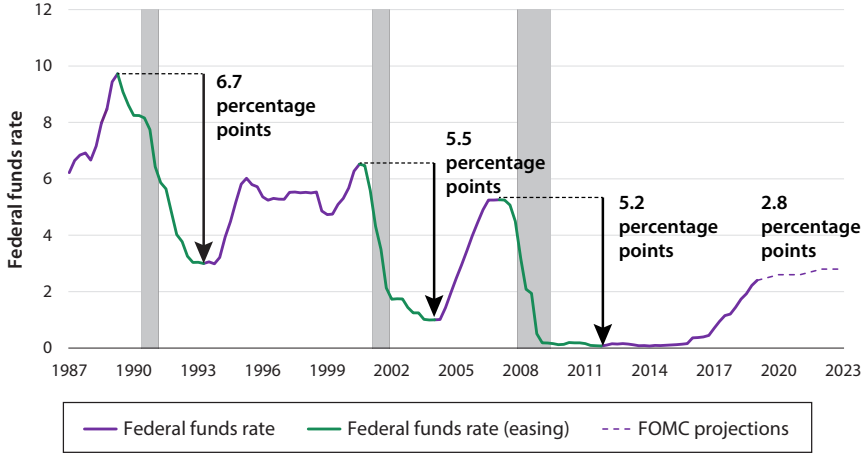
Indeed, low interest rates are likely to be what monetary policymakers will increasingly confront. As shown in figure 13, the Federal Reserve has lowered the federal funds rate by 5.2 to 6.7 percentage points over the

course of the last three recessions. As of March 2019 the effective federal funds rate sits at 2.4 percent, leaving very little room for reductions before the zero lower bound becomes a binding constraint. A number of studies have documented the reasons for the long-run reduction of the equilibrium real interest rate (see Laubach and Williams 2015, and most recently, Rachel and Summers 2019). As of the spring of 2019, policymakers at the Federal Reserve expect the long-run federal funds rate to be between 2.5 and 3.0 percent, suggesting that they expect limited room for rate cuts to be a persistent issue (Federal Open Market Committee 2019). In conditions of low inflation and low interest rates, the monetary policy response prescribed by conventional theory is significantly constrained (Reifschneider and Williams 2000).

In principle, the Federal Reserve could lower nominal interest rates (i.e., interest rates without adjustment for inflation) below zero (Kimball 2015). But in practice, rates well below zero pose a number of serious problems, including risks to financial stability (Arteta et al. 2016; Bech and Malkhozov 2016; Eggertsson, Juelsrud, and Wold 2017). In response to the 2007–9 global financial crisis and again in 2014 and 2015, some European central banks lowered nominal interest rates to levels slightly below zero,

FIGURE I3.

Actual and Projected Federal Funds Rate, 1987–2023



Source: Federal Open Market Committee (FOMC) projections 2019; Board of Governors of the Federal Reserve System 1987–2019; authors' calculations.

Note: The arrows and corresponding values represent the differences in peak to trough for the federal funds rate. Shaded bars denote a recession. The dotted line represents the FOMC's March 2019 projections for the federal funds rate.

without apparent ill effect; but in so doing, they augmented the room for monetary action only slightly (Rognlie 2016).[8] The Bank of Japan has also experimented with negative rates, but these attempts have either been limited by practicalities or simply not tried at sufficient scale to significantly change the notion of an effective lower bound on nominal interest rates.

In the modern environment of low interest rates, policymakers may increasingly turn to alternative monetary policy tools, such as quantitative easing (i.e., purchases of specified quantities of assets). Though quantitative easing and other strategies were employed during the Great Recession, their effects are still less well understood; furthermore, there are concerns that these unconventional tools may be insufficiently effective relative to their risks (Greenlaw et al. 2018; Summers, Wessel, and Murray 2018). Whether there are limits to the extent a central bank can expand its balance sheet is still relatively untested, as is the long-run consequence of buying a wide range of assets. These tools can be effective in bringing down long-run interest rates, even when the short-run rate is pinned at zero. But in both Japan and Germany, even 10-year rates have approached zero, suggesting there are limits to what monetary policy can achieve.

Given that monetary policy may face constraints, policymakers will need to rely much more than previously on a combination of fiscal stimulus and unconventional monetary policy measures.

The Limits of Discretionary Fiscal Policy

Discretionary fiscal stimulus has played an important role in U.S. stabilization policy for many decades, and its effects have often been positive.[9] However, discretionary policy relies on politicians to take decisive action, which can be difficult in the quick timeframe required (Blinder 2004). To be most effective, stimulus must be timely, targeted, and temporary (Elmendorf and Furman 2008; Summers 2007).

A related concern is that policymakers who oversee discretionary stimulus often do not implement the full range of policies that evidence suggests would be beneficial for macroeconomic stabilization. As Romer and Romer (2019) describe, some policymakers simply do not believe that active fiscal policy will help, and thus they shift too quickly to austerity, especially if public debt is high. Most recently, after the first few years following the Great Recession, there was a considerable pivot to austerity far in advance of what textbook macroeconomics would suggest. Far from acting as the free-spending political agents often assumed in economic models, a wide range of governments (often urged on by the International Monetary Fund

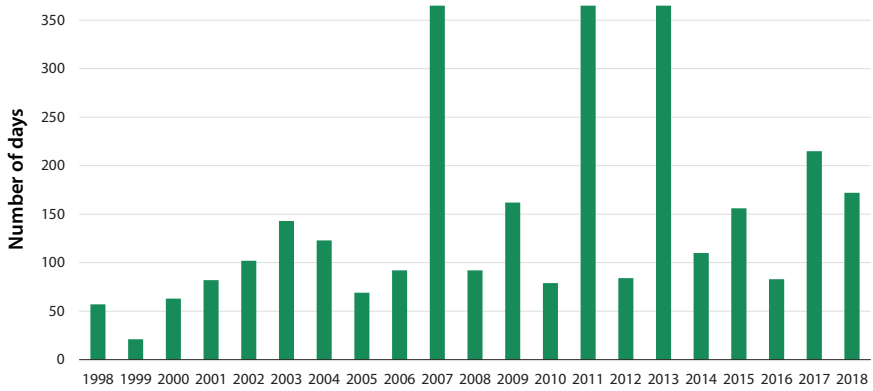
[IMF] and the Organization for Economic Cooperation and Development) shifted to a more-restrictive fiscal policy (Shambaugh 2017).

Further complicating the nation's ability to take quick action, the U.S. political system is designed to make it difficult to act quickly and forcefully, and this tendency to delay action has become more pronounced in recent years.[10] By one measure, up to three-quarters of salient issues are now in stalemates in Congress (Binder 2014).

The increased tendency toward gridlock is apparent in the increasing number of days when the U.S. federal government has been funded under a continuing resolution, rather than through a normal budget process (see figure 14). Continuing resolutions—which simply extend previous patterns of funding into a new fiscal period—reflect Congress's inability to appropriate funds through a traditional process that requires compromise and (typically) ultimate agreement between Congress and the administration. By nature, continuing resolutions make it difficult or impossible for the federal government to respond to evolving fiscal challenges.

FIGURE 14.

Days the Federal Budget was Funded by Continuing Resolution, 1998–2018



Source: Saturno and Tollestrup 2016; U.S. Congress 2017–18; authors' calculations.

Note: Values represent the number of days spent under a continuing resolution (CR) in a given fiscal year. The number of days spent under a CR is calculated as the number of days, beginning October 1, that funding for federal agencies was primarily or fully provided via temporary continuing appropriations in lieu of regular appropriations bills. The day that the CR expired is counted as a day spent under a CR.

THE HAMILTON PROJECT Equitable Growth

SHORTCOMINGS OF ARRA AND THE OVERALL FISCAL RESPONSE

Though discretionary stimulus has played a key role in mitigating the harm caused by recent recessions, the recovery from the Great Recession was relatively slow, and with monetary policy at the zero lower bound, fiscal policy could have been more effective at pushing the economy back to full employment more quickly than it did. After the 2008 stimulus payments at the end of the Bush administration, there was a considerable lag before more fiscal stimulus took effect. ARRA itself was enacted on February 17, 2009, fully 14 months after the beginning of the recession. ARRA was, in retrospect, too small. In the months and years after its passage, it became clear that political constraints would make additional large-scale stimulus difficult or impossible to enact (New York Times Editorial Board 2014). Although there were several additional measures, larger-scale jobs support efforts (e.g., the proposed American Jobs Act in 2011) stalled in Congress, and budget policy pivoted away from stimulus and toward fiscal restraint.

Given the extended duration of the downturn, the phaseout of fiscal stimulus occurred too quickly, creating large fiscal headwinds as early as 2011 (Lucking and Wilson 2012). As Cashin et al. (2018) demonstrate, this withdrawal of stimulus was unusually large at such an early stage of the recovery compared to prior economic recoveries. In subsequent years, programs like EUC were arguably discontinued prematurely when Congress failed to renew them (CEA and Department of Labor [DOL] 2014).

ARRA's magnitude and duration were insufficient in part because it was not initially clear to the public and policymakers that the Great Recession would be as devastating as it proved to be. One key challenge is that policymakers often need to rely on data that are insufficient for indicating conditions in real time. Case in point: ARRA was designed before GDP data for the fourth quarter of 2008 were released to the public. Once available, the original data for that quarter showed an annualized decline of about 3 percent. After many revisions, the data now show a contraction of over 8 percent. Trying in real time to convince policymakers of the severity of the Great Recession—based on partial and unrevised GDP data—was challenging despite the historically high jump in unemployment that was underway. In contrast to a discretionary stimulus, an automatic stabilizer, especially one based on the unemployment rate, would allow policy to respond effectively to economic conditions.

Automatic Stabilizers Are Desirable and Practical

Automatic stabilizers—the tax code, SNAP, and UI, to name just a few examples—have played an important role in softening the harm caused

by the most recent recession. CBO (2013) found that in fiscal year 2012, spending on automatic stabilizers amounted to 2.3 percent of potential GDP beyond their baseline level (with similar or higher amounts in each of the three previous years). Follette and Lutz (2010) assess the effects of this automatic spending, finding that automatic stabilizers reduce the GDP response to a negative shock by 20 percent after 8 quarters. When looking at the Great Recession, they observe a slightly smaller effect, finding that output would have been 0.75 percentage points lower in the absence of automatic stabilizers.

The United States could incorporate many more of these kinds of policies into its policy apparatus. To take just one metric: The United States is an outlier among other advanced economies in that it makes less-extensive use of automatic stabilizers. Dolls, Fuest, and Peichl (2012) find that 47 percent of the demand reduction from a large unemployment increase would be offset by automatic stabilizers in the European Union, but only 34 percent of the same shock would be offset in the United States.[11]

AUTOMATIC STABILIZERS ARE DESIRABLE

Automatic stabilizers have important advantages over discretionary stimulus.[12] Among the advantages is that fiscal stimulus will likely be more effective if carefully designed in advance of a crisis. There are four main benefits of advance planning for recessions. First, it is administratively easier to implement programs for which preparation has already been made. When federal agencies and state governments understand in advance what will occur, it is easier for them to make necessary programming adjustments and to do other types of capacity building.

Second, a predetermined, automatic policy will likely have beneficial effects on household and firm confidence. Recessions are characterized by widespread pessimism about the prospects for growth in the near future (De Nardi, French, and Benson 2012). Automatic fiscal stimulus (particularly including the social safety net) can mitigate that pessimism by diminishing the risks that motivate households and businesses to reduce consumption and investment (McKay and Reis 2016). Without automatic stabilizers, households may feel it necessary to increase their precautionary savings (Kimball 1990) when a downturn threatens.

Third, automatic stabilizers are credibly timely, targeted, and temporary—an advantage emphasized by Elmendorf and Furman (2008). Though a discretionary stimulus can certainly be removed (or allowed to expire) later, it may be politically difficult to do so. Anticipating this possibility, opponents of a permanently larger government could even oppose stimulus that they agree would be valuable in the near term. Because automatic

stabilizers are well crafted in advance, they can focus on the most-important ways to improve economic outcomes.

Fourth and finally, automatic policies allow policymakers to agree in advance about what should be done to combat recessions. Designing fiscal policy is always a political process, but doing so in advance could reduce the risk that contemporary political hurdles inhibit a timely and effective fiscal stimulus. No policymaker knows whether their constituency will be hit hard in the next recession, so there may be more room to create a shared sense of responsibility for limiting the effects than would exist during an actual crisis.

AUTOMATIC STABILIZERS ARE PRACTICAL

Obtaining the benefits described above requires a workable implementation of automatic stabilizers. In some cases, automatic stabilization flows naturally (and sometimes unintentionally) from the design of a program. Some government programs automatically increase or decrease in size as the economy becomes stronger or weaker. This is true of the social safety net and the tax system. Each additional unemployed person means more spending via the unemployment insurance system and less tax revenue. If family incomes fall due to reduced employment or hours, more people are eligible for SNAP, Medicaid, and other programs. Even if incomes simply rise more slowly, the growth of federal tax revenue slows. Indeed, the federal tax code is an important automatic stabilizer, both because families move down income brackets as their earnings fall and because taxes need not be paid on lost income; individuals' federal taxes are mitigated by as much as 8 percent of initial shocks to GDP (Auerbach and Feenberg 2000).[13]

In other cases, it is necessary for automatic stabilization policies to explicitly trigger on or off at the appropriate moments in the business cycle. This requires accurate, timely assessments of economic conditions. Researchers and policymakers have found that they can rely on a rule of thumb that accurately identifies the onset of a recession using timely data: When the economy has seen an increase in the unemployment rate of more than 0.5 percentage points during the past six months, then the economy is almost certainly in a recession. Table 1 shows that this six-month unemployment trigger measure (referred to in the table as "alternate unemployment") compares favorably with triggers that would either follow the NBER's recession announcements or a GDP-based rule. For example, during the Great Recession, the six-month unemployment trigger would have turned on in June 2008, while the NBER-based trigger would only have turned on in December 2008 and the GDP-based trigger would have turned on at the end of January 2009.

In a companion paper to this chapter, Claudia Sahm (2019) presents a refinement of this rule that is even more accurate; she looks to whether the three-month moving average of the national unemployment rate has exceeded its minimum during the preceding 12 months by at least 0.5 percentage points. As seen in table 1, both unemployment-based rules can identify recessions more quickly than either a GDP-based rule or the NBER. The Sahm rule calls each of the last five recessions within 4 to 5 months of its actual start. The alternate rule (i.e., the six-month trigger described above) calls recessions within 2 to 8 months—somewhat quicker in most earlier recessions, but slower in the last two, indicating another reason that national triggers may improve if they use Sahm's rule. The Sahm rule would not have generated any incorrect signals in the last 50 years.[14]

In the Great Recession, Sahm's rule would have identified April 2008 (for which estimates were released in May) as the month in which the 3-month moving average of unemployment would have risen sufficiently to trigger stimulus. This was just three months after the Bush administration and Congress agreed to send direct payments to households to buoy the economy. But it was a full nine months before ARRA was enacted to provide infrastructure funds, increases in SNAP and UI, and funds to struggling states, along with additional tax cuts for households.

TABLE 1.

Activation Date of Selected Triggers in Previous Recessions

Recession start date	NBER announcement	*Triggers*		
		Sahm	Alternate unemployment	GDP
12/1969	-	3/6/1970	6/5/1970	4/17/1970
11/1973	-	4/5/1974	2/1/1974	1/16/1975
1/1980	6/3/1980	5/2/1980	5/2/1980	10/17/1980
7/1981	1/6/1982	12/4/1981	11/6/1981	4/21/1982
7/1990	4/25/1991	12/7/1991	12/7/1990	4/26/1991
3/2001	11/26/2001	7/6/2001	11/2/2001	N/A
12/2007	12/1/2008	5/2/2008	6/6/2008	1/30/2009

Source: Bureau of Economic Analysis (BEA) 1981–2009; Current Population Survey, BLS 1981–2009; NBER n.d; authors' calculations.

Note: For all activation dates, we use real-time unemployment data (i.e., not the fully revised data). The NBER did not formally announce business cycle turning points before 1979. "N/A" reflects that the GDP-based trigger was not activated during the 2001 recession. Dates for the Sahm and the Alternative Unemployment triggers were calculated based on the release date of the monthly Employment Situation release. The Employment Situation release always reports on unemployment data for the prior month (e.g., April 2008 data is released in May 2008).

This method is preferable to available alternatives. We cannot rely on the NBER's Business Cycle Dating Committee, which semiofficially dates recessions. This committee's focus is on historical accuracy, not on identifying recessions in real time. Thus, it waits until multiple data sets have been released and revised and there is more certainty as to whether a recession has occurred. In the last five recessions, the NBER's announcement has come 6 to 12 months after the official starting date of the recession, which is far too late to be useful for implementing stabilization policy.[15]

Additionally, we cannot rely on economic forecasts, given that economists are notoriously bad at forecasting recessions. As of this writing in early 2019, no major forecast—not the official budget forecast of the administration, the CBO's forecast, or the IMF's forecast for the United States—suggests a period of economic contraction in the next 10 years. Given that the economy has already been growing for 10 years since the last recession, this would amount to a truly unprecedented period of continuous growth. All of these organizations believe there will eventually be another recession, but given the uncertainty of its timing in the future, it would be pointless to guess when it might occur.

Given appropriate design and accurate data, automatic stabilizers that use macroeconomic triggers are feasible.

Conclusion

Recessions are both common and devastating. They damage the economic outcomes of individuals, the communities they live in, the firms they work in, and the overall economy, resulting in a loss of economic activity and a rise in unemployment. Over the last four recessions, GDP fell by an average of about 2 percent (roughly $400 billion as a share of the current economy), and unemployment rose by 2 to 5 percentage points, leaving millions of workers without a job. The economic costs of recessions are real and harmful for many American families.

Most recently, the U.S. economy experienced the longest and most-severe economic downturn since World War II. The Great Recession of 2007–9 devastated the employment, income, wealth, and economic security of millions of Americans. Furthermore, these effects were not shared equally. Eleven years after the start of the Great Recession, the bottom quintile of American families by income still had not returned to its precession peak of median income. By contrast, it took the top 5 percent only four years from the start of the recession to return to the prerecession level. Unemployment rates rise more during recessions for minorities relative to non-Hispanic whites and for less-educated workers relative to more-educated workers.

Although not all recessions are as devastating as the Great Recession, another economic downturn will inevitably come, and policymakers should do all they can to prepare for its effects.

Historically, the United States has used two main types of policy responses to fight recessions: monetary policy and fiscal policy, much of it discretionary. Both methods have been effective in responding to prior recessions. However, there is reason for concern about how reliable these methods will be in addressing the next recession. Regarding monetary policy, the Federal Reserve has cut the federal funds rate between 5 and 6 percentage points as a response to the past 3 recessions. But as of March 2019 this rate stands at about 2.4 percentage points—greatly limiting the Federal Reserve's ability to stimulate the economy. Regarding discretionary fiscal policy, concerns about timeliness, magnitude, and duration are important in a gridlocked political environment. Moreover, designing policy responses in the midst of a crisis can lead those responses to be the wrong size—and conducted over the wrong time frame—while also being more difficult to administer.

The United States should therefore implement a more-robust set of automatic stabilizers, designed in advance to adjust to the business cycle. These kinds of countercyclical policies are important because recessions can feed on themselves. With falling consumer confidence comes reduced consumption, which lowers both output and employment. In turn, this lowers consumer confidence even more. These policies may not eliminate the need for discretionary actions but would make economic recovery less dependent on them.

Mindful of these dynamics as well as the human costs of recessions, policymakers should augment existing stabilizers with a set of policies that automatically increase spending (or reduce taxes) during an economic downturn. Given the limits of monetary and discretionary fiscal policy, it is crucial that we strengthen and expand the role of automatic stabilizers to make the most of opportunities for limiting recessions.

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Endnotes

1. See Cajner et al. (2017) and Aaronson et al. (2019) for detailed investigations of these racial gaps.
2. Because of an increase in participation by older workers as the expansion continued, the overall demographically adjusted employment-to-population ratio has also only recently exceeded its pre-crisis level (authors' calculations, not shown).
3. The CBO approach in box figure 1—which decomposes the budget deficit or surplus—differs from that of Cashin et al. (2018) and the Hutchins Center Fiscal Impact Measure, which examine the effects of changes in fiscal policy on aggregate demand.
4. These authors study U.S. data; Baum, Poplawsk-Ribeiro, and Weber (2012) examine international data and find similar results.
5. While CBO's assessment makes use of a broad range of relevant research, fiscal multiplier estimates can vary substantially across studies. For example, see Leduc and Wilson (2013) for public infrastructure multipliers above those shown in figure 10.
6. For an extended discussion, see CEA (2014b).
7. The different educational distribution of UI participation is related to its relatively strict eligibility requirements (including minimum earnings history) and the fact that UI is available to those who previously had high incomes.
8. As a consequence, it is preferable to speak of the "effective lower bound" rather than the "zero lower bound." Rognlie (2016) shows that negative interest rates can be beneficial as part of a stabilization policy, as long as certain conditions are met (e.g., commitment from the central bank).
9. See the chapter in this volume by Louise Sheiner and Michael Ng (2019) for more detail.
10. Madison (1778) argues that the structure of the U.S. government ought to be intentionally designed to make decisive and forceful action difficult, with each branch of government pitted against the others.
11. Examining income (rather than unemployment) shocks, Auerbach and Feenberg (2000) and Mabbett and Schelkle (2007) find corresponding "stabilization coefficients" of 0.25 to 0.30 for the United States and 0.32 to 0.58 for the EU.
12. See Blanchard (1999) for a comment that explains the benefits of automatic stabilizers and the case for making more use of them. Notably, this comment predates changes in the long-term level of interest rates that have likely strengthened the case.
13. Accordingly, countries in which the public sector is a larger share of the economy tend to have larger automatic stabilizers (Debrun, Pisani-Ferry, and Sapir 2008; Fatás and Mihov 2001).
14. The alternate unemployment rule would have activated at three moments just after recessions formally ended but labor markets remained weak: in 1976, 1992, and 2003. The alternate rule also would have incorrectly activated in 1986 when using real-time data due to spikes in the unemployment rate that are not apparent in the currently revised data. The smoothing in the Sahm rule helps avoid accidental signals that might occur in real-time data. See Sahm (2019) for further discussion as well as Fiedler, Furman, and Powell (2019), which includes a discussion of a state-specific unemployment rate automatic measure.
15. One could also use the rule of thumb that the economy is in a recession after two quarters of negative growth in GDP. Unfortunately, this requires waiting for six months of negative growth in addition to waiting for GDP estimates to be released and revised.

References

Aaronson, Stephanie R., Mary C. Daly, William Wascher, and David W. Wilcox. 2019. "Okun Revisited: Who Benefits Most from a Strong Economy?" Conference Draft, *Brookings Papers on Economic Activity,* Brookings Institution, Washington, DC.

Alesina, Alberto, and Lawrence H. Summers. 1993. "Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence." *Journal of Money, Credit and Banking* 25 (2): 151–62.

Arteta, Carlos Ó, M. Ayhan Kose, Marc Stocker, and Temel Taskin. 2016. "Negative Interest Rate Policies: Sources and Implications." Policy Research Working Paper 7791, World Bank Group, Washington, DC.

Auerbach, Alan J., and Daniel Feenberg. 2000. "The Significance of Federal Taxes as Automatic Stabilizers." *Journal of Economic Perspectives* 14 (3): 37–56.

Auerbach, Alan J., and Yuriy Gorodnichenko. 2012. "Measuring the Output Responses to Fiscal Policy." *American Economic Journal: Economic Policy* 4 (2): 1–27.

Baum, Anja, Marcos Poplawski-Ribeiro, and Anke Weber. 2012. "Fiscal Multipliers and the State of the Economy." Working Paper 12/286, International Monetary Fund, Washington, DC.

Bech, Morten, and Aytek Malkhozov. 2016. "How Have Central Banks Implemented Negative Policy Rates?" *BIS Quarterly Review,* 31–44.

Binder, Sarah. 2014. *Polarized We Govern?* Washington, DC: Center for Effective Public Management, Brookings Institution.

Blanchard, Olivier. 1999. "Commentary on The Automatic Fiscal Stabilizers." *Federal Reserve Bank of New York Economic Policy Review*, April 2000: 69-74.

Blinder, Alan S. 2004. "The Case against the Case against Discretionary Fiscal Policy." Working Paper 100, Center for Economic Policy Studies, Princeton University, Princeton, NJ.

———. 2016. "Fiscal Policy Reconsidered." Policy Proposal 2016-5, The Hamilton Project, Brookings Institution, Washington, DC.

Blinder, Alan S., and Mark Zandi. 2015. *The Financial Crisis: Lessons for the Next One.* Washington, DC: Center on Budget and Policy Priorities.

Board of Governors of the Federal Reserve System. 1987–2019. "Effective Federal Funds Rate." Board of Governors of the Federal Reserve System, Washington, DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

Bureau of Economic Analysis (BEA). 1957–2019. "Real Gross Domestic Product." Bureau of Economic Analysis, Suitland, MD. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

Bureau of Labor Statistics (BLS). 1969–2019. "Current Population Survey." Bureau of Labor Statistics, Washington, DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 2010. "Current Population Survey, Annual Social and Economic Supplement." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC. Retrieved from IPUMS-CPS, University of Minnesota.

Cajner, Tomaz, Tyler Radler, David Ratner, and Ivan Vidangos. 2017. "Racial Gaps in Labor Market Outcomes in the Last Four Decades and Over the Business Cycle." Paper 2017-071l, Finance and Economics Discussion Series, Federal Reserve Board, Washington, DC.

Cashin, David, Jamie Lenney, Byron Lutz, and William Peterman. 2018. "Fiscal Policy and Aggregate Demand in the U.S. Before, During, and Following the Great Recession." *International Tax and Public Finance* 25 (6): 1519–58.

Chodorow-Reich, Gabriel. 2019. "Geographic Cross-Sectional Fiscal Multipliers: What Have We Learned?" *American Economic Journal: Economic Policy* 11 (2): 1–36.

Chodorow-Reich, Gabriel, Laura Feiveson, Zachary Liscow, and William Gui Woolston. 2012. "Does State Fiscal Relief during Recessions Increase Employment? Evidence from the American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4 (3): 118–45.

Christiano, Lawrence, Martin Eichenbaum, and Sergio Rebelo. 2011. "When Is the Government Spending Multiplier Large?" *Journal of Political Economy* 119 (1): 78–121

Coenen, Günter, Christopher J. Erceg, Charles Freedman, Davide Furceri, Michael Kumhof, René Lalonde, Douglas Laxton, Jesper Lindé, Annabelle Mourougane, Dirk Muir, Susanna Mursula, Carlos de Resende, John Roberts, Werner Roeger, Stephen Snudden, Mathias Trabandt, and Jan in 't Veld. 2012. "Effects of Fiscal Stimulus in Structural Models." *American Economic Journal: Macroeconomics* 4 (1): 22–68.

Congressional Budget Office (CBO). 1980–2018. "Estimates of Automatic Stabilizers: January 2019." Congressional Budget Office, Washington, DC.

———. 2011. "Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from January 2011 through March 2011." Congressional Budget Office, Washington, DC.

———. 2013. "The Effects of Automatic Stabilizers on the Federal Budget as of 2013." Congressional Budget Office, Washington, DC.

Conley, Timothy G., and Bill Dupor. 2013. "The American Recovery and Reinvestment Act: Solely A Government Jobs Program?" *Journal of Monetary Economics* 60 (5): 535–49.

Council of Economic Advisers (CEA). 2014a. "Economic Report of the President." Council of Economic Advisers, Executive Office of the President, White House, Washington, DC.

———. 2014b. "The Economic Impact of the American Recovery and Reinvestment Act Five Years Later: Final Report to the President." Council of Economic Advisers, Executive Office of the President, White House, Washington, DC.

Council of Economic Advisers and the Department of Labor. 2014. "The Economic Benefits of Extending Unemployment Insurance." Council of Economic Advisers and the Department of Labor, Washington, DC.

Davig, Troy, and Eric M. Leeper. 2011. "Monetary-Fiscal Policy Interactions and Fiscal Stimulus." *European Economic Review* 55 (2): 211–27.

De Nardi, Mariacristina, Eric French, and David Benson. 2012. "Consumption and the Great Recession." Working Paper 17688, National Bureau of Economic Research, Cambridge, MA.

Debrun, Xavier, Jean Pisani-Ferry, and Andre Sapir. 2008. "Government Size and Output Volatility: Should We Forsake Automatic Stabilization?" Working Paper 08/122, International Monetary Fund, Washington, DC.

DeLong, J. Bradford, and Lawrence H. Summers. 2012. "Fiscal Policy in a Depressed Economy." *Brookings Papers on Economic Activity* (1): 233–97.

Dettling, Lisa, Joanne Hsu, and Elizabeth Llanes. 2018. "A Wealthless Recovery? Asset Ownership and the Uneven Recovery from the Great Recession." FEDS Notes, Board of Governors of the Federal Reserve System, Washington, DC.

Dolls, Mathias, Clemens Fuest, and Andreas Peichl. 2012. "Automatic Stabilizers and Economic Crisis: US vs. Europe." *Journal of Public Economics* 96 (3–4): 279–94.

Dupor, Bill, and Peter B. McCrory. 2018. "A Cup Runneth Over: Fiscal Policy Spillovers from the 2009 Recovery Act." *The Economic Journal* 128 (611): 1476–508.

Dupor, Bill, and M. Saif Mehkari. 2016. "The 2009 Recovery Act: Stimulus at The Extensive and Intensive Labor Margins." *European Economic Review* 85: 208–28.

Economic Policy Institute. 2012. *The State of Working America.* Washington, DC: Economic Policy Institute.

Eggertsson, Gauti B., Ragner E. Juelsrud, and Ella Getz Wold. 2017. "Are Negative Nominal Interest Rates Expansionary?" Working Paper 24039, National Bureau of Economic Research, Cambridge, MA.

Elmendorf, Douglas W., and Jason Furman. 2008. "If, When, How: A Primer on Fiscal Stimulus." Strategy Paper 2008-1, The Hamilton Project, Brookings Institution, Washington, DC.

Emmons, William R., Ana H. Kent, and Lowell R. Ricketts. 2018. *The Demographics of Wealth: How Education, Race and Birth Year Shape Financial Outcomes.* St. Louis, MO: Federal Reserve Bank of St. Louis.

Fatás, Antonio, and Ilian Mihov. 2001. "Government Size and Automatic Stabilizers: International and Intranational Evidence." *Journal of International Economics* 55 (1): 3–28.

Fazzari, Steven M., James Morley, and Irina Panovska. 2015. "State-Dependent Effects of Fiscal Policy." *Studies in Nonlinear Dynamics & Econometrics* 19 (3): 285–315.

Federal Open Market Committee (FOMC). 2019, March 20. "Chairman's FOMC Press Conference Projections Materials." Federal Open Market Committee, Federal Reserve, Washington, DC.

Feyrer, James, and Bruce Sacerdote. 2011. "Did the Stimulus Stimulate? Real-Time Estimates of the Effects of the American Recovery and Reinvestment Act." Working Paper 16759, National Bureau of Economic Research, Cambridge, MA.

Fiedler, Matt, Jason Furman, and William Powell. 2019. "Increasing Federal Support for State Medicaid and CHIP Programs in Response to Economic Downturns." In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center on Equitable Growth.

Follette, Glenn, and Byron Lutz. 2010. "Fiscal Policy in the United States: Automatic Stabilizers, Discretionary Fiscal Policy Actions, and the Economy." Working Paper 2010-43, Finance and Economics Discussion Series, Board of Governors of the Federal Reserve System, Washington, DC.

Friedman, Milton. 1972. "Have Monetary Policies Failed?" American Economic Review 62 (2): 11–18.

Gordon, Tracy. 2012. "State and Local Budgets and the Great Recession." Article, Brookings Institution, Washington, DC.

Greenlaw, David, James D. Hamilton, Ethan S. Harris, and Kenneth D. West. 2018. "A Skeptical View of the Impact of the Fed's Balance Sheet." Working Paper 24687, National Bureau of Economic Research, Cambridge, MA.

Gruber, Jonathan. 1997. "The Consumption Smoothing Benefits of Unemployment Insurance." *American Economic Review* 87 (1): 192–205.

Hall, Robert E. 2009. "By How Much Does GDP Rise If the Government Buys More Output?" *Brookings Papers on Economic Activity* (2): 183–250.

Havranek, Tomas, and Marek Rusnak. 2013. "Transmission Lags of Monetary Policy: A Meta-Analysis." *International Journal of Central Banking* 9 (4): 39–75.

Holahan, John, and Stacey McMorrow. 2019. *Slow Growth in Medicare and Medicaid Spending per Enrollee Has Implications for Policy Debates.* Washington, DC: Urban Institute.

Johnson, David S., Jonathan A. Parker, and Nocholas S. Souleles. "Household Expenditure and the Income Tax Rebates of 2001." *American Economic Review* 96 (5): 1589–610.

Kahn, Lisa B. 2010. "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy." *Labour Economics* 12 (2): 303–16.

Keynes, John Maynard. 1936. *The General Theory of Employment, Interest, and Money.* London, United Kingdom: Palgrave Macmillan.

Kimball, Miles S. 1990. "Precautionary Saving in the Small and in the Large." *Econometrica* 58 (1): 53–73.

———. 2015. "Negative Interest Rate Policy as Conventional Monetary Policy." *National Institute Economic Review* 234: R5–R14.

Kurz, Christopher, Geng Li, and Daniel J. Vine. 2018. "Are Millennials Different?" Paper 2018-080, Finance and Economics Discussion Series, Board of Governors of the Federal Reserve System, Washington, DC.

Labonte, Marc. 2010. *The 2007–2009 Recession: Similarities to and Differences from the Past.* Washington, DC: Congressional Research Service.

Laubach, Thomas, and John C. Williams. 2015. "Measuring the Natural Rate of Interest Redux." Working Paper, Federal Reserve Bank of San Francisco, San Francisco, CA.

Leduc, Sylvain, and Daniel Wilson. 2013. "Roads to Prosperity or Bridges to Nowhere? Theory and Evidence on the Impact of Public Infrastructure Investment." *NBER Macroeconomics Annual,* edited by Daron Acemoglu, Jonathon Parker, and Michael Woofdord, 89–142. Cambridge, MA: National Bureau of Economic Research and University of Chicago Press.

Lucking, Brian, and Dan Wilson. 2012. "U.S. Fiscal Policy: Headwind or Tailwind?" Economic Letter 2012-20, Federal Reserve Bank of San Francisco, San Francisco, CA.

Mabbett, Deborah, and Waltraud Schelkle. 2007. "Bringing Macroeconomics Back in to the Political Economy of Reform: The Lisbon Agenda and the 'Fiscal Philosophy of EMU." *Journal of Common Market Studies,* 45 (1): 81–103.

Madison, James. 1788. "Federalist Paper No. 51." Washington, DC: U.S. Library of Congress.

Martin, Fernando M. 2016. "Private Investment and The Great Recession." Economic Synopses 1, Economic Research, Federal Reserve Bank of St. Louis, St. Louis, MO.

McKay, Alisdair, and Ricardo Reis. 2016. "The Role of Automatic Stabilizers in the US Business Cycle." *Econometrica* 84 (1): 141–94.

McNichol, Elizabeth. 2012. *Out of Balance: Cuts in Services Have Been States' Primary Response to Budget Gaps, Hemming the Nation's Economy.* Washington, DC: Center on Budget and Policy Priorities.

Meyer, Bruce D., Wallace K. C. Mok, and James X. Sullivan. 2009. "The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences." Working Paper 15181, National Bureau of Economic Research, Cambridge, MA.

Nakamura, Emi, and Jon Steinsson. 2014. "Fiscal Stimulus in a Monetary Union: Evidence from U.S. Regions." *American Economic Review* 104 (3): 753–92.

National Bureau of Economic Research (NBER). n.d. "U.S. Business Cycle Expansions and Contractions." National Bureau of Economic Research, Cambridge, MA.

New York Times Editorial Board. 2014, February 22. "What the Stimulus Accomplished." Editorial, *New York Times.*

Oh, Hyunseung, and Ricardo Reis. 2011. "Targeted Transfers and the Fiscal Response to the Great Recession." Working Paper 16775, National Bureau of Economic Research, Cambridge, MA.

Owyang, Michael T., Valerie A. Ramey, and Sarah Zubairy. 2013. "Are Government Spending Multipliers Greater during Periods of Slack? Evidence from Twentieth Century Historical Data." *American Economic Review: Papers and Proceedings* 103 (3): 129–34.

Rachel, Łukasz, and Lawrence H. Summers. 2019. "On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation." Conference Draft, *Brookings Papers on Economic Activity,* Brookings Institution, Washington, DC.

Ramey, Valerie A., and Sarah Zubairy. 2018. "Government Spending Multipliers in Good Times and in Bad: Evidence from US Historical Data." *Journal of Political Economy* 126 (2): 850–901.

Reifschneider, David, and John C. Williams. 2000. "Three Lessons for Monetary Policy in a Low-Inflation Era." *Journal of Money, Credit and Banking* 32 (4): 936–66.

Rognlie, Matthew. 2016. "What Lower Bound? Monetary Policy with Negative Interest Rates." Unpublished manuscript.

Romer, Christina D., and David H. Romer. 2019. "Fiscal Space and the Aftermath of Financial Crises: How It Matters and Why." *Conference Draft, Brookings Papers on Economic Activity,* Brookings Institution, Washington, DC.

Sahm, Claudia. 2019. "Direct Stimulus Payments to Individuals." In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center on Equitable Growth.

Samuelson, Paul A. 1948. *Economics.* York, PA: Maple Press.

Saturno, James V., and Jessica Tollestrup. 2016. *Continuing Resolutions: Overview of Components and Recent Practices.* Washington, DC: Congressional Research Service.

Serrato, Juan Carlos Suárez, and Philippe Wingender. 2016. "Estimating Local Fiscal Multipliers." Working Paper 22425, National Bureau of Economic Research, Cambridge, MA.

Shambaugh, Jay. 2017. "Rethinking Fiscal Policy." In *Evolution or Revolution?: Rethinking Macroeconomic Policy after the Great Recession*, edited by Oliver Blanchard and Lawrence H. Summers, 131–9. Cambridge, MA: MIT Press.

Sheiner, Louise, and Michael Ng. 2019. "How Stabilizing Is Fiscal Policy?" In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center on Equitable Growth.

Silberman, David. 2019, January. "Assessing Our Rules: Our Reports on the Ability to Repay and Qualified Mortgage Rule and the RESPA Mortgage Servicing Rule." Consumer Financial Protection Bureau, Washington, DC.

Stein, Herbert. 1969. *The Fiscal Revolution in America.* Washington, DC: AEI Press.

Summers, Lawrence H. 2007, December 19. "The State of the U.S. Economy." Presentation at Brookings Institution Forum, Brookings Institution, Washington, DC.

Summers, Lawrence H., David Wessel, and John David Murray. 2018. *Rethinking the Fed's 2 Percent Inflation Target.* Washington, DC: Hutchins Center on Fiscal and Monetary Policy, Brookings Institution.

Taylor, John B. 2000. "Reassessing Discretionary Fiscal Policy." *Journal of Economic Perspectives* 14 (3): 21–36.

U.S. Census Bureau. 1977–2018. "Business Dynamics Statistics." U.S. Census Bureau, Suitland, MD.

U.S. Congress. 2017–18. "Appropriations and Budget." U.S. Congress, Washington, DC.

U.S. Department of Agriculture (USDA). 2007–13. "Persons, Households, Benefits, and Average Monthly Benefit per Person & Household: FY69 through FY19." Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

U.S. Department of Health and Human Services (HHS). 2007–13. "TANF Fiscal Year Financial Data." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

U.S. Department of Labor. 2007–13a. "Unemployment Insurance Data Summary." Employment and Training Administration, U.S. Department of Labor, Washington, DC.

———. 2007–13b. "EUC Aggregate Program Activity." Employment and Training Administration, U.S. Department of Labor, Washington, DC.

Whalen, Charles J., and Felix Reichling. 2015. "The Fiscal Multiplier and Economic Policy Analysis in the United States." Working Paper 2015-02. Congressional Budget Office, Washington, DC.

Wilson, Daniel J. 2012. "Fiscal Spending Jobs Multipliers: Evidence from the 2009 American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4 (3): 251–82.

How Stabilizing Has Fiscal Policy Been?

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Abstract

This paper investigates the cyclicality of fiscal policy over the past 40 years, using a measure that weights the changes in the components of fiscal policy by their likely impact on the economy. Fiscal policy has been strongly countercyclical over the past four decades, with the degree of cyclicality somewhat stronger in the past 20 years than the previous 20. Automatic stabilizers, mostly through the tax system and unemployment insurance, provide roughly half the stabilization, with discretionary fiscal policy in the form of enacted tax cuts and increased spending accounting for the other half. Fiscal policy at the federal level accounts for all the stabilization. State fiscal policy has been very mildly procyclical in downturns, on average, as declines in state and local purchases have more than offset the stimulus provided by state and local tax systems.

Introduction

Government tax and spending policies naturally affect the macroeconomy. Because these policies tend to increase aggregate demand during recessions and restrain it during booms, fiscal policy is in general a stabilizing economic force. Lower taxes and larger transfer payments during recessions help cushion the blow of a lower income and help people maintain their consumption. Higher government spending during economic downturns increases aggregate demand directly, since governments either hire more people or spend more money at private businesses that, in turn, increase employment.

Economists have long debated the relative benefits of fiscal policy versus monetary policy at fighting recessions. Many economists believe that monetary policy is more effective at economic stabilization—because the Federal Reserve can act more quickly than Congress and because it

is more insulated from political considerations (Elmendorf and Furman 2008). With the secular decline in interest rates observed over the past few decades, however, it seems likely that monetary policy will have more-limited firepower than in previous recessions.[1] Because interest rates are likely to be lower than they have been in the past and cannot be lowered much below zero, the need for countercyclical fiscal policy is likely to be higher in the future than it has been in the past (Rachel and Summers 2019).

As a backdrop to the debate about increasing fiscal stabilizers, it is useful to address a few questions:

1. How countercyclical has U.S. fiscal policy been over the past forty years?
2. What types of policies provide the greatest amount of stabilization?
3. What has been more important to stabilization—changes in policy that happen automatically or changes brought about through legislation?
4. What are the contributions of federal versus state and local fiscal policies to stabilization?
5. How has fiscal stabilization changed over time?

In short, fiscal policy has been strongly countercyclical over the past four decades, with the degree of cyclicality somewhat stronger in the past 20 years than the previous 20. Almost all the stabilization is accounted for by the federal government—especially when we include federal transfers to states and localities. Automatic stabilizers and discretionary fiscal policy are about equally important to macroeconomic stabilization. During economic downturns, taxes fall and transfers increase—both automatically and in response to legislation—and the federal government also increases purchases. State fiscal policy is very mildly procyclical because declines in state and local purchases more than offset stimulus provided by state automatic stabilizers.

MEASURING THE DIRECT EFFECTS OF FISCAL POLICY ON THE MACROECONOMY

While increases in government budget deficits boost aggregate demand, the composition of these deficit changes can matter for both the duration and the degree of economic stabilization arising from these policies.

The Hutchins Center on Fiscal and Monetary Policy (Hutchins Center) created its Fiscal Impact Measure (FIM) as a rough gauge of how the fiscal policies of federal, state, and local governments affect near-term changes in output—measured by gross domestic product (GDP).[2] Rather than simply examining changes in government deficits over time, the FIM weights the changes in the various components of government budgets—purchases,

individual and corporate taxes, and transfers—by their likely impact on the economy.[3]

Direct government purchases include spending on employee compensation and benefits, payments to contracts for defense and nondefense purposes, and other government expenditures that represent an exchange of government money for goods and services. These are counted directly in output, so they have a one-for-one immediate impact on GDP.

Assessing the impact of changes in transfers (e.g., Social Security and Medicaid) and changes in taxes is more complicated because these changes affect GDP only to the extent that they increase or lower consumption. Because some changes in taxes and transfers may lead to changes in saving rather than in consumption and because people may adjust their consumption only slowly, the FIM assumes that the direct effect of changes in taxes and transfers is less than one for one and takes place slowly over time. The specific assumptions for each type of tax and transfer are detailed in online appendix A.[4]

The FIM includes only the direct effect of fiscal policy on the economy. It measures the first-order effects of government policy on GDP, but not any second-round effects whereby higher GDP in one year stimulates hiring that then boosts GDP further. Because these effects are likely to be positive, particularly during downturns, the FIM probably understates the stabilizing effects of fiscal policy on the economy. However, the FIM also excludes potential offsets from monetary policy. For example, a surge in government spending when unemployment rates are low could induce the Federal Reserve to raise interest rates—a response that might undo the effects captured by the FIM.

As explained in online appendix A, in order to calculate the effects of government policy on the economy, it is necessary to specify a counterfactual; in other words, we need to know what the effects of a particular set of policies are compared to some alternative. The counterfactual assumed by the FIM is that taxes and spending rise with potential GDP—the gross domestic output that would be obtained if the economy were at full employment. When the FIM is positive, fiscal policy is stimulative, in the sense that it is a force that is pushing GDP growth above potential growth. When the FIM is negative, policy is contractionary, in the sense that it is lowering real GDP growth relative to potential growth.

To get a better sense of the FIM, consider the effects of a temporary tax cut enacted to spur growth in a recession. When the tax cut goes into effect, the FIM would increase. But once consumers had adjusted their consumption to reflect the lower taxes, the FIM would fall—even though the tax cut was

still supporting the new level of consumption. Finally, when the temporary tax cut expires, the FIM would become negative, because changes in fiscal policy would be curtailing consumption growth.

The FIM is closely related to a measure of fiscal stance developed by Federal Reserve Board staff (see Cashin et al. 2018). Their measure is somewhat more detailed and more carefully tracks specific changes in federal fiscal policy, but the overall measure looks quite similar to the FIM.

Data

Most of the data are from the Bureau of Economic Analysis's (BEA) National Income and Product Accounts (NIPA). In the NIPA, government spending is attributed to the level of government that spends the money rather than to the level of government that finances the spending. For example, total expenditures on Medicaid—a program that is jointly financed by states and the federal government (with the federal government paying roughly 60 percent)—are labeled by BEA as state and local government transfers, whereas the federal Medicaid expenditures are recorded as grants to state and local governments.

To better attribute spending to the entity that made the policy decision, we reallocate to the federal government state and local spending that is financed by the federal government. In particular, we use data on the federal share of Medicaid spending to split Medicaid expenditures into federal and state expenditures and to categorize the remainder of federal grants to states (i.e., for purposes other than Medicaid) as federal purchases.[5]

Apart from the NIPA data, we use Congressional Budget Office (CBO) estimates of potential GDP and the natural rate of unemployment to calculate output gaps and unemployment gaps. We also use their estimate of the automatic stabilization associated with federal revenues. We calculate our own automatic stabilizers for state and local taxes as well as federal and state spending.

The Cyclicality of Fiscal Policy

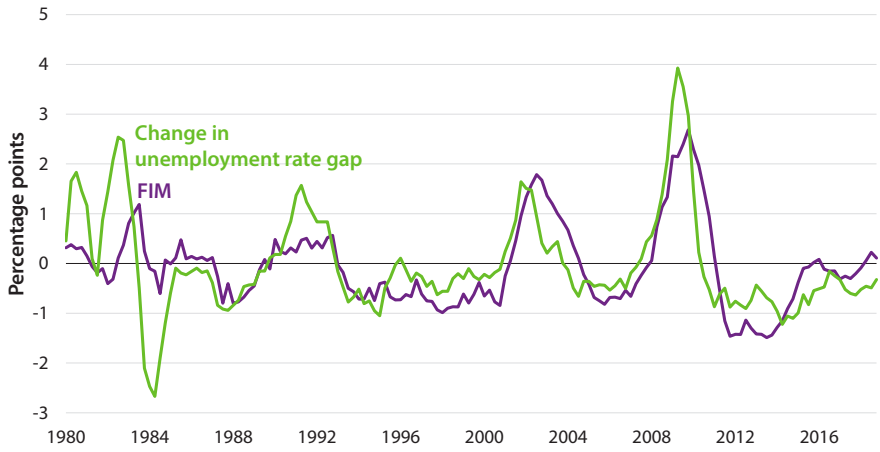
Figure 1 plots the four-quarter moving average of the FIM and the four-quarter change in the unemployment gap (defined as the difference between the actual unemployment rate and CBO's estimate of the natural rate of unemployment). Fiscal policy is clearly countercyclical, with the FIM rising when the unemployment rate increases and falling when it decreases, though sometimes the fiscal policy shifts lag the unemployment rate changes slightly. (Other measures of the business cycle, like the output

gap, also fit, but not quite as well.) Fiscal policy responded quite strongly to changes in the unemployment gap in the Great Recession, boosting GDP growth over four quarters by almost 3 percentage points at its peak, but turned sharply contractionary from 2011–14. Indeed, fiscal policy was more contractionary in those years than it was in any of the preceding 30 years, even though the unemployment gap remained substantial (see figure 2). As we show below, had policy followed the pattern of previous business cycles, fiscal policy would have been closer to neutral from 2011–14.

One question is whether following the fiscal stance of previous business cycles would have still been too contractionary. Because fiscal stimulus responds to changes in the unemployment rate, it diminishes when the economy starts to improve, even if unemployment remains high. While this might seem counterintuitive, it is analogous to how monetary policy responds to a decline in the unemployment gap under a Taylor-type rule and should be interpreted similarly: when the FIM is falling but is still above zero, fiscal policy remains stimulative, but to a lessening degree (Taylor 2000). Thus, the cyclicality of fiscal policy seems reasonable overall. In the recovery from the Great Recession, however, with monetary policy still

FIGURE I.

Fiscal Impact Measure and Change in the Unemployment Rate Gap, 1980–2018



Source: Bureau of Labor Statistics [BLS] 1980–2018; Congressional Budget Office [CBO] 1980–2018; authors' calculations; see online appendix A for more details on FIM.

Note: The Hutchins Center Fiscal Impact Measure (FIM) is a gauge of how the fiscal policies of federal, state, and local governments affect near-term changes in GDP. The unemployment rate gap is the actual unemployment rate minus the CBO's estimate of the natural rate of unemployment. Both series are four-quarter moving averages.

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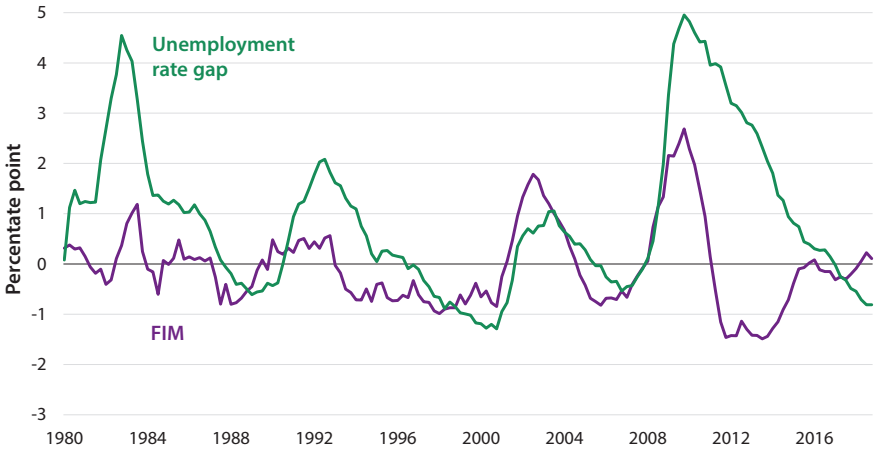
FIGURE 2.

Fiscal Impact Measure and the Unemployment Rate Gap, 1980–2018



Source: BLS 1980–2018; CBO 1980–2018; authors' calculations; see online appendix A for more details on FIM.

Note: The Hutchins Center Fiscal Impact Measure (FIM) is a gauge of how the fiscal policies of federal, state, and local governments affect near-term changes in GDP. It is shown as a four-quarter moving average. The unemployment rate gap is the actual unemployment rate minus the CBO's estimate of the natural rate of unemployment. Both series are four-quarter moving averages.

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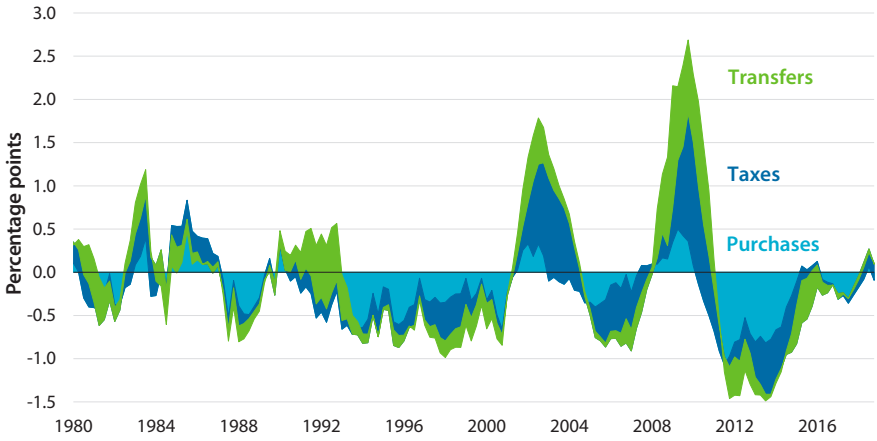
FIGURE 3.

Fiscal Impact Measure: Contributions of Purchases, Taxes, and Transfers, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the four-quarter moving average of each FIM component. Data are for all levels of government.

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constrained by the zero lower bound, keeping fiscal policy stimulative for longer might have been warranted. Certainly, the move to contractionary fiscal policy in 2011–14 impeded the pace of the recovery and was far from optimal.[6]

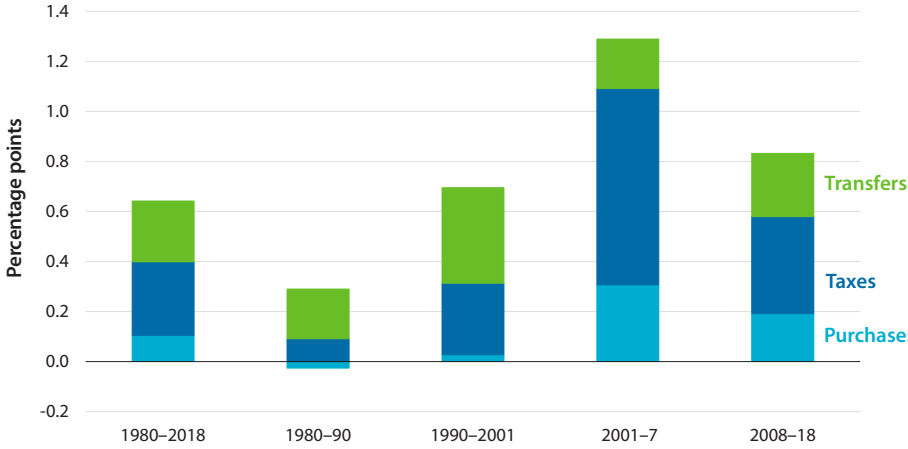
COMPONENTS OF STABILIZATION

Figure 3 decomposes the FIM into its three main components: purchases, taxes, and transfers. Taxes and transfers are about equally countercyclical, and purchases appear to be an important stabilizer as well.

To be more precise about the relationships between FIM components and the business cycle, we run a regression that relates the FIM to the size of the change in the unemployment gap. (The regression results are reported in online appendix table A-2.) We run the regression for the years 1980–2018, and then also split the sample into four periods, using the labor market cycles defined by Aaronson et al. (2019). The FIM is defined as the contribution of fiscal policy to GDP growth, so if taxes decline when the unemployment rate rises, thereby boosting consumption, the FIM will show up as positive. Thus, a positive coefficient on the unemployment gap is countercyclical and stabilizing, whereas a negative coefficient is procyclical and destabilizing.

FIGURE 4.

Fiscal Impact Measure Response to a Higher Unemployment Rate Gap, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the regression coefficients of each FIM component regressed on the four-quarter change in the unemployment gap from 1980 to 2018. Coefficients are for a one-percentage-point change in the unemployment rate gap.

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Figure 4 plots the responsiveness of each component of the FIM to a 1-percentage-point increase in the four-quarter change in the unemployment gap over different time horizons. Over the entire 1980–2018 period, a 1-percentage-point increase in the unemployment gap over the previous four quarters raises the FIM by 0.6 percentage points, meaning that quarterly real GDP growth is 0.6 percentage points higher (at an annual rate) than it would otherwise be.

As expected, taxes are the most-important fiscal stabilizer, but transfers (e.g., unemployment insurance and Medicaid) and even purchases are quite responsive as well.

One way to put these coefficients into context is to consider the rule of thumb coined by Arthur Okun known as Okun's law. Okun's law suggests that lowering the unemployment rate 1 percentage point requires GDP growth 2 percentage points above trend. Thus, these fiscal coefficients—ranging from 0.3 to 1.3—suggest policy was providing between 15 percent and 65 percent of the GDP growth needed to offset the increases in unemployment.

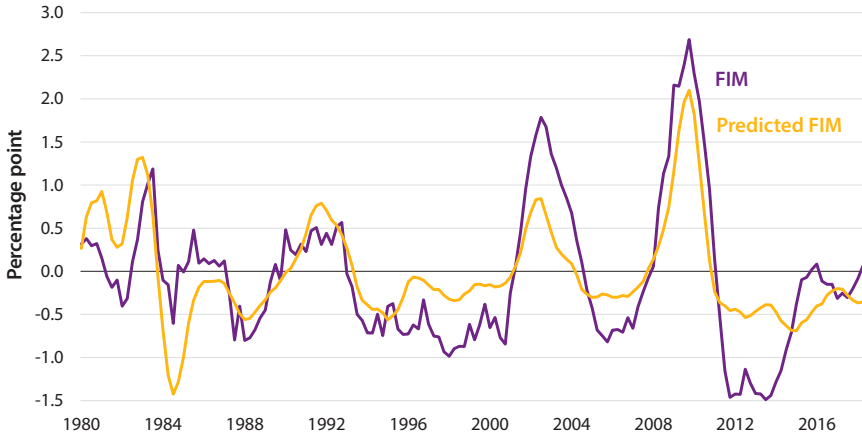
The relatively small effect of fiscal policy during the 1980–90 period may be surprising, given the 1981 tax cuts and Reagan-era defense buildup, which seemed to fortuitously coincide with the 1981–82 recession. Indeed, Follette and Lutz (2013) find that enacted legislation around the time of the 1981 recession did have sizable positive effects on aggregate demand. But, high inflation during the early 1980s pushed taxpayers into higher tax brackets (the tax system was not indexed for inflation until 1985), effectively raising tax rates during the 1980 recession, and partially offsetting the effects of the 1981 tax cuts during the 1981–82 recession (CBO 1986). Furthermore, many of the effects of the 1981 tax cuts appeared in later years, when the economy was already recovering.

FISCAL POLICY IN THE RECOVERY FROM THE GREAT RECESSION

As noted above, fiscal policy became unusually contractionary in the 2011–14 period, a development that was widely viewed as holding back the recovery. Had the policies reflected in the FIM been as responsive to unemployment in that period as they had been from 1980–2010, fiscal policy would have been much less contractionary. Figure 5 compares the actual FIM (purple line) with the FIM that would be predicted using a regression of the FIM on the change of the unemployment rate from 1980–2010 (yellow line). Had policy reacted after 2010 as it did before, the FIM would have hovered near zero in the 2011–14 period.

FIGURE 5.

Actual and Predicted Fiscal Impact Measure, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: This graph shows the four-quarter moving average of the FIM and the four-quarter moving average of the predicted FIM, using a regression of the FIM on the four-quarter change in the unemployment gap from 1980 through 2010 to predict the FIM from 2011 to 2018.

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DISCRETIONARY OR AUTOMATIC?

Another way to split these data is according to whether the policy changes are automatic or discretionary. Automatic stabilizers are those that occur without legislative changes. The tax system is an automatic stabilizer because taxes fall when incomes fall—both because taxes are calculated as a share of income and because the tax system (particularly the federal tax system) is progressive, meaning that when people's incomes fall, they fall into a lower tax bracket and thus face a lower tax rate.

We use CBO's estimates of the automatic stabilizers for federal taxes, which CBO defines as the difference between actual taxes and the taxes that would have been collected had the economy been operating at its potential given the existing tax system.[7] For state and local taxes, we calculate the automatic stabilizers as the difference between actual and potential GDP multiplied by the state and local tax rate, which we assume is equal to the ratio of tax collections to GDP in the previous quarter.[8]

Some transfers also move automatically with the business cycle. In particular, when the unemployment rate increases, more people are unemployed and so unemployment insurance (UI) spending increases. Similarly, when incomes decline, more people become eligible for Medicaid, boosting Medicaid expenditures (unless those expenditures are offset

by changes to Medicaid rules). To calculate the automatic stabilizers for transfers, we follow a version of the method in CBO (2015).[9]

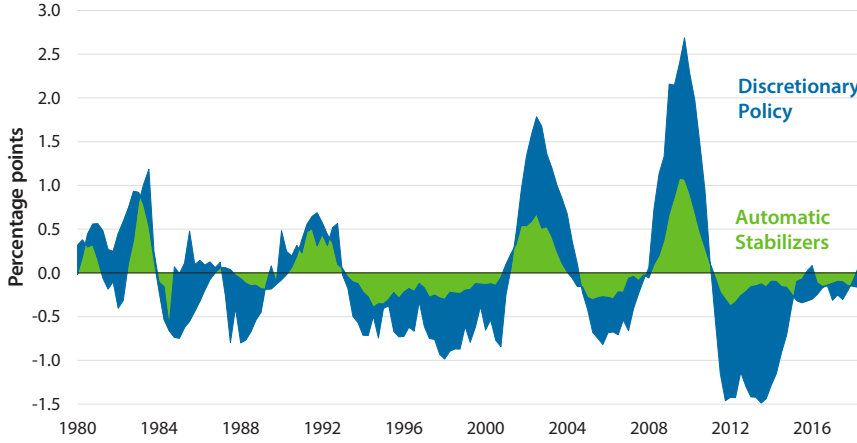
Other cyclical changes in taxes and transfers are discretionary. For example, Congress sometimes enacts tax cuts to counter recessions, as it did during the Great Recession, whereas states and localities might boost certain taxes to help balance their budgets. Basic unemployment benefits are automatic, but most extended benefits provided in recent years (benefits that allow people to stay on UI for longer than the standard 26 weeks) require legislation.[10] Stimulus packages enacted by the federal government may include increased infrastructure spending—either directly or via increases in transfers to state governments. At the same time and due to their balanced budget requirements, state and local governments often cut purchases during downturns to reduce their deficits.[11]

Many changes in tax and spending are acyclical or at least are not intended to be cyclical. Examples are changes in Social Security and Medicare spending that occur over time because of increases in health spending and population aging, boosts in taxes that are the result of a stock market boom, and defense buildups in response to increased threats to national security.[12] These types of spending increases are unlikely to be responsive to changes in the unemployment gap and can reduce the measured countercyclicality of fiscal policy. Note that, in this paper, we call all these changes discretionary, even though some of them—like changes in tax revenues fueled by increases in the stock market—occur without any legislative changes.[13]

Figure 6 decomposes the FIM into its automatic and discretionary portions, where the term discretionary encompasses all changes in the FIM other than the automatic stabilizers. Figure 7 presents the results from the regression of each component on the four-quarter change in the unemployment gap. Automatic stabilizers (the green portions of the bars in figure 7) account for about one-half of the total stabilization over the entire period—with automatic changes in taxes being somewhat more important than automatic changes in transfers. But about one-half of the stabilization provided by fiscal policy has come from discretionary changes, with discretionary changes in purchases, taxes, and transfers all contributing. These discretionary changes have been particularly large since 2001 and account for most of the difference between the responsiveness of fiscal policy over time. Thus, even while some economists might have dismissed the value of countercyclical discretionary fiscal policy, governments continued enacting it.

FIGURE 6.

Fiscal Impact Measure: Contributions of Automatic and Discretionary Policy, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the four-quarter moving average of each FIM component.

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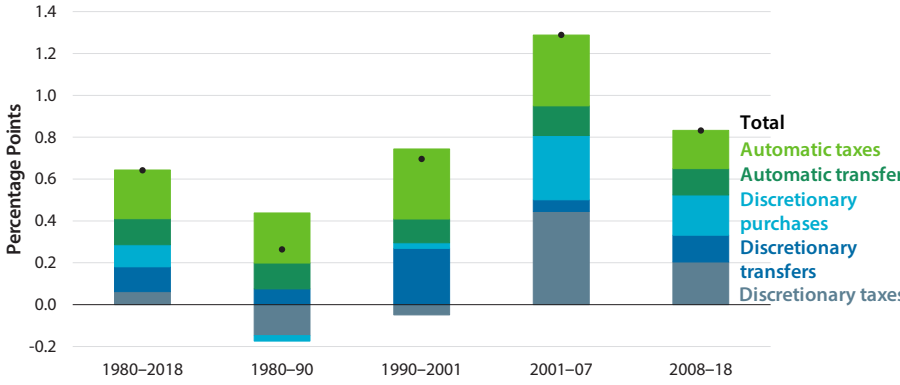
FIGURE 7.

Automatic and Discretionary Policy Responses to a Higher Unemployment Rate Gap, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the regression coefficients of each FIM component regressed on the four-quarter change in the unemployment gap using data from 1980 to 2018. Automatic policies are shown in green and discretionary policies are shown in blue.

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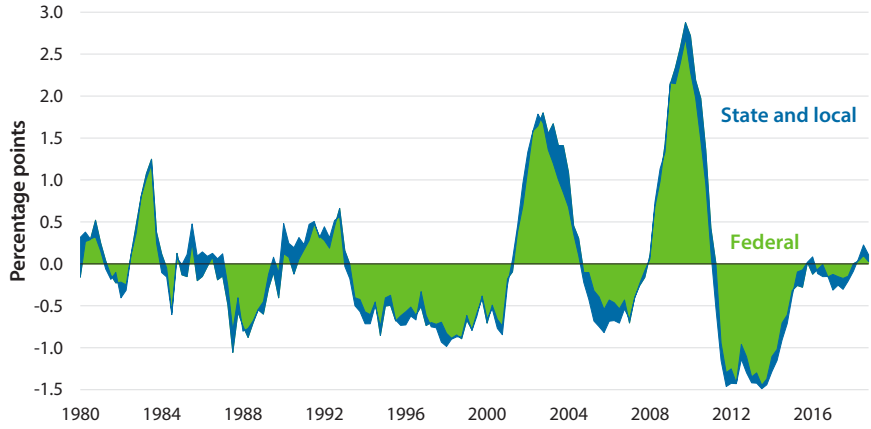
FIGURE 8.

Fiscal Impact Measure: Contributions of Federal and State and Local Governments, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the four-quarter moving average of each FIM component.

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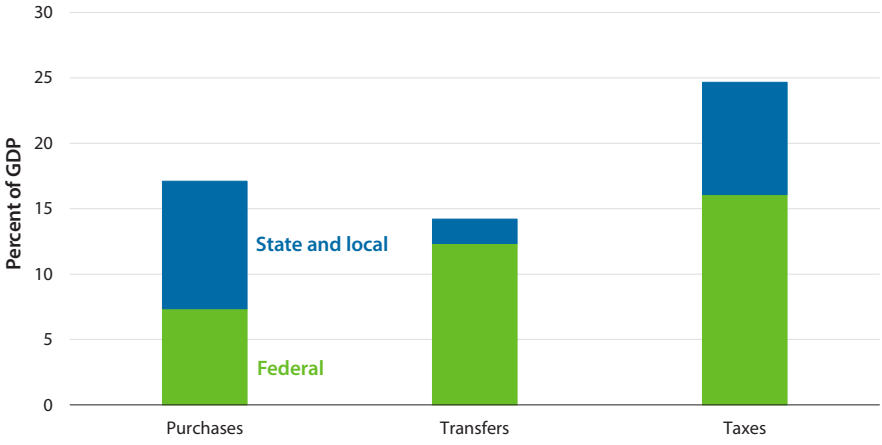
FIGURE 9.

Components of Fiscal Policy, by Level of Government, 1980–2018



Source: Bureau of Economic Advisers (BEA) 2018; authors' calculations.

Note: Data show the different components of fiscal policy, broken out by level of government, as a share of GDP.

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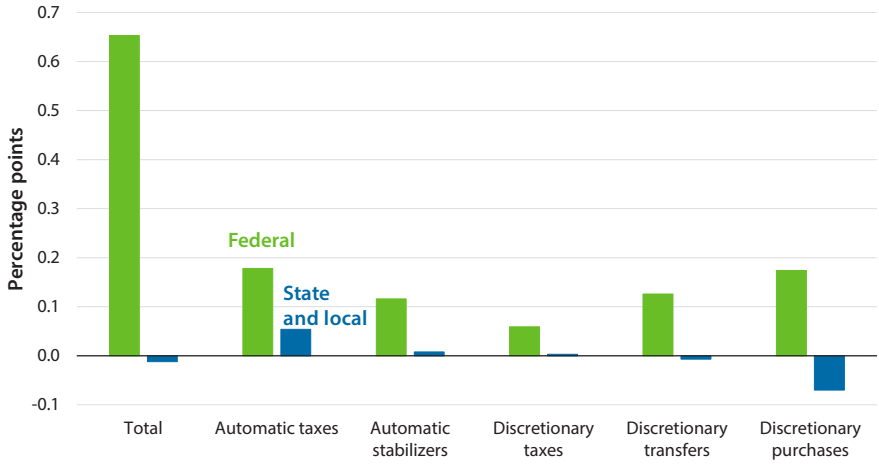
FEDERAL OR STATE AND LOCAL?

Figure 8 shows that most of the impact of fiscal policy on the macroeconomy reflects federal policy. This is unsurprising for several reasons. First, as shown in figure 9, the federal government represents a larger share of the economy. Federal tax collections are about double those of state and local governments, and most transfers are federal (recall that we have reallocated the federal portion of Medicaid to the federal government), although Social Security and Medicare—the two largest transfers—are not countercyclical. The federal government represents just under half of purchases. Thus, the scope for stabilization for fiscal policy is larger at the federal level than at the state and local levels.

Second, states and localities generally operate under balanced budget requirements, meaning that any reductions in taxes (that stabilize the economy) are generally offset by reductions in spending (that destabilize the economy). Because changes in purchases affect the economy one for one—whereas changes in taxes and transfers have smaller and more-gradual effects on consumption—spending cuts that perfectly balance tax revenue shortfalls would have a net negative effect on economic growth. But balanced budget requirements do not preclude all stabilization because they do not apply to capital investments, and because states have ways to

FIGURE 10.

Responsiveness of Fiscal Policies to a Higher Unemployment Rate Gap, by Level of Government, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the regression coefficients of each FIM component regressed on the four-quarter change in the unemployment gap from 1980 to 2018.

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meet them other than through cutting spending (e.g., by depleting rainy-day funds or cutting back on contributions to employee pension funds).

Figure 10 reports the results of the regression of various federal and state and local components of the FIM on the four-quarter change in the unemployment gap for the whole 1980–2018 period. These regressions indicate that not only is the federal government a more-important player in the macroeconomy, but it is also a more-stabilizing force. Automatic stabilizers make both federal—and state and local—fiscal policy more countercyclical, but the federal government reinforces these effects by also enacting legislation that reduces taxes, increases transfers, and increases purchases during downturns. In contrast, state and local governments, reflecting their need to balance their budgets, offset the automatic declines in revenues by cutting spending.

As shown in figures 11 and 12, these patterns are relatively consistent over the various periods. The conclusion that state and local tax policy is only mildly procyclical might appear at odds with the conventional wisdom that state and local government policy was meaningfully holding back the recovery during the Great Recession (Furman, forthcoming). One reason may be that the combined state and local policy was more procyclical in 2008 than in any other business cycle. It may also be that observers generally focus on the purchasing behavior of state and local governments rather than on the combination of tax and spending policy, which (as detailed above) is less procyclical. Finally, it could be that the state cutbacks were large in 2011–16 when the unemployment rate was falling (and hence do not look procyclical by the measure used), but the economy was still weak.[14] If state and local governments did not cut spending or raise taxes during recessions, fiscal policy would be more powerful in combatting recessions, but, as shown in figure 10, the effect would not be particularly large.

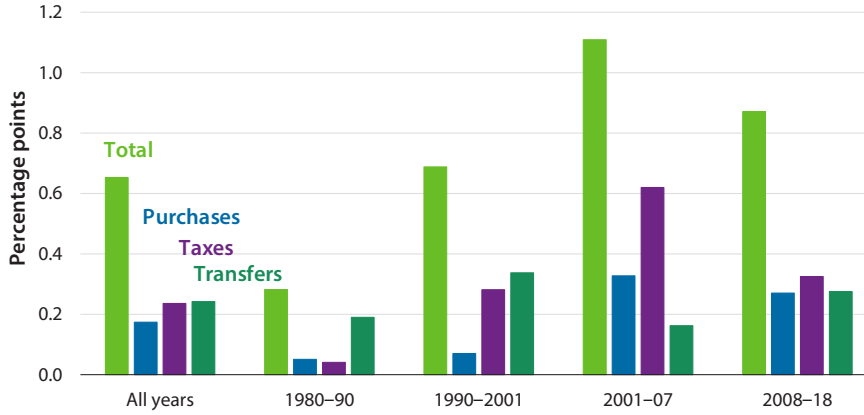
Online appendix B explores the timing of the fiscal responses of federal and state and local governments. It shows that for a given unemployment gap shock, cuts to state and local spending offsets about 25 percent of the total stimulus provided by the federal government during a recession. Moreover, although federal stimulus reaches its peak after about two years, state and local spending cuts continue over the course of almost five years after an unemployment gap shock.

Conclusion

Fiscal policy has been strongly countercyclical over the past four decades, with the degree of cyclicality somewhat stronger in the past 20 years than the previous 20. Almost all the stabilization is accounted for by the

FIGURE I1.

Responsiveness of Federal Fiscal Policies to a Higher Unemployment Rate Gap, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the regression coefficients of each FIM component regressed on the four-quarter change in the unemployment gap from 1980 to 2018.

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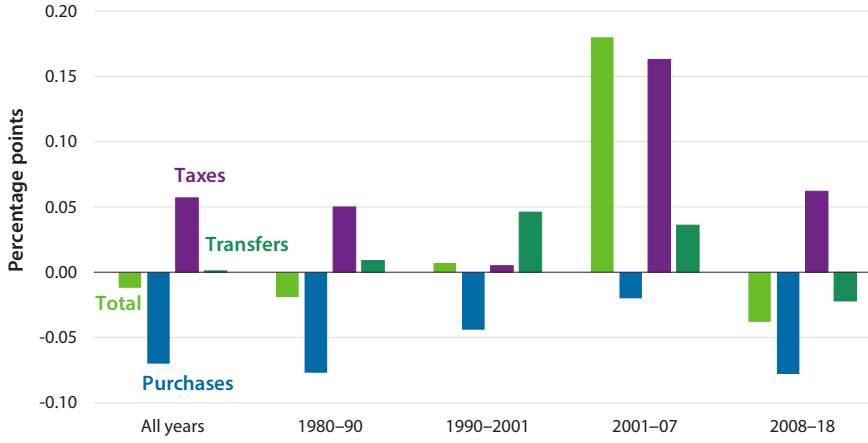
FIGURE I2.

State and Local Responsiveness to a Higher Unemployment Rate Gap, 1980–2018



Source: Authors' calculations; see online appendix A for more details on FIM.

Note: Data show the regression coefficients of each FIM component regressed on the four-quarter change in the unemployment gap from 1980 to 2018.

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federal government—especially when spending financed by the federal government but implemented by states and localities is counted as federal. The automatic stabilizers and discretionary fiscal policy are about equally important to macroeconomic stabilization. During economic downturns, taxes fall and transfers increase both automatically and in response to legislation, and the federal government also increases purchases. State fiscal policy is very mildly procyclical, and declines in state and local purchases more than offset stimulus provided by state automatic stabilizers.

Acknowledgments

We thank Heather Boushey, Glenn Follette, Byron Lutz, Ryan Nunn, Jay Shambaugh, and David Wessel for helpful comments. All errors are, of course, our own.

Endnotes

1. See Blinder (2016) for discussion of the history of thought on the use of fiscal policy.
2. The Hutchins Center publishes its latest reading of the FIM with every GDP release (see Belz and Sheiner 2019).
3. The assumed total fiscal multipliers are 1.0 for government purchases, 0.9 for government transfers, 0.6 for individual taxes, and 0.4 for corporate taxes. See online appendix A for more details.
4. Appendices can be found at the end of the online version of this chapter.
5. The rest of federal grants are mainly for education and transportation, so are likely to be purchases rather than transfers. Data on the federal share of Medicaid are from the National Health Expenditure Accounts released by the Center for Medicare & Medicaid Services.
6. See Furman (2016) for a discussion of the need for sustained fiscal policy following large recessions. Cashin et al. (2018) also discuss the unusual degree of contraction in these years.
7. CBO uses cross-sectional data to estimate how much taxes would increase were everyone's income to rise by 1 percentage point, which allows CBO to isolate the automatic part of revenue changes from changes that occur because of legislation (Russek and Kowalewski 2015). CBO's most recent estimates can be found at CBO (2019).
8. As noted by Sheiner (2019), state income taxes are not very progressive, and most state and local sales and property taxes are also subject to a flat rate, so the assumption of a flat tax rate seems fine. But if the tax base does not move one for one with GDP—for example, if property values do not fall much during recessions—this calculation will overstate the effect of state automatic stabilizers.
9. CBO (2015) appears to regress federal Medicaid spending against measures of the business cycle, without accounting for the fact that Congress has in the past increased the federal share of Medicaid spending during recessions, which will make Medicaid appear more countercyclical than it is. We regress total Medicaid spending, including both state and federal, to avoid this problem.
10. Both BEA and CBO count all UI benefits as federal, although the UI program is really a joint federal-state program, with the states having discretion to set the rules and financing most of the regular benefit payments, either through tax proceeds or through loans from the federal government. We follow their lead in assigning all benefits to the federal government; assigning some benefits to state governments would reduce the procyclicality of state and local fiscal policy.
11. Furman (forthcoming) has a comprehensive discussion of the changes in fiscal policy that occurred during the Great Recession.
12. Follette and Lutz (2013) decompose discretionary policies into those intended to stimulate the economy and those enacted for other reasons.
13. The fiscal stance measured in Cashin et al. (2018) is decomposed into three pieces: discretionary

policy (policy that requires legislation), automatic stabilizers, and a residual (everything else). They find that their residual category is slightly countercyclical, which could mean that including it with discretionary, as we do, implies that we are overstating the countercyclicality of fiscal policy a bit. But even that is not clear. It may be that Congress is more likely to allow increases in spending or reductions in taxes to show through to the deficit when the economy is weak, but not when the economy is strong, meaning that residual cyclicality is viewed appropriately as countercyclical fiscal policy.

14. It is worth noting that, while the one-year change in the unemployment gap fits most of the data well, adding an additional lag (the one-year change lagged four quarters) to the equations involving state FIM improves the fit and increases the procyclicality of state and local policy. This suggests that the chain of events between an increase in the unemployment rate and a reduction in state and local spending takes longer. When recessions are short and the economy bounces back quickly, this lag makes state and local fiscal policy less destabilizing. When recessions are long, though, the lag acts to impede the recovery.

References

Aaronson, Stephanie R., Mary C. Daly, William Wascher, and David W. Wilcox. 2019. "Okun Revisited: Who Benefits Most from a Strong Economy?" Conference Draft, *Brookings Papers on Economic Activity,* Brookings Institution, Washington, DC.

Belz, Sage, and Louise Sheiner. 2019, April 5. "Hutchins Center Fiscal Impact Measure." The Brookings Institution, Washington, DC.

Blinder, Alan S. 2016. "Fiscal Policy Reconsidered." Policy Proposal 2016-05, The Hamilton Project, Brookings Institution, Washington, DC.

Bureau of Economic Analysis (BEA). 2018. "National Income and Product Accounts (NIPA) Tables." Bureau of Economic Analysis, U.S. Department of Commerce, Suitland, MD.

Bureau of Labor Statistics (BLS). 1980–2018. "Unemployment Level (Seas)." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

Cashin, David, Jamie Lenney, Byron Lutz, and William Peterman. 2018. "Fiscal Policy and Aggregate Demand in the USA Before, During, and Following the Great Recession." *International Tax and Public Finance* 25 (6).

Congressional Budget Office (CBO). 1980–2018. "Natural Rate of Unemployment." Congressional Budget Office, Washington, DC.

———. 1986. "Effects of the 1981 Tax Act on the Distribution of Income and Taxes Paid." Staff Working Paper, Congressional Budget Office, Washington, DC.

———. 2015. "How CBO Estimates Automatic Stabilizers." Working Paper 2015-07, Congressional Budget Office, Washington, DC.

———. 2019. "Data that Supplement CBO's January 2019 Report." Congressional Budget Office, Washington, DC.

Elmendorf, Douglas, and Jason Furman. 2008. "If, When, How: A Primer on Fiscal Stimulus." Strategy Paper, The Hamilton Project, Brookings Institution, Washington, DC.

Follette, Glenn, and Byron F. Lutz. 2013. *Fiscal Multipliers: How Much Bang for the Buck?* Rome, Italy: Banca d'Italia.

Furman, Jason. 2016, October 5. "The New View of Fiscal Policy and Its Application." Remarks prepared for delivery, Global Implications of Europe's Redesign, New York, NY.

———. Forthcoming. "The Fiscal Response to the Great Recession: Steps Taken, Paths Rejected, and Lessons for Next Time." In *Responding to the Global Financial Crisis, What We Did and Why We Did It,* edited by Nellie Liang. Yale University Press and the Hutchins Center on Fiscal & Monetary Policy at Brookings, Washington, DC.

Rachel, Łukasz, and Lawrence H. Summers. 2019. "On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation." Conference Draft, *Brookings Papers on Economic Activity,* Brookings Institution, Washington, DC.

Russek, Frank, and Kim Kowalewski. 2015. "How CBO Estimates Automatic Stabilizers." Working Paper 2015-07, Congressional Budget Office, Washington, DC.

Sheiner, Louise. 2019. "Effects of Low Productivity Growth on Fiscal Sustainability in the United States." In *Facing up to Low Productivity Growth,* edited by Ada Posen and Jeromin Zettelmeyer, 87-115. Washington, DC: Peterson Institute for International Economics.

Stock, James H., and Mark W. Watson. 2001. "Vector Autoregressions." *Journal of Economic Perspectives* 15 (4): 101–15.

Taylor, John. 2000. "Reassessing Discretionary Fiscal Policy." *Journal of Economic Perspectives* 14 (3): 21–36.

Direct Stimulus Payments to Individuals

Claudia Sahm, *Board of Governors of the Federal Reserve System*

Abstract

This chapter proposes a direct payment to individuals that would automatically be paid out early in a recession and then continue annually when the recession is severe. Research shows that stimulus payments that were broadly disbursed on an ad hoc (or discretionary) basis in the 2001 and 2008–9 recessions raised consumer spending and helped counteract weak demand. Making the payments automatic by tying their disbursement to recent changes in the unemployment rate would ensure that the stimulus reaches the economy as quickly as possible. A rapid, vigorous response to the next recession in the form of direct payments to individuals would help limit employment losses and the economic damage from the recession.

Introduction

Direct payments to individuals are an effective way to stimulate spending and making these payments automatic would guarantee that stimulus arrives early in a recession. These two arguments are supported by a growing body of high-quality research on the effects of stimulus to individuals in the past two recessions, in 2001 and 2008–9. This chapter proposes establishing direct payments to individuals as an automatic stabilizer. The lump-sum annual payments would be made to individuals, regardless of their income level, when the national unemployment rate rises by at least 0.50 percentage points. The amount of the individual payments would be set such that total payments equaled 0.7 percent of GDP, or 1 percent of personal consumption expenditures (PCE). Payments in subsequent years would be made only in the case of severe, prolonged recessions that lead to cumulative unemployment rate increases of at least 2.0 percentage points. Automatic stimulus payments to individuals would provide a rapid, frontline defense early in a recession and a commitment to sustained support in a severe recession.

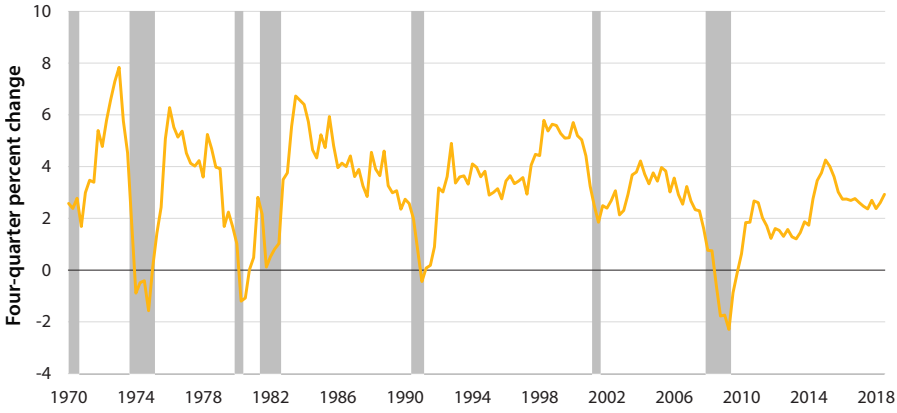
Growth in consumer expenditures slows sharply during recessions—and in many cases turns negative (figure 1). Consumer expenditures make up about 70 percent of aggregate demand; a pullback in spending by consumers can lead to employment losses and reduced production. Consumers are therefore a key focus of efforts to stabilize the economy, and policymakers have often used stimulus payments to individuals (also referred to as tax rebates) and temporary reductions in taxes to support household spending during recessions.

In fact, during the Great Recession and the recovery, individuals received more than $420 billion in broad-based stimulus from the federal government through three large, consecutive policies: a stimulus payment in 2008, a tax credit in 2009 and 2010 (the Making Work Pay tax credit), and a payroll tax reduction in 2011 and 2012. These programs were broad based in the sense that they applied to many households with few qualifications, such as having a minimum amount of income. In each case, the administration and Congress crafted the specifics of the stimulus program in real time, along with other fiscal policies, including targeted discretionary changes in taxes and transfers to support individuals, businesses, and state and local governments. The range of stimulus programs in the Great Recession has supported a rich body of research on the efficacy of various tools.

Automatic stabilizers are already an important feature of fiscal stabilization policy, two of the most notable examples being progressive income taxation

FIGURE 1.

Real Personal Consumption Expenditures, 1970–2018



Source: Bureau of Economic Analysis (BEA) 1969–2018; author's calculations.

Note: Shaded areas denote recessions.

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and unemployment insurance (UI). Incomes tend to decline in recessions, but given that marginal income tax rates are lower at lower income levels, taxes fall more than income does. The disproportionate decline in income tax burden helps to offset some of the loss in disposable income. The UI system, by contrast, is a more narrowly targeted automatic stabilizer that supports consumption for eligible workers who lose their jobs. In a recession, as the unemployed rise in numbers so do payments from UI. In both cases, these automatic stabilizers (and others including the Supplemental Nutrition Assistance Program [SNAP], formerly the Food Stamp Program) are often paired with additional discretionary measures, such as temporary tax cuts or temporary extensions of UI benefits.

The choice between automatic and discretionary fiscal policy depends on several factors. First, we want to do only what we know works, and the evidence shows that direct, lump-sum payments are an effective fiscal tool. Adding a new automatic stabilizer would be a commitment to increase government support to households in a recession. Improved stabilization—such as shortening the length or severity of a downturn—would limit the economic costs of a recession. Even so, stabilizers are unlikely to pay for themselves. Sufficient fiscal space for such policies could require either higher taxes or lower transfers outside of recessions. In this case, one could view the budget for the automatic stimulus payments as a rainy-day fund for payments to individuals that would be administered by the government. The fund would accrue savings in good times and make payments in bad times. Given the thin financial buffers of many households, the direct stimulus payments would increase households' resiliency during a recession.

Making the stimulus payments to individuals fully automatic could have some drawbacks. One concern is that it might give the incorrect appearance that policymakers are inactive in the face of recession. One response to this concern would be to implement the stimulus payments in two legislative phases. First, legislation prior to a recession would determine the features of prospective stimulus payments, such as size and targeting, and would allow the preparation of administrative systems. Then when macroeconomic conditions warrant (according to a prespecified economic trigger), Congress would vote on whether to enact the stimulus payments. The precommitment to the form and delivery of payments would increase the speed with which stimulus can be distributed but still allow Congress to control the exact timing. The development of macroeconomic triggers and schedules for additional payments would provide additional guidance to policymakers, even if the implementation is not fully automatic.

Policymakers would only want to make automatic the policies that have proven to be cost effective in the past. In turn, the effectiveness of stimulus payments in a recession largely depends on the spending response of households. A temporary reduction in taxes or increase in transfers, if either action boosts spending, can mitigate the job losses, underutilization of productive resources, and widespread pessimism in recessions. Nonetheless, simple economic models with forward-looking consumers and well-functioning financial markets tend to predict a small increase in spending from a temporary boost to income. In fact, some models even predict that individuals would save all of any rebate (yielding what is known as Ricardian equivalence), under the assumption that people would have to repay the debt-financed stimulus with higher taxes in the future. Empirical evidence (summarized below) across numerous research studies of the Great Recession strongly suggests that at least some forms of stimulus to households can measurably boost spending in the near term.

The Challenge

EVIDENCE ON THE EFFECTS OF DIRECT STIMULUS PAYMENTS PROVIDED TO INDIVIDUALS

Mounting evidence in the past decade finds that broadly distributed payments to individuals increase spending during a recession and help stabilize the economy. This new research has overcome a methodological challenge: previously, a challenge in showing the effectiveness of these direct payments was the difficulty in distinguishing the positive effects of the direct payments from the negative effects of the recession. When these stimulus payments are disbursed, the overall economy is weakening and so the trajectory of total spending can make the stimulus look ineffectual. In other words, a simple comparison of consumer spending before and after a stimulus payment to individuals is not enough to determine whether stimulus is effective.

A novel feature in the delivery of stimulus payments in 2001 and 2008 provided an opportunity to tease apart and separately identify the effect of the payments. The resulting studies have bolstered the view that such payments are an effective and fast-acting stimulus. Due to administrative constraints on the number of payments that could be sent out at one time, the timing of individuals' payment in 2001 and 2008 was determined by the last two digits of their Social Security number. This random variation in the timing provided a way to measure spending before and after a stimulus payment under the *same* macroeconomic conditions. Comparing the spending of individuals who have (randomly) already received their payment with the spending of those who will (randomly) receive it in a

BOX 1.

Stimulus Payments to Individuals During the Great Recession

The mix of discretionary stimulus to individuals in the Great Recession and subsequent research on the effects has provided several lessons on the best ways to structure stimulus payments. Early in the recession, the Economic Stimulus Act of 2008 enacted on February 13, 2008, included one-time recovery rebates to individuals. Most single tax filers received a $600 payment while couples that were married and filed jointly received $1,200 at some point between May and July of 2008. Filers received an additional $300 for each qualifying child. The rebates were phased out for high-income earners, while individuals with nontaxable Social Security or pension income were eligible for smaller lump-sum payments.

After the financial crisis and recession intensified in the second half of 2008, a large array of fiscal stimulus policies was used. On February 17, 2009, the Making Work Pay tax credit, a broad-based, two-year tax cut for individuals, was signed into law as one part of the expansive American Recovery and Reinvestment Act of 2009 (ARRA). The Making Work Pay tax credit was implemented via lowering withholdings, so the annual tax savings of $400 for singles and $800 for married couples was spread out in smaller amounts across pay periods. As the Making Work Pay tax credit was set to expire, a temporary 2-percentage-point cut in the payroll tax for 2011 was signed into law on December 17, 2010, in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010. A year later, on December 23, 2011, The Temporary Payroll Tax Cut Continuation Act of 2011 extended the payroll tax cut for the first two months of 2012, and then on February 22, 2012, the Middle Class Tax Relief and Job Creation Act of 2012 extended the payroll tax cut through the end of 2012.

Notably, this last stimulus policy required three legislative actions, underscoring how precommitment could simplify the process and reduce uncertainty for households. As with the tax credits in 2009 and 2010, the reduction in payroll taxes was spread throughout the year in the form of larger paychecks. One difference is that this last

stimulus was proportional to income (up to the taxable maximum), whereas the earlier stimulus to individuals were closer to a lump-sum payment. The temporary payroll tax cut was allowed to expire at the end of 2012. Across these three stimulus programs more than $420 billion in additional income was sent to individuals from 2008 to 2012.

matter of weeks helps to isolate the effect on spending of having (versus not having) the stimulus payment.

Studies of the 2001 and 2008–9 recessions have yielded stimulus spending estimates that are uniformly positive. Johnson, Parker, and Souleles (2006) analyzed Consumer Expenditure Survey data in their study of the 2001 tax rebates. They used the random variation in timing of payments to estimate that, on average, households spent 20 to 40 percent of their rebates on nondurable goods in the three-month period when the rebate was distributed. Within the first six months, individuals spent nearly two thirds of the rebate on nondurable goods. In their follow-up study of the 2008 rebate, Parker et al. (2013) estimate that 12 to 30 percent of the rebate was spent on nondurables within three months of receipt. Including durables spending, 50 to 90 percent of the rebate was spent over three months. With the same data, Misra and Surico (2014) estimate that 40 to 50 percent of the households who received a payment in 2001 or 2008 did not change their spending, but about 20 percent spent half or more of their stimulus. Other analyses using different data sources and randomized timing also find that the 2001 and 2008 tax rebates quickly boosted consumer spending. Broda and Parker (2014) use transactions data in 2008 for a narrower set of consumer goods and find a 10 percent increase in spending in the week of receipt. Using credit card data, Agarwal, Liu, and Souleles (2007) find that initially the 2001 rebate led to a reduction in debt but then credit card spending rose by about 40 percent of the rebate amount within nine months. Altogether, these studies find a sizeable boost to spending from the payments.

After making the case for sending income to many households in a recession, the next challenge is structuring the payments to most effectively increase demand. A key finding that draws on results in multiple research studies is that larger one-time payments lead to more spending, more quickly, than payments that are smaller or more spread out. The composition of spending induced by the payments in 2001 and 2008 is one piece of the explanation. Parker et al. (2013) find that the larger payments in 2008 (almost twice the size of the payments in 2001) led to a large increase in durable spending

within three months of receipt. In 2001 most of the spending response came from nondurables and occurred over six months. Similarly, Misra and Surico (2014) find that some people increased their durable purchases by more than the amount of their rebate, for example by using the stimulus to make a down payment on a motor vehicle.

Another source of evidence in favor of large one-time payments comes from a method developed by Shapiro and Slemrod (2003a, 2003b, 2009) that asks individuals directly in surveys whether they planned to "mostly spend," "mostly save," or "mostly pay off debt" with the stimulus. With the one-time payments in 2001 and 2008, they found that about 20 percent of adults said that they had "mostly spent" the rebates.[1] When this method was applied to the Making Work Pay tax credit in 2009–10, the spending response was more muted. Sahm, Shapiro, and Slemrod (2012) find that the smaller, repeated boost to income from lower tax withholding led to less additional spending than the one-time payments. The share of people who planned to "mostly spend" the lower withholding from Making Work Pay was about two-thirds the share who planned to spend the tax rebate. The structure of the stimulus payments—not the deterioration in macroeconomic conditions between the spring of 2008 and the spring of 2009—appears to have dampened the spending response. In both years retirees received a small, lump-sum payment, and in both years their self-reported spending rates were similar. In addition, among non-retirees a hypothetical one-time payment elicited a spending rate higher than the withholding change (similar to the effect observed for the 2008 tax rebate). Similarly, Sahm, Shapiro, and Slemrod (2015) find a similarly small spending response to the payroll tax cut.[2]

The evident lack of public awareness of the more gradual stimulus like the Making Work Pay tax credit—as documented in Sahm, Shapiro, and Slemrod (2012)—raises some additional questions. In particular, one role of economic stabilization policy is to assuage the negative views on the economy. Pessimism and uncertainty could lead households to pull back on spending and instead save as a precaution. Durables spending, which can be more easily delayed than nondurable necessities, is particularly sensitive to precautionary savings motives. A stimulus payment—even disbursed annually—is not large enough to make up for a job loss but it could temper the need to build up extra savings as a precaution. Stimulus that is not seen or recognized by individuals is unlikely to affect their sentiment and tendency to engage in precautionary saving. The direct boost to spending is the key criterion for efficacy of stimulus payments, but the saliency (or sentiment) effects are also worth considering.

RELEVANT EVIDENCE FROM OTHER CONSUMPTION RESEARCH

The finding that additional income boosts spending on receipt is confirmed by other research, not specifically related to stimulus payments or discretionary tax cuts. Moreover, the initial spending response does not appear to depend on the additional income being a surprise to households (as has been the case with stimulus payments in the past). Simple, forward-looking economic models predict an increase in spending only if the temporary increase in income is unexpected. One concern with making stimulus payments automatic is that they would be less of a surprise to households than discretionary stimulus payments. Yet, research shows that additional income will often generate additional spending, even if individuals anticipate the income and it is a regular, large payment, such as the annual Alaska Fund payments (Kueng 2018) or the Earned Income Tax Credit (Aladangady et al. 2018). Empirically, spending is tied to the receipt of the income, a relationship that does not appear to differ much across predictable and unpredictable income.

Research findings are mixed on the benefits of targeting stimulus to low-income individuals. A common—but not universal—finding is that households with low liquid assets relative to their income tend to spend more (and more quickly) out of additional income than those households with ample liquidity. Thus, as argued by Kaplan and Violante (2014), even high-income households with illiquid assets, such as housing wealth or retirement savings accounts, would spend out of stimulus income. Targeting current low-income or low-wealth households may not identify the households most likely to spend the stimulus, which could include some wealthy households.[3] However, it would be difficult to target stimulus payments to individuals with low liquidity, since the government does not readily have information about households' assets.

The Proposal

This section lays out the case for direct stimulus payments to individuals to become part of our system of automatic stabilizers, building on the evidence in the previous sections that additional income translates quickly into additional spending. I discuss several economic considerations that militate in favor of automatic stimulus payments. I then propose a specific policy to deliver automatic fiscal stimulus through direct payments to individuals.

ECONOMIC CONSIDERATIONS RELEVANT TO AUTOMATIC PAYMENTS

There are three reasons why I argue that direct payments should be made into an automatic stabilizer. First, automatic stimulus payments would

provide a policy precommitment to broadly support aggregate demand in a recession. Second, analysis and deliberation over the size, structure, and funding of stimulus payments, as well as the development of administrative procedures to disburse payments, could occur at a time other than the crisis of a recession. Finally, automatic payments could also commit fiscal policymakers to maintain support if the recession is severe and the recovery is drawn out. The payroll tax cut, the last of the broad-based household stimulus after the Great Recession, expired in the first quarter of 2013. At that time, the national unemployment rate was still 2.7 percentage points above its prerecession level—a sign that stimulus was withdrawn while the economy was far from a full recovery.[4] Fiscal support during the Great Recession was less than in prior recessions, and the additional stabilization later in the recovery was largely due to monetary policy.

Putting administrative systems in place ahead of time could ensure that the stimulus is delivered more quickly and more broadly. It is also important to minimize errors and ensure that only intended populations receive the payment. With the 2008 stimulus payments, the Internal Revenue Service (IRS) estimated that it would require 60 days to program the system to calculate payments after the legislative details were settled (Joint Committee on Taxation 2008). In addition, the payments could not be disbursed during the peak tax filing system. Thus, without advance preparation of the system, it is not currently possible to send out payments from late January to mid-May each year.

Moreover, advance planning could also be used to reach a wider population than those filing income tax returns. A key impediment to sending out payments is the lack of a centralized, up-to-date address or electronic funds transfer information on individuals. The IRS maintains this information for tax filers, as does Social Security for all its benefit recipients. Collaboration between the IRS, the Social Security Administration, and other agencies that interact with non-filers could also extend the receipt of payments to more individuals than tax filers and ensure that individuals receive only a single payment from the government.

Automatic stimulus payments in recessions and recoveries—paid for by higher taxes during expansions—would provide additional liquidity when uncertainty about employment and income is high. Many households have low savings and even outside of recessions would have difficulty paying a modest unexpected expense (Board of Governors of the Federal Reserve 2018). Given the thin financial buffers of many households and the heightened uncertainty in a recession, automatic stimulus payments could be a popular form of rainy-day savings and support to spending.

Automatic stimulus payments to individuals would also be a broad-based, transparent source of macroeconomic stabilization. Lump-sum payments disbursed annually to households based on macroeconomic conditions would be a more direct, easier-to-understand form of stimulus than changes in interest rates or asset purchases via monetary policy. Income payments would go directly to individuals and would not rely on propagation through financial and labor markets. Monetary policy is an effective way to stabilize business cycles—lowering interest rates to increase demand during a recession—but its initial direct effects vary across individuals (depending, for example, on their assets and debts) and the overall, beneficial effects are often hard to communicate.[5] The broad-based nature of the stimulus payments would also make it easier to explain the details of the program to the public, increasing its salience and effectiveness. Recessions coincide with heightened pessimism and the stimulus payments would directly counter that pessimism. Understanding how the government is directly supporting individuals in the recession could create public support for more targeted policies or for those policies with less direct effect on individuals.

POLICY PROPOSAL

I propose a new automatic stimulus payment—lump-sum annual payments to individuals—that would be triggered automatically by a rise in the unemployment rate. Key details of the proposal are as follows:

- Automatic lump-sum stimulus payments would be made to individuals when the three-month average national unemployment rate rises by at least 0.50 percentage points relative to its low in the previous 12 months.
- The total amount of stimulus payments in the first year is set to 0.7 percent of GDP.
- After the first year, any second (or subsequent) year payments would depend on the path of the unemployment rate.
    - An increase of 2.0 percentage points or more from the initial unemployment rate would result in a second year's payments with aggregate stimulus again equal to 0.7 percent of GDP.
    - After the second year and after the unemployment rate has peaked (whichever comes later), the total stimulus amount would be scaled down as the unemployment rate declines.
    - Annual payments would continue in the third (and subsequent) years until the unemployment rate is no more than 2.0 percentage points above the level at the time of the first payment.

- Eligibility for direct stimulus payments would not be restricted to households with taxable income.
- All adults would receive the same base payment, and in addition, parents of minor dependents would receive one half the base payment per dependent.

Each aspect of the policy, including its administration, is discussed in more detail below. This section concludes with an example of how the automatic payments would have been applied in the Great Recession and recovery. These automatic stimulus payments to individuals should be thought of as a first line of defense in the recession and not a replacement for discretionary fiscal policy or other automatic stabilizers, which could add to stimulus as macroeconomic conditions evolve.

Trigger to Start Automatic Stimulus Payments

This proposal requires an explicit trigger that will turn on during a cyclical downturn. This trigger could be used to automatically disburse the payments or to initiate a congressional vote on payments. In this proposal, the trigger is based on changes in the national unemployment rate.

The direct stimulus payments to individuals begin after a 0.50 percentage point increase or more in the three-month moving average of the unemployment rate relative to its low in the prior 12 months (figure 2). The three-month average smooths out some of the monthly random variation in the rate and avoids false positives, such as stimulus payments made outside economic downturns. The trigger depends on recent changes in the unemployment rate, as opposed to a fixed unemployment rate threshold, because this type of trigger accommodates changes over time in the natural rate of unemployment.[6] Even a modest rise in the unemployment rate such as 0.50 percentage points (shown by the orange dashed line in figure 2) has occurred only during or closely following recessions. In other words, by this rule the stimulus payments would have been triggered only in recessions.[7]

Based on past recessions (and the data available to policymakers at the time), the change in the unemployment rate would be a highly effective trigger for the stimulus payments. Early in each recession since 1970, the unemployment rate rose at least a 0.50 percentage points (figure 3).[8] On average, payments would have been triggered within three months of the start of the past six recessions. The automatic trigger would have been met four months after the 2008–9 recession began and two months after the 2001 recession began. The specific trigger in this proposal—comparing the three-month average unemployment rate to its low over the prior 12 months—signals a recession well before the official dating of a recession.

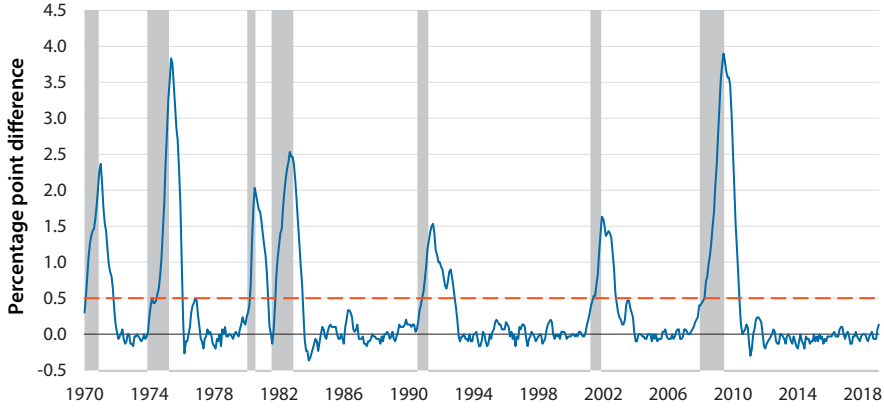
The proposed trigger would reliably deliver stimulus to the economy early in recessions.

The unemployment rate has other advantages as the basis for the trigger in an automatic stabilizer. The unemployment rate has been used as a core signal of labor market strength and overall economic well-being, and has been measured consistently for many decades. It is a timely measure: a given month's unemployment rate estimate is available at the beginning of the subsequent month. By contrast, output growth is measured with a lag, is revised frequently, and, given its volatility, would require waiting for at least two to three weak quarters to signal recession. Partly due to these advantages, the U.S. government has extensive experience using the unemployment rate as a trigger for social programs. Making the stimulus payments to individuals automatic once the unemployment rate trigger is met would guarantee that stimulus flows to the economy quickly. If administrative systems are already in place to disburse payments, then individuals would receive their automatic payments early in the recession. In contrast, for discretionary payments work also has to be done on both the legislation and the logistics before stimulus can be delivered to households.

There are some concerns with using the unemployment rate as a trigger to start stimulus payments. First, the unemployment rate tends to lag the business cycle, such that unemployment usually peaks after the recession has ended. The slow-moving nature of the unemployment rate implies

FIGURE 2.

Unemployment Rate (3-Month Average) Relative to Prior 12-Month Low, 1970–2018



Source: BLS 1969–2019; author's calculations.

Note: Shaded areas denote recessions. Dashed orange line denotes the proposed trigger threshold. Calculation uses real-time estimates of the unemployment rate.

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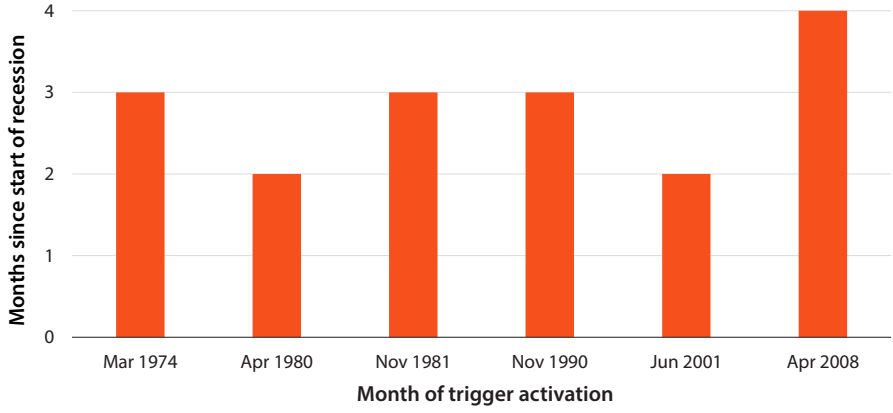
that it gives little advance warning of recessions. Still, as seen in figure 3, this trigger would signal a downturn nearly immediately and long before it has been officially recognized. Second, the rise in unemployment prior to a recession does not predict the severity of the recession. For example, the increases in the unemployment rate prior to the 2001 and 2008–9 recessions were similar, even though the subsequent rise during and after the 2008–9 recession was more than double the rise with the 2001 recession. In other words, a prerecession unemployment rate rise is not a good guide to the shortfall in demand in a recession and speaks to having a plan for additional payments in severe recessions. Finally, one may worry about whether people leaving the labor market or reentering it mask the quality of the signal from the unemployment rate, but, at least at the start of recessions, the change in the unemployment rate is a remarkably reliable signal.

Aggregate Amount of Stimulus Payments

Because the goal of the direct payments to individuals is macroeconomic stabilization and shallower recessions, the total amount of the stimulus is a core concern. During the initial months of the recession when the first payment arrives, the eventual severity of the downturn will be unknown. And, in fact, one goal of such fast-acting stimulus is to help stave off the negative dynamics that often accompany recessions—that is, the stimulus can itself reduce the severity of the downturn. Fiscal stimulus can provide

FIGURE 3.

Date that Unemployment Rate Trigger Activated Relative to the Start of Selected Recessions



Source: BLS 1969–2019; author's calculations.

Note: Calculation uses real-time estimates of the unemployment rate.

additional spending power to those who are liquidity constrained and counteract the rise in precautionary savings that might otherwise lead to a reduction in spending, particularly for purchases of durables that can more easily be delayed.

I propose setting the total dollars of first-year direct payments to address the weakness in a typical recession. Since the mid-1970s, a typical recession has entailed a slowdown in real consumer spending growth—on a four-quarter basis—of about 2 percentage points, with substantially larger slowdowns in growth in 1973 and 2008. In this proposal, direct payments that are half of a typical recession's slowdown in consumer spending growth—equal to approximately 1 percent of real PCE (or about 0.7 percent of GDP)—would be a substantial commitment to stabilize the economy.[9] This additional income, on aggregate, is on the high end of past discretionary payments. By comparison the 2001 tax rebates were about 0.4 percent of GDP, and the payments in 2008 were about 0.7 percent of GDP (Shapiro and Slemrod 2003b, 2009).

Several considerations speak in favor of a large initial stimulus to households. First, the costs of recession, whether at the macroeconomic level or at the household level, are substantial.[10] Thus, vigorous efforts to stabilize demand early in a recession would have large payoffs. Second, larger aggregate stimulus translates into larger individual payments. Large direct payments to individuals are spent more quickly since their size can support the purchase of (or the down payment on) large consumer durables, such as automobiles (Parker et al. 2013). For consumers, large payments are also more salient than small ones (Sahm, Shapiro, and Slemrod 2012), allowing them to more effectively counter precautionary saving motives and bolster popular support for stimulus. Finally, these direct stimulus payments—especially if made automatically—would be some of the earliest support to the economy in the recession. Most of the support from other automatic stabilizers, including progressive income tax rates or UI benefits, arrive later than the initial months of a recession. Large, direct payments to individuals would provide an aggressive, frontline defense against the negative effects of a recession.

Structure and Targeting of Payments

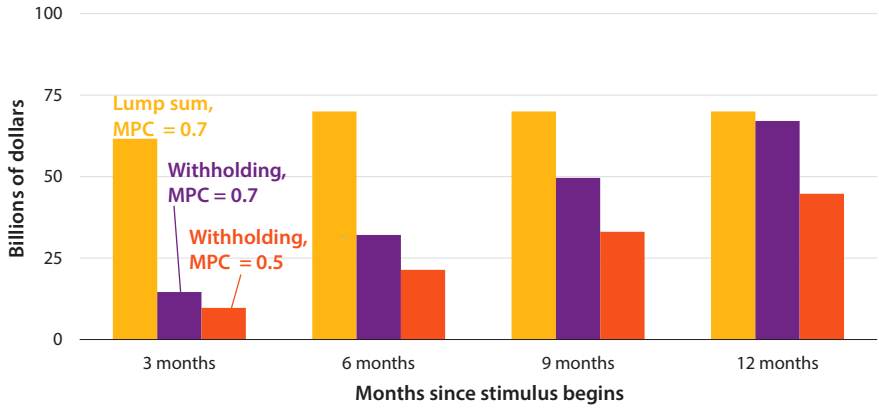
With the aggregate amount of stimulus set, the next step is to structure the individual payments to maximize the immediate boost to spending. From the empirical research on the 2001 and 2008 to 2012 stimulus policies, the propensity to spend out of the stimulus payments is likely to be highest for one-time, lump-sum payments (Sahm, Shapiro, and Slemrod 2012). In addition, one-time payments add stimulus spending more quickly to the

economy than a change in tax withholding (which would spread fiscal stimulus throughout the year). Consider two hypothetical $100 billion stimulus packages. The first is paid out in one-time payments (with all individuals receiving checks within 10 weeks) and the second is spread out evenly during the year in the form of higher take-home paychecks (via lower tax withholding). Even if individuals responded to both forms of stimulus in the same way—in other words, if the marginal propensity to consume (MPC) out of each dollar was identical—it would not be until early in the next year that the full stimulus spending occurred under the second option (figure 4). The delay in payments necessarily delays individuals' spending. In contrast, the increase in spending from one-time payments would occur within three months (Parker et al. 2013). Furthermore, because research shows that the individual spending response is larger from one-time payments than from changes in withholding (Sahm, Shapiro, and Slemrod 2012), the overall stimulus boost would be both larger and more rapid. The faster timing and higher spend rate favor one-time payments for macroeconomic stabilization.[11]

The speed—supported by empirical research—with which direct payments increase aggregate demand is particularly important. To meet its primary objective macroeconomic stabilization needs to occur when resources are underutilized in the economy. The outright declines in output occur early

FIGURE 4.

Cumulative Spending by Disbursement Form and Spend Rate



Source: Author's calculations.

Note: Spending is based on a $100 billion stimulus. The MPC, which determines the spend rate, for lump sum payments is set at 0.7, with 60 percent of the spending response in the first month, 30 percent in the second month, and 10 percent in the third month. The MPC for withholding is alternately assumed to be 0.5 or 0.7.

in recessions, and stimulus that quickly supports aggregate demand would be particularly beneficial. The direct spending out of stimulus payments to individuals is followed by indirect (i.e., second-round or multiplier) effects, in which production responds to the initial boost to spending. These multiplier effects are likely larger in a severe recession when more slack exists in the economy (and even more so when monetary policy is constrained at the zero lower bound). Stimulus demand, then, is less likely to crowd out other spending (Auerbach and Gorodnichenko 2012). This finding argues both for a rapid first payment and for a commitment to repeated payments in a severe recession until the lingering economic weakness has subsided. Finally, as mentioned previously, other forms of stabilization policy—for example, UI benefits or reductions in interest rates via monetary policy—tend to work with a lag, so stimulus payments offer one of the most rapid responses in a recession. Thus, the direct payments to individuals should be structured to maximize timeliness.

The direct stimulus payments to individuals would be made broadly available and would not be restricted to those working or with tax liabilities. The broad nature of the recipient pool aligns with the broad negative economic effects of recessions. A defining feature of a recession is the pullback in demand across a wide range of households: recessions lead high- and low-income households alike to sharply reduce their assessments of buying conditions (figure 5). Stimulus intended to boost demand in a recession should therefore encompass a range of households.[12] Generally, the fastest spending responses to additional income are from low-liquidity individuals, but targeting liquidity is more difficult in existing administrative data, and low liquidity also exists among higher-income households.

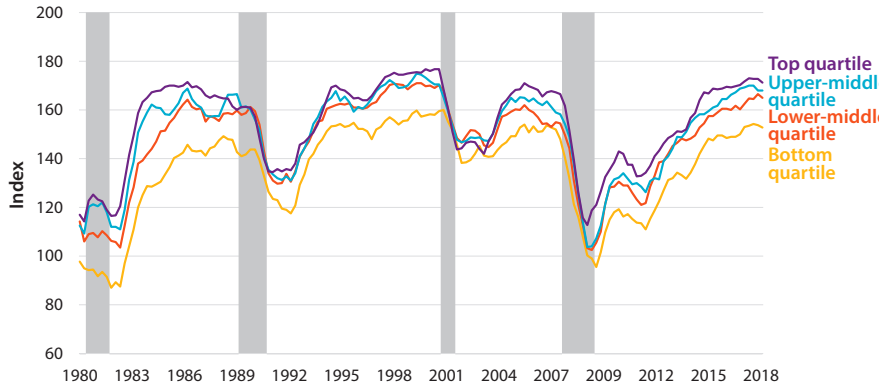
However, some criteria are needed for eligibility for stimulus payments. Individuals with any taxable or nontaxable income (like Social Security or Veterans Affairs benefits) would be eligible, though the stimulus payments would not be tied directly to tax liability.[13] (Non-filers without any income would also be eligible, though locating them can be a challenge.) The presence of dependent children would increase the amount of the stimulus payment. One important criterion would be that no individual (or dependent) receives more than one payment in a round of stimulus payments. Further limitations on eligibility, such as residency requirements or no unpaid taxes, could be added to the legislation authorizing the automatic stimulus payments.

Administration and Marketing of Stimulus Payments

The closest existing structure to the proposed stimulus has been the advance payment of refundable, temporary tax credits. Given its experience with

FIGURE 5.

Index of Consumer Purchasing Sentiment by Household Income Quartile, 1980–2018



Source: Survey of Consumers, University of Michigan 1980–2018.

Note: Shaded areas denote recessions. Index for each income group is the percent of consumers responding that they think it is a "good time to buy major household items" minus the percent reporting it is a bad time to buy, plus 100. Values above 100 indicate that more consumers think it is a good time to buy durable goods. Series is a four-quarter moving average.

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past discretionary stimulus payments and access to payment information of filers, the IRS would be the appropriate agency to review and approve disbursement of the stimulus payment. Making the payments automatic and setting the structure in advance would allow for administrative systems to be designed in advance. This would be especially important if the start of the recession coincided with the annual processing of tax returns, when administrative demands on the IRS are high.

An important administrative challenge in delivering broad-based stimulus is that individuals without taxable income, such as many Social Security beneficiaries, would not normally file tax returns. Despite multiple outreach efforts, Treasury estimates that only 59 percent of the 20 million Social Security and Veterans Affairs benefits recipients filed a stimulus-only return in 2008 and received a payment (U.S. Department of the Treasury [Treasury] 2009). Another 24 percent were claimed as dependents on other tax filings, but that left 17 percent who were eligible but did not receive the stimulus. Getting information—and instructions on how to complete the forms—to eligible non-filers was one of the areas where the IRS viewed its initial guidance as incomplete (Treasury 2008). A commitment to cover these non-filers in future stimulus payments would allow time for more coordination with Social Security, Veterans Affairs, and other agencies delivering other benefit payments. Social Security, for example, has information to deliver payments, but only to those receiving

benefits from Social Security. A centralized system for approving stimulus payment recipients, overseen by the IRS, could use payment information (mailing addresses or electronic funds transfer) from various agencies. The coordination would expand the reach of the stimulus payments and still avoid duplication of payments.

The marketing of the stimulus is another aspect of administering the payments. The terms in which the stimulus is described are important. Studies from psychology (Epley, Mak, and Idson 2006) have argued that describing the additional income as a "tax rebate" yields a smaller spending response than framing it as a "bonus." Leigh (2012) found a larger response to stimulus payments in Australia than in the United States during the Great Recession and argued that the difference may have been due to the Australian government calling their payments "bonuses," though of course it is difficult to rule out other differences between the two countries as the determining factor.

Sending out information about the stimulus payments to recipients may also be important. The U.S. Treasury sent letters to individuals about the 2008 stimulus payments prior to disbursement, but there were no information campaigns to recipients of the subsequent Making Work Pay tax credit and payroll tax cut. Awareness of the stimulus would highlight the government support for individuals in the recession, but it is unclear how this affects the spending response. Notably, none of the empirical studies of the earlier stimulus payments found evidence of consumer spending responses prior to the arrival of stimulus payments, either at the passage of the legislation or at the receipt of informational mailings. Rather, the spending response occurs at the time the income is received.

Stimulus Payments after the First Year of the Recession

Some recessions are more severe and prolonged than the typical recession, and in such cases I propose additional rounds of direct payments to individuals after the first year. The goal of these additional payments is further macroeconomic stabilization and reduction of slack resources in the economy as quickly as possible. A cumulative increase of 2 percentage points or more in the unemployment rate in the four quarters *after the initial trigger* would result in a second round of payments. The aggregate stimulus in the second year would be the same as in the initial year (0.7 percent of prerecession GDP) and would follow the same payment structure to individuals. Direct payments would continue each year until the unemployment rate is no more than 2 percentage points above its initial trigger level, though the total amount of the payments scales down after the unemployment rate has peaked. Specifically, if the prerecession, the peak,

and the current unemployment rates were 5, 10, and 9 percent, respectively, the total stimulus would be set at (9 – 5 – 2) / (10 – 5 – 2) = 2/3 of the first-year amount (or 2/3 of 0.7 percent of GDP). When the unemployment rate gap falls to less than 2 percentage points, stimulus is entirely discontinued. Payments after the first year would be triggered in severe recessions: the 1973–75, 1981–82 and 2008–9 recessions are the only three recent examples that would have met this criterion.

In each recession since the mid-1970s, the unemployment rate eventually rose at least 2 percentage points during or immediately following the recession, but with a sufficient delay that it would not have qualified for a second payment round under this proposal. One could argue that a second payment to individuals would have been useful in these other recessions. However, other more-targeted policies such as UI or SNAP payments would better direct resources to those most in need. In addition, discretionary fiscal policy could add further support, specific to the shocks of that particular recession.

Simulation of Proposed Stimulus Payments in the Great Recession

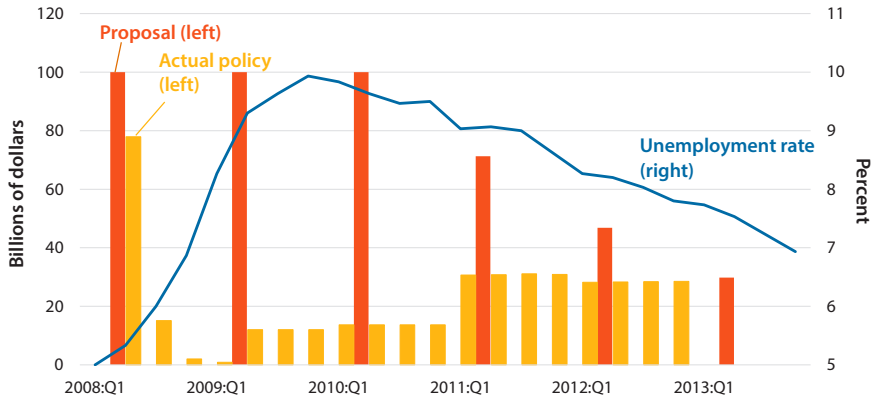
The macroeconomic comparison of automatic stimulus payments to the discretionary policies deployed in the Great Recession (see figure 6) serves two purposes. One is to compare a quantitative example of automatic stimulus payments with discretionary payments that have been used in the past. The second is to be able to compare with other more-targeted automatic stabilizers. Two advantages of automatic stimulus payments are the speed and the scale with which they can deliver stimulus to the economy. Even if this fiscal stabilization policy remains largely discretionary, these exercises will help us understand and critically evaluate the menu of policy options that are available to fight recessions.

In April 2008 the (three-month average) unemployment rate was 5.0 percent, up 0.50 percentage points from its low in April 2007. Under the proposal, this rise would have automatically triggered a direct stimulus payment to individuals. The disbursement of the direct payments would have begun within a few months after the trigger was reached. In this case, the first stimulus payments would have been disbursed in the second quarter of 2008, somewhat sooner than were the tax rebates in 2008. Total stimulus payments of $100 billion—equivalent to 0.7 percent of GDP in 2006—would have been issued. The automatic payments in 2008 would have been around $500 for singles or $1,000 for couples, with higher payments for those with dependent children.

The main difference between the actual stimulus to individuals (from the 2008 tax rebates, Making Work Pay tax credit, and payroll tax reduction)

FIGURE 6.

Automatic Proposal Versus Discretionary Stimulus Income in the Great Recession, 2008–13



Source: BLS 2008–13; BEA 2009; BEA 2015; author's calculations.

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and the proposed direct payments would have arisen after the first year. In April 2009, the unemployment rate (on three-month average basis) was 8.5 percent—a 12 month increase of 3.5 percentage points from its level at the time of the first trigger—and was still rising. This rapid, first-year increase (above the 2-percentage-point threshold) in the unemployment rate would signal a severe recession and would have triggered an additional round of direct stimulus payments to individuals. The second round of direct payments to individuals in 2009 would have again been $100 billion, larger and more quickly distributed than the $50 billion in additional income from the Making Work Pay tax credit. Subsequent annual payments would continue at that level until the unemployment rate had peaked and was no longer rising relative to its level at the prior year's payment. At that point, the annual payments would scale down as the unemployment rate declines and end when the unemployment rate is within 2 percentage points of its initial trigger. The total amounts of the direct payments in figure 6 are only a rough approximation to show the trajectory and timing, and do not take into account how the direct payments might affect the unemployment rate. The purpose of the larger, more-rapid stimulus payments is to make the recession shallower and the recovery faster. In fact, under the proposal (and the assumptions above about MPCs) the boost to spending in 2008 and 2009 together would have been about one and a half times larger than under actual policy.

Repeated, large direct payments to individuals offers three main benefits relative to the discretionary policy mix of broad-based stimulus to

individuals that was used in the Great Recession. First, the proposed stimulus payments are more concentrated in the initial years of the recession when the unemployment rate and slack in the economy was highest. Second, the proposal commits to maintaining stimulus while the unemployment rate remains elevated. In contrast, during the Great Recession the payroll tax cut expired when the unemployment rate was nearly 8 percent. Third, the relevant research indicates that the proposal's lump-sum annual payments are expected to have an MPC of 0.7 within a quarter or two of receipt, one third higher than the MPC of 0.5 on the smoothed stimulus (distributed via lower withholding) that was used during the Great Recession. Taken together, this proposal for direct payments to individuals is designed to deliver timely, substantial, and ongoing support to the economy in the event of a severe recession.

Ongoing Research Evaluation

To further study the macroeconomic effects of fiscal stimulus, the proposal establishes a process for rigorous evaluation of the effects on spending. Fortuitously, administrative constraints on the number of paper checks that the federal government could send out in week led to a natural experiment during the past two recessions. The timing of stimulus payments in 2001 and 2008 were randomized by Social Security numbers. In conjunction with the addition of information to official consumer surveys, this allowed researchers to credibly demonstrate the efficacy of stimulus payments.

With the rise in electronic funds transfers, the constraint on the volume of payments that can be processed at once has been relaxed. Even so, for evaluation purposes it would be beneficial to maintain some randomization in the timing of payments. Social Security numbers remain an option, though this information is not regularly collected in official household surveys, and the data on spending would be available only with a substantial delay. Account level data, such as from financial apps or bank account data sources, might be another option for tracking incoming payments and the spending response, but a nontrivial portion of the population does not have such accounts. Another option for randomization in disbursement would be physical location, such as timing based on the final digit of a zip code. Geographic variation in the stimulus payments would widen the set of evaluation data sources and could be used to explore differences in underlying macroeconomic conditions that affect the spending responses to the stimulus. The main policy goal is to deliver stimulus quickly to households, but given the large commitment of resources some design features should be studied to inform the design of future policies.

Questions and Concerns

1. Are there other macroeconomic indicators that could be used as triggers for the stimulus payments?

The unemployment rate has the benefits of being simple to explain and widely followed. Indicators from the financial market, such as the yield curve or near-term forward spread (Engstrom and Sharpe 2018), are also potential predictors of recessions. However, financial market indicators tend to produce more false positives (in part due to monetary policy responses).

2. How would the Congressional Budget Office score an automatic stimulus payment?

If the proposal was enacted during an expansion, precommitting to stimulus payments in the event of a recession would necessitate the use of probabilistic scoring by the Congressional Budget Office (CBO), according to which the CBO would project the expected value of the payments over a ten-year window. In contrast, a two-stage implementation in which the payments must be authorized by Congress would be scored according to the full cost of the payments, given that the recession would already have started. Consequently, the estimated cost would likely be lower outside a recession, but at the time the pressing need for the outlay would be lower, too.

3. Would the payments have to be annual or could multiple payments occur during the year?

The baseline proposal is for annual payments, but once the infrastructure of distributing payments is in place, it could be used at any time. Accelerating the schedule of payments based on changes in economic conditions via additional legislation would be another way to reintroduce legislative control. For example, the case could have been made for a second stimulus payment at the end of 2008 after the severe disruption in financial markets.

4. Would a smaller, more geographically targeted stimulus be preferable?

One option to limit the overall costs and to still support demand would be to target payments after the first year to parts of the country in which the unemployment rate has risen most. For example, the 2-percentage-point threshold applied nationally in the baseline proposal for a second round could instead be applied at the state level. This would allow the stimulus to take into account both national and local economic conditions. However, this geographic targeting would move away from the principle of broad-based income and consumption support. Other policies, such as federal grants to states and localities, would likely be a more effective way to

geographically target stimulus. The baseline automatic stimulus payments could provide broad national support and then be combined with the other discretionary, geographically targeted policies.

Conclusion

Direct stimulus payments would quickly deliver extra income to millions of households at the start of a recession and maintain income support until the recession has subsided. High-quality research on similar payments in the past shows that this form of stimulus directly boosts spending and helps stabilize demand. Making the payments automatic and tying them to changes in the national unemployment rate would guarantee a timely and transparent source of demand in recessions. The individual payments in the proposal are designed—based on available research—to maximize the spending out of the stimulus and thereby increase the efficacy of the fiscal stimulus. As part of a broad portfolio of automatic stabilization policies, the proposal can help mitigate the worst costs of economic downturns.

Acknowledgments

The views expressed here are those of the author and not necessarily those of other members of the Federal Reserve System. I am grateful for many insightful comments and encouragement from the project editors, Heather Boushey, Ryan Nunn, and Jay Shambaugh, as well as from participants in a Hamilton Project author's conference. Jana Parsons and Jimmy O'Donnell provided excellent research assistance. This work draws on several years of research collaboration with Matthew Shapiro and Joel Slemrod.

Endnotes

1. These survey responses on stimulus do not map directly to a fraction of the payment spent, but Parker and Souleles (forthcoming) find a strong, positive correlation between spending behavior and self-assessments in the Consumer Expenditure Survey.
2. With another survey, Graziani, van der Klaauw, and Zafar (2016) found that the self-reported fraction spent out of the payroll tax cut rose from 14 percent in early 2011 to 36 percent at the end of 2011. The spending out of this gradual stimulus may slowly rise over time, but the boost is still less immediate than the boost from one-time payments.
3. The evidence (and interpretation) of the role of liquidity in spending responses varies to some extent across empirical studies. For example, Parker (2017) finds that low liquidity in years prior to receiving the tax rebate predicts a spending response nearly as well as low liquidity at the time of receipt. This finding could suggest differences in preferences and relates to earlier work such as the Campbell-Mankiw spender-saver model and research from Carroll et al. (2017) on patience that appeals to individual-specific preferences for spending. In addition, Kueng (2018) finds a large spending response to payments among high-income households with ample liquid assets.
4. Compared to past business cycles and including estimates of discretionary fiscal policy and automatic stabilizers, Cashin et al. (2018) find that the fiscal support during the Great Recession

was substantial but the support in the recovery was less than in earlier recessions.

5. As one example of the difficulty in communicating the benefits of monetary policy: Savers who hold interest-bearing assets will initially receive less interest income due to expansionary monetary policy; however, these policies to boost aggregate demand and stabilize the economy will lead to higher interest rates in the future. On net, savers benefit from monetary policy, but this is not as transparent as receiving a direct payment.
6. The unemployment rate consistent with minimal labor market slack—sometimes called the natural rate of unemployment—may change as demographics, labor market frictions, and other variables evolve over time (see, e.g., estimates from the Congressional Budget Office [CBO 2019] that range from a high of 6.2 percent in 1978 in to a low of 4.6 percent in 2019).
7. Earlier in the postwar period (not shown in figure 2) the only false positive by this rule was in 1959, and it was followed six months later by a recession.
8. Throughout, I use the data on the unemployment rate available to policymakers at a given moment in time. In general, the real-time data trigger a few months later than would the fully revised data.
9. Measured growth in GDP (or PCE) reflects the effect of past fiscal and monetary stimulus. The typical shortfall in aggregate demand in a recession—in the absence of stimulus—would be larger. An estimate of that counterfactual time series could be a better way to calibrate the size of the total stimulus. The estimates of fiscal policy effects in Cashin et al. (2018) could be used to calibrate the underlying GDP changes.
10. As one recent example of the individual effects, Davis and von Wachter (2011) estimate that workers who are laid off when the unemployment rate is above 8 percent lose 2.8 years of potential earnings, twice the loss when the unemployment rate is below 6 percent. For the economy as a whole, Reifschneider, Wascher, and Wilcox (2013) argue that weak demand in severe recessions like the Great Recession can lead to slower growth in the economy's overall productive capacity (or aggregate supply). Large, long-lasting costs from recessions are why it is important to stabilize the economy as quickly as possible.
11. Other policy goals, such as increasing take-home pay or making taxes more progressive, could favor withholding changes over one-time payments. The argument here for one-time payments is based on trying to bring additional support to the economy during a recession and time of weak aggregate demand. One-time payments could also be combined with broader changes in the tax code.
12. Other automatic stabilizers such as UI or SNAP are targeted to those who are most severely affected by the recession. This proposal has a broader aim. Moreover, decoupling the stimulus payments from an individual's tax liability simplifies the structure of the payments and allows for anchoring on the overall stimulus level desired.
13. While retirees are not exposed to the risk of losing their jobs or reduced wage growth, those living on fixed incomes are often affected by the low interest rates in recessions.

References

Agarwal, Sumit, Chunlin Liu, and Nicholas Souleles. 2007. "The Reaction of Consumer Spending and Debt to Tax Rebates—Evidence from Consumer Credit Data." *Journal of Political Economy* 115 (6): 986–1019.

Aladangady, Aditya, Shifrah Aron-Dine, David Cashin, Wendy Dunn, Laura Feiveson, Paul Lengermann, Katherine Richard, and Claudia Sahm. 2018. "High-frequency Spending Responses to the Earned Income Tax Credit." FEDS Notes. Board of Governors of the Federal Reserve, Washington, DC.

American Recovery and Reinvestment Act of 2009 (ARRA) Pub. L. 111–5 (2009).

Auerbach, Alan J., and Yuriy Gorodnichenko. 2012. "Measuring the Output Responses to Fiscal Policy." *American Economic Journal: Economic Policy* 4 (2): 1–27.

Board of Governors of the Federal Reserve. 2018. *Report on the Economic Well-Being of U.S. Households in 2017.* Washington, DC.

Broda, Christian, and Jonathan A. Parker. 2014. "The Economic Stimulus Payments of 2008 and the Aggregate Demand for Consumption." *Journal of Monetary Economics* 68: 20–36.

Bureau of Economic Analysis. 1969–2018. "Table 1.1.6. Real Gross Domestic Product, Chained Dollars: Personal Consumption Expenditures." Last revised on December 21, 2018. U.S. Department of Commerce, Suitland, MD.

———. 2009. "Government Receipts and Expenditures: Third Quarter of 2009." *Survey of Current Business* 89 (12): 11–14.

———. 2015. "Federal Recovery Programs and BEA Statistics: Tax Provisions." Last updated August 27, 2015. U.S. Department of Commerce, Suitland, MD.

Bureau of Labor Statistics. 1969–2019. "Civilian Unemployment Rate." Bureau of Labor Statistics, Washington DC. Retrieved from ALFRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

Carroll, Christopher, Jiri Slacalek, Kiichi Tokuoka, and Matthew N. White. 2017. "The Distribution of Wealth and the Marginal Propensity to Consume." *Quantitative Economics* 8: 977–1020.

Cashin, David, Jamie Lenney, Byron Lutz, and William Peterman. 2018. "Fiscal Policy and Aggregate Demand in the USA Before, During, and Following the Great Recession." I*nternational Tax and Public Finance* 25 (6): 1519–58.

Congressional Budget Office (CBO). 2019. "An Update to the Budget and Economic Outlook: 2019 to 2029." Congressional Budget Office, Washington, DC.

Davis, Steven J. and Till von Wachter. 2011. "Recessions and the Costs of Job Loss." *Brookings Papers on Economic Activity,* 2011 (2): 1–72.

Economic Stimulus Act, Pub.L. 110–185, 122 Stat. 613 (2008).

Engstrom, Eric, and Steve Sharpe. 2018. "The Near-Term Forward Yield Spread as a Leading Indicator: A Less Distorted Mirror." Finance and Economics Discussion Series No. 2018-055, Federal Reserve Board, Washington, D.C.

Epley, Nicholas, Dennis Mak, and Lorraine Chen Idson. 2006. "Bonus of Rebate?: The Impact of Income Framing on Spending and Saving." *Journal of Behavioral Decision Making* 19 (3): 213–27.

Graziani, Grant, Wilbert van der Klaauw, and Basit Zafar. 2016. "Workers' Spending Response to the 2011 Payroll Tax Cuts." *American Economic Journal: Economic Policy* 8 (4): 124–59.

Johnson, David, Jonathan A. Parker, and Nicholas S. Souleles. 2006. "Household Expenditure and the Income Tax Rebates of 2001." *American Economic Review* 95 (5): 1589–610.

Joint Committee on Taxation. 2008. "Overview of Past Tax Legislation Providing Fiscal Stimulus and Issues in Designing and Delivering a Cash Rebate to Individuals." U.S. Congress Joint Committee on Taxation, Washington, DC.

Kaplan, Greg, and Giovanni L. Violante. 2014. "A Model of the Consumption Response to Fiscal Stimulus Payments." *Econometrica* 82 (4): 1199–239.

Kueng, Lorenz. 2018. "Excess Sensitivity of High-Income Consumers." *The Quarterly Journal of Economics* 133 (4): 1693–1751.

Leigh, Andrew. 2012. "How Much Did the 2009 Australian Fiscal Stimulus Boost Demand? Evidence from Household-Reported Spending Effects." *The B.E. Journal of Macroeconomics.* 12 (1): 1935–1960.

Middle Class Tax Relief and Job Creation Act of 2012 Pub.L. 112–96, H.R. 3630, 126 Stat. 156 (2012).

Misra, Kanishka, and Paolo Surico. 2014. "Consumption, Income Changes, and Heterogeneity: Evidence from Two Fiscal Stimulus Programs." *American Economic Journal: Macroeconomics* 6 (4): 84–106.

Parker, Jonathan A. 2017. "Why Don't Households Smooth Consumption? Evidence from a $25 Million Experiment." *American Economic Journal: Macroeconomics* 9 (4): 153–83.

Parker, Jonathan A., and Nicholas S. Souleles. Forthcoming. "Reported Effects vs. Revealed Preference Estimates: Evidence from the Propensity to Spend Tax Rebates." *American Economic Review: Insights.*

Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson, and Robert McClelland. 2013. "Consumer Spending and the Economic Stimulus Payments of 2008." *American Economic Review* 103 (6): 2530–53.

Reifschneider, David, William L. Wascher, and David W. Wilcox. 2013. "Aggregate Supply in the United States: Recent Developments and Implications for the Conduct of Monetary Policy." Federal Reserve Board *Finance and Economics Discussion Series* No. 2013-77.

Sahm, Claudia R., Matthew D. Shapiro, and Joel Slemrod. 2012. "Check in the Mail Or More in the Paycheck: Does the Effectiveness of Fiscal Stimulus Depend on how it is Delivered?" *American Economic Journal: Economic Policy* 4 (3): 216–50.

———. 2015. "Balance-Sheet Households and Fiscal Stimulus: Lessons from the Payroll Tax Cut and Its Expiration." *Finance and Economics Discussion Series* No. 2015-037.

Shapiro, Matthew D. and Joel Slemrod. 2003a. "Consumer Response to Tax Rebates." *American Economic Review* 93(1): 381–96.

———. 2003b. "Did the 2001 Tax Rebate Stimulate Spending? Evidence from Taxpayer Surveys." In *Tax Policy and the Economy*, vol. 17, edited by James Poterba 83–109. Cambridge, MA: MIT Press.

———. 2009. "Did the 2008 Tax Rebates Stimulate Spending?" *American Economic Review Papers and Proceedings* 99: 374–9.

Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, Pub.L. 111-312 (2010).

Temporary Payroll Tax Cut Continuation Act, H.R. 3765 (2011).

University of Michigan. 1980–2018. "Survey of Consumers." University of Michigan, Ann Arbor, MI.

U.S. Department of the Treasury (Treasury). 2008. "Evaluation of Planning Efforts for the Issuance of Economic Stimulus Payments" Treasury Inspector General for Administration, U.S. Department of the Treasury, Washington, DC.

———. 2009. "Evaluation of Efforts to Ensure Eligible Individuals Received Their Economic Stimulus Payment" Treasury Inspector General for Administration, U.S. Department of the Treasury, Washington, DC.

Increasing Federal Support for State Medicaid and CHIP Programs in Response to Economic Downturns

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Abstract

State governments face large declines in tax revenues and increased demand for state programs during recessions and their aftermath. Because states generally must balance their budgets annually, this fiscal pressure forces states to cut programs, raise taxes, or both. These fiscal changes deprive states' residents of valuable public services and substantially reduce overall economic activity, thereby depriving residents of privately produced goods and services as well. To prevent this outcome, this chapter proposes to transfer federal funds to state governments during periods of economic weakness by automatically increasing the federal share of expenditures under Medicaid and the Children's Health Insurance Program when a state's unemployment rate exceeds a threshold level. The increase in a state's matching rate would be proportional to the amount by which the state's unemployment rate exceeds the threshold and would phase down automatically as the state's economy recovers. We calibrate our proposal to offset around two-thirds of the budget shortfalls that emerge in economic downturns. We present historical and prospective simulations of our proposal demonstrating that it would meaningfully reduce the severity of economic downturns at a manageable federal fiscal cost.

Introduction

State governments face significant fiscal pressures during recessions. Economic activity declines, which reduces receipts from sales taxes, income taxes, and other taxes. In addition, the number of people eligible for means-tested programs operated by state governments rises, putting upward pressure on state spending on these programs. Unlike the federal

government, state governments generally must balance their budgets annually, so the budget shortfalls that emerge when the economy is weak require states to take steps to increase revenues, reduce spending, or some combination of the two.

These state responses to fiscal pressure have significant negative effects. Most directly, state residents lose valuable public services supported by state governments, including education, transportation, and public safety. Reductions in state spending or increases in state taxes also reduce aggregate demand, thereby deepening the economic downturn both in the state implementing the changes and in other states as well. This amplification of economic downturns is substantial: recent empirical work implies that transfers to state governments sufficient to avoid $1.00 of cuts to state programs would produce at least $1.70 in additional economic activity under economic circumstances similar to those that were observed during and after the most-recent recession (Chodorow-Reich 2019). States' fiscal responses to economic downturns thus also reduce the consumption of privately produced goods and services.

We argue below that there are reasons to be particularly concerned that the fiscal pressures that arise during economic downturns may spur states to cut the two largest safety net programs they support: Medicaid and the Children's Health Insurance Program (CHIP). These programs, which are jointly funded by the states and the federal government, provide health insurance—and long-term care—to low-income people and people with disabilities, so cuts to these programs have the potential to seriously harm vulnerable state residents.

To address these problems, this chapter presents a proposal that would automatically increase the federal share of expenditures on Medicaid and CHIP during recessions. When a state's unemployment rate exceeds a threshold level, the share of these programs financed by the federal government (commonly referred to as the state's matching rate) would rise by an amount proportional to the excess of the state's unemployment rate over this threshold. The increase in the matching rate that would apply in most instances—4.8 percentage points for every percentage point the state's unemployment rate exceeded the threshold—is calibrated to offset around two-thirds of the budget shortfalls that emerge in economic downturns, accounting for effects on both the revenue and outlay sides of state budgets. As the state's economy recovers, the state's matching rate would gradually and automatically phase down to its level under current law.

Our proposal builds on—and improves upon—past practice. Congress has legislated temporary increases to Medicaid matching rates on a

discretionary basis in 2003, 2009, and 2010 to address recessions and their aftermath. Our proposal would create an automatic mechanism to ensure that states would receive this assistance in a timely fashion even if a recession hit amid political gridlock. It would also ensure that the amount of this assistance would be appropriately calibrated to the magnitude of the economic shock and the duration of the subsequent recovery. Indeed, we undertake detailed simulations of our proposal and compare it to the actions Congress has taken historically. These results demonstrate that the state fiscal relief delivered during the Great Recession and its aftermath was too small to offset the fiscal shock that states experienced and ended well before state economies had fully recovered from that economic downturn.

The chapter proceeds as follows. The first section provides greater detail on the rationale for providing additional federal support to states during economic downturns and the rationale for doing so through Medicaid and CHIP in particular. The second section presents our proposal for increasing Medicaid and CHIP matching rates during recessions. The third section presents simulations of how our proposal would have affected the federal budget and the economy historically, as well as projections of how our proposal would function in the future. The fourth section addresses possible questions or concerns about our proposal. The final section concludes.

The Challenge

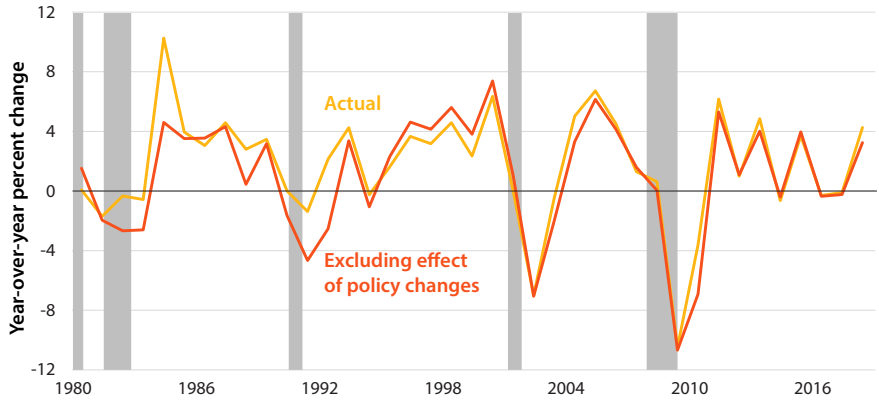
Declines in state revenues and increased demands on transfer programs, together with states' balanced budget requirements, lead states to reduce spending, increase taxes, or do both during recessions and their aftermath. Those responses do significant harm by deepening recessions and slowing the subsequent recoveries both in the state implementing the changes and in other states, thereby depriving residents of valuable publicly and privately produced goods and services. This section examines these negative effects in greater detail and then discusses how the federal government can help mitigate them.

BACKGROUND ON CYCLICAL PRESSURES ON STATE BUDGETS

Consumption, income, and asset values fall in recessions, which drives sharp reductions in state governments' receipts from income taxes, sales taxes, and other taxes, as depicted in figure 1. These declines are large. On average from 1985 to the present, a 1-percentage-point increase in the unemployment rate—an increase in unemployment about one-fifth as large as the increase in unemployment during the 2007–9 recession—has been associated with a 3.7 percent reduction in state tax revenues per capita, holding state tax policy constant.[1] In 2017, 3.7 percent of state tax

FIGURE I.

Change in Real per Capita State Tax Revenues, 1980–2018



Source: Bureau of Economic Analysis (BEA) 1978–2018a, 1978–2018b; National Association of State Budget Officers (NASBO) 2018b; U.S. Census Bureau (Census) 1978–2018; authors' calculations.

Note: Shaded areas denote recessions. Years are defined to run from July to June to align with most states' fiscal years. Changes in real per capita state tax revenues are adjusted for policy changes using estimates from NASBO, as described in online appendix A.

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revenues was $36 billion or 0.2 percent of GDP. State tax revenues appear to have become more cyclically sensitive in recent years, likely a reflection of changes both in the economy and in states' tax systems (Boyd and Dadayan 2014; McGranahan and Mattoon 2012).

In addition, the number of people eligible for means-tested programs operated by state governments rises during recessions, which puts upward pressure on spending on those programs. The overwhelming majority of states' spending on such programs is on Medicaid and CHIP (joint state-federal programs that provide health insurance (and long-term care) to low-income people), so these programs are also the main source of cyclical spending pressure. These programs are structured so that the federal government pays for a specified share of each state's costs, commonly referred to as the federal matching rate. The matching rate varies across states and enrollee types, but is projected to average slightly above 60 percent in Medicaid and around 70 percent in CHIP over the next decade (Congressional Budget Office [CBO] 2018d). State governments finance the remainder, so when enrollment rises, states' costs rise as well. As discussed later, we estimate that the cyclical budget pressures created by these programs are less than one-tenth as large as the pressures that arise from declines in revenues, largely reflecting the fact that state spending on these programs accounted for only 16 percent of states' spending from nonfederal funds during fiscal year 2017 (National Association of State

Budget Officers [NASBO] 2018a). Nevertheless, these programs do add to the overall cyclical pressures on state budgets.

Unlike the federal government, almost all states have some form of balanced budget requirement on their operating budgets. These requirements vary in their stringency, and states do have some ability to circumvent them, at least for short periods, through approaches such as drawing down budget stabilization (often called rainy-day) funds or shifting expenditures from one fiscal year to the next, as Randall and Rueben (2017) discuss in detail. Even so, state-balanced budget requirements bind to a significant degree in practice. A state that does find ways to borrow, moreover, risks sending a negative signal to financial markets, driving up the interest rate it faces, and frustrating its efforts to borrow to get through a downturn. Indeed, Randall and Reuben (2017) review evidence that states' attempts to circumvent their balanced budget requirements increase the interest rates they face on bonds issued to finance capital projects (for which borrowing generally is permitted). States thus have far less ability to borrow than the federal government, so the fiscal pressures that arise during recessions lead states to take steps to increase revenues, reduce spending, or some combination of the two.

Tax increases played a relatively minor role in state governments' responses to the fiscal shocks they experienced during the past two recessions, as illustrated in figure 1 by the fact that adjusting observed revenue trends for changes in state tax law makes relatively little difference during these periods.[2] This is something of a change from the 1990–91 recession, when states implemented significant revenue increases that partially offset a cyclical decline in revenues, as noted by McGranahan and Mattoon (2012). Most of the adjustment, therefore, involved spending cuts. For example, McNichol (2012) estimates that, in state fiscal years 2008 through 2012, states used spending cuts to close about two-thirds of budget shortfalls not financed with federal fiscal relief.

NEGATIVE EFFECTS OF STATES' RESPONSES TO CYCLICAL BUDGET PRESSURES

Whether states' efforts to close budget shortfalls that emerge during economic downturns occur through increased taxes or reduced spending, the result will be to reduce economic output, thereby deepening recessions, slowing recoveries, and depriving families of valuable public and private goods and services.

Reductions in state spending directly reduce the provision of public services such as education, transportation, and public safety. The loss of these services does substantial direct harm. To take one example, recent

research has examined the consequences of cutbacks in state education spending spurred by the 2007–9 recession and found that they resulted in substantial reductions in student achievement (Jackson, Wigger, and Xiong 2018; Shores and Steinberg 2017). Additionally, when aggregate demand is depressed, as it is during a recession and its aftermath, those who were previously employed delivering public services are unlikely to be reemployed in other sectors, leading them to reduce their spending and thereby spurring reductions in the production of *private* goods and services.[3] Similarly, increases in taxes or reductions in transfers reduce families' demand for private goods and services, thereby reducing output in the private sector.

The overall macroeconomic effect of these changes can be large. The decline in real per capita state and local government consumption spending in the wake of the 2007–9 recession directly reduced GDP by 0.7 percent in the third quarter of 2012, the quarter in which real per capita spending reached its trough. Importantly, this figure understates the reduction in output attributable to the steps that states took to close their budget shortfalls. Notably, it does not account for reductions in private spending attributable to either tax increases or reductions in income among those who supply services to state governments. Additionally, spending by state and local governments would likely have grown in real per capita terms in the absence of the recession, so this calculation likely understates the reduction in such spending that is attributable to fiscal pressure caused by the recession.

RATIONALE FOR A FEDERAL POLICY RESPONSE

Because state governments are limited in their ability to borrow, they lack the tools to address these problems on their own. They also lack the right incentives to do so, because states face a significant collective action problem. When a state reduces spending or increases taxes, it bears only a portion of the aggregate economic cost of doing so because the fiscal contraction also has substantial spillovers to other states; the state implementing the contraction will spend less on imports from other states, thereby reducing economic activity in the rest of the country. In the presence of these spillovers, states that rationally followed their own economic interests would collectively do too little to counteract a recession.

These considerations suggest an important role for federal policy.[4] Recent research has found that federal aid to state governments during periods of economic weakness that is financed by higher federal budget deficits can be a highly effective policy response. Research analyzing a temporary increase in the share of Medicaid costs borne by the federal government that was included in the American Recovery and Reinvestment Act of 2009

(ARRA)—an important precedent for the proposal we advance in this chapter—has found that this funding significantly reduced the severity of the recession, while allowing states to make smaller cuts to public spending and employment (Chodorow-Reich 2019; Chodorow-Reich et al. 2012). Research examining other state grant programs included in ARRA has also consistently found strong positive effects of these programs on economic activity (Chodorow-Reich 2019). Indeed, drawing on this evidence base, Chodorow-Reich (2019) estimates that federal transfers that allow state governments to avoid $1.00 in cuts to state programs would increase overall economic activity by at least $1.70, holding monetary policy constant. Similarly, the CBO estimates that transfers to state and local governments are among the most effective forms of fiscal stimulus (Whalen and Reichling 2015).

Unfortunately, as illustrated in detail later in this chapter, the ad hoc federal efforts to help state budgets made in response to the 2007–9 recession and prior recessions were too small and too short-lived and, in the 2001 recession, were started too late. It is also easy to envision scenarios in which political gridlock might prevent—or at least seriously delay—delivery of any state fiscal relief at all. This gridlock indicates a need for a federal program that would automatically deliver fiscal relief to state governments that is calibrated to the magnitude and persistence of weakness in state economies.

MECHANISMS FOR DELIVERING FISCAL RELIEF

The federal government could deliver fiscal relief to states in multiple ways. One approach would be to provide general fiscal relief—that is, unconditional transfers of funds—to states experiencing economic weakness. This approach could largely accomplish the objective of preventing states from implementing damaging fiscal adjustments during recessions.

However, as discussed in detail in the next section, we instead propose that the federal government modify the formula that determines the federal share of expenditures under states' Medicaid and CHIP programs to automatically increase the federal share when state economies are weak. This approach would have the same broad benefits for state budgets as a general fiscal relief program, but would have several important advantages.

First, delivering fiscal relief by increasing the federal share of expenditures under Medicaid and CHIP would particularly discourage states from cutting these programs and thereby better protect states' low-income residents. States have responded to recent economic downturns by tightening eligibility rules, reducing the scope of covered benefits, and

reducing the amounts they pay medical providers for health-care services (Smith et al. 2002, 2003, 2009, 2010, 2011, 2012). Reductions in Medicaid and CHIP eligibility directly reduce financial security and access to care for those losing coverage (e.g., Baicker et al. 2013). Reductions in provider rates also have the potential to undermine beneficiary access to care by causing some providers to cease participating in the program. These access concerns are likely particularly acute with respect to physician services. In 2016 Medicaid's physician payment rates were 28 percent lower than the corresponding Medicare payment rates, which are themselves typically below the rates paid in private insurance, and smaller fractions of physicians accept new Medicaid patients than accept Medicare or private insurance (Holgash and Heberlein 2019; Zuckerman, Skopec, and Epstein 2017).

Second, delivering fiscal relief via Medicaid and CHIP would discourage states from responding to fiscal pressure in ways that are likely to do particularly serious macroeconomic damage. Because of the state-federal matching structure of Medicaid and CHIP, when a state reduces its spending, the federal government reduces its spending by the same amount or more, thereby greatly magnifying the resulting reduction in aggregate demand. For example, in a state with a base Medicaid matching rate of 55 percent (the Medicaid matching rate for a state with per capita income equal to the national average), policy changes that reduce a state's contribution to its Medicaid program by $1.00 reduce federal spending on that state's program by an additional $1.22. States may not fully internalize these effects on aggregate demand, either because they are inattentive to the macroeconomic consequences of their fiscal choices or because they underweight those consequences due to the collective action problem described earlier.

Third, delivering fiscal relief via Medicaid and CHIP would economize on administrative costs. The federal government already finances the majority of state spending on Medicaid and CHIP. Our proposal would build on this existing framework by modifying the existing matching rate formula to depend on the unemployment rate, thereby avoiding the administrative costs associated with setting up a whole new mechanism.

Finally, delivering state fiscal relief through Medicaid and CHIP may be more politically feasible than other approaches. Both Republican and Democratic presidents and Congresses have delivered State fiscal relief in this manner on a discretionary basis. Further, the Medicaid and CHIP programs attract support from a range of influential constituencies, most notably medical providers. By contrast, there has been more congressional opposition to fiscal relief for states that is not tied to a specific activity, which would complicate that approach.

We note that the federal share of program costs in Medicaid and CHIP already depends on states' economic circumstances in one important respect. Specifically, the federal share is higher in states with per capita income below the national average and lower in states with per capita income above the national average. However, the income data used in this formula are very lagged; when setting the matching rate for a given year, the Centers for Medicare and Medicaid Services (CMS) measures per capita income for these purposes by averaging per capita income for the years three, four, and five years prior. Additionally, because this calculation is based on a state's income *relative* to the national average, the nationwide average federal share of Medicaid and CHIP costs does not change appreciably in response to a national economic downturn. Thus, while this formula fulfills Congress's original objective of delivering greater assistance to states that have persistently lower incomes, it does essentially nothing to offset cyclical pressures on state budgets.

We also note that we are far from the first authors to discuss creating a mechanism that would automatically deliver fiscal relief to state governments during recessions, whether through Medicaid or other mechanisms. For example, the Government Accountability Office (GAO) has previously proposed creating a mechanism that would automatically increase the federal share of Medicaid spending in response to recessions, which we discuss in detail later in the chapter (GAO 2006, 2011a, 2011b). Many others have also considered creating new programs or making modifications to existing programs that would provide fiscal relief to state governments during periods of economic weakness, including Bernstein and Spielberg (2016), Clemens and Ippolito (2018), Kamin (2015), and Mattoon, Haleco-Meyer, and Foster (2010).

Proposal for Delivering State Fiscal Relief through Medicaid and CHIP

To reduce states' need to make contractionary fiscal changes during hard economic times, we propose to automatically increase the federal share of expenditures under a state's Medicaid and CHIP programs when the state's unemployment rate exceeds a threshold level. Our proposal would determine the amount of assistance each state received based on the amount by which its unemployment rate exceeded this threshold, with the objective of offsetting two-thirds of the deterioration in state budgets associated with increases in unemployment above the threshold. Fiscal relief would phase out automatically as a state's economy improved. The remainder of this section describes in detail how this assistance would be determined and administered.

MECHANISM FOR TRIGGERING AND CALCULATING THE INCREASED MATCHING RATE

Our proposal bases each state's eligibility for fiscal relief on its unemployment rate. A state would be eligible for relief in any quarter in which its unemployment rate exceeded a threshold level, set at the 25th percentile of the distribution of the state's unemployment rates over the preceding 15 years, plus 1 percentage point. This approach is motivated by an assumption that most state economies are likely to be close to full employment a meaningful fraction of the time, but substantially above full employment relatively infrequently. Under that assumption, the 25th percentile of the distribution of the state's unemployment rate over a suitable historical period is likely to provide a reasonable approximation of the state's unemployment rate at full employment. We add 1 percentage point to that amount to allow for normal fluctuations around full employment, as well as to ensure that assistance is targeted to serious economic downturns and is not triggered by small fluctuations in state unemployment rates.

To make this concrete, figures 2 and 3 illustrate how this estimate would have changed over time in two states—North Carolina (a relatively populous state) and Maine (a relatively less populous state)—as well as the distribution of unemployment rates in these states over the past 15 years.

FIGURE 2A.

Unemployment Rate and Proposed Threshold Level in North Carolina, 1976–2018

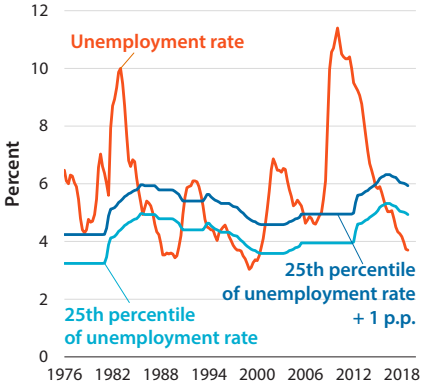
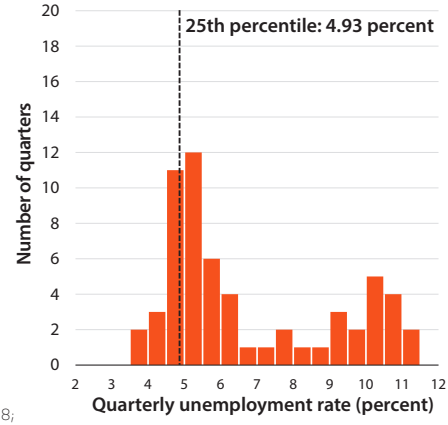


FIGURE 2B.

Distribution of North Carolina Unemployment Rate, 2003–18



Source: Bureau of Labor Statistics (BLS) 1960–2018, 1976–2018; authors' calculations.

Note: The 25th percentile series in figure 2a is calculated over the prior 15 years. The vertical dashed line in figure 2b is the 25th percentile of North Carolina unemployment rates from 2003:Q4 through 2018:Q3. State unemployment rates for years prior to 1976 (which are needed to estimate the threshold level in the early years of the sample) are estimated using the methodology described in online appendix B.

The figures illustrate that there are important differences in unemployment dynamics across states. For example, in North Carolina the 2007–9 recession was by far the most severe recession observed during the period we examine, while the 1990–91 recession was the mildest (figure 2a). By contrast, in Maine the 1990–91 recession was relatively severe, while the 2001 recession was quite mild (figure 3a). These differences across the states illustrate the importance of tailoring the amount of assistance provided to each state's particular economic circumstances.

Under our proposal, the state's base Medicaid matching rate would increase by 3.8 percentage points for each percentage point by which the state's unemployment rate exceeded the threshold level. States that have expanded Medicaid under the Patient Protection and Affordable Care Act (ACA) would receive an additional 1.0 percentage point increase in the base matching rate per percentage point of excess unemployment. The same percentage point increase would also apply to the CHIP matching rate and the matching rates that apply to Medicaid administrative spending, but not to the matching rate for the ACA Medicaid expansion population.[5]

The additional matching rate increase for expansion states has two objectives. First, it would (more than) offset the costs of increased enrollment

FIGURE 3A.

Unemployment Rate and Proposed Threshold Level in Maine, 1976–2018

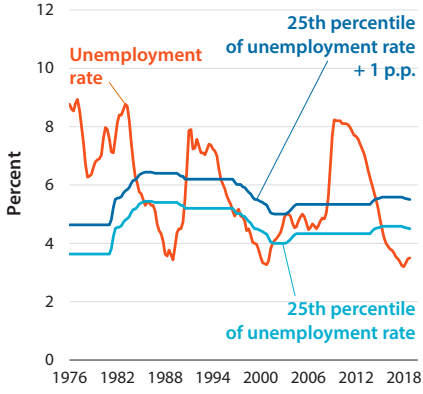
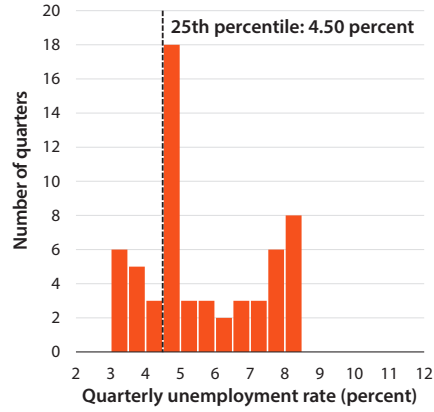


FIGURE 3B.

Distribution of Maine Unemployment Rate, 2003–18



Source: BLS 1960–2018, 1976–2018; authors' calculations.

Note: The 25th percentile series in figure 3a is calculated over the prior 15 years. Vertical dashed line in figure 2b is the 25th percentile of Maine unemployment rates from 2003:Q4 through 2018:Q3. State unemployment rates for years prior to 1976 (which are needed to estimate the threshold level in the early years of the sample) are estimated using the methodology described in online appendix B.

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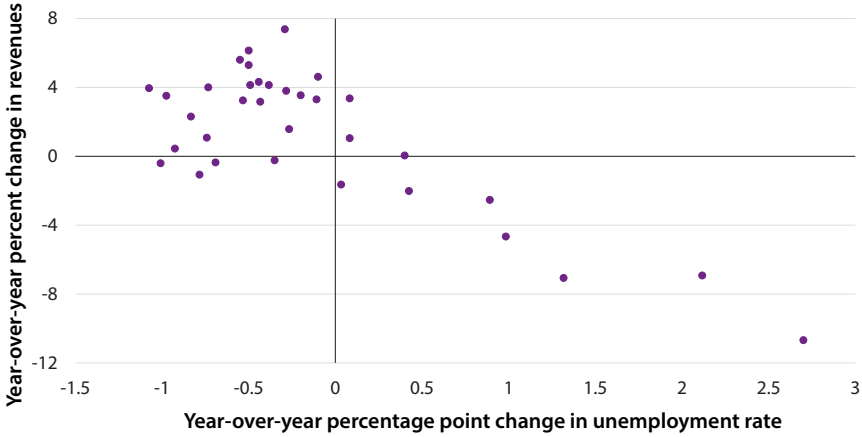
in the Medicaid expansion population. We take this approach rather than directly increasing the matching rate for the expansion population because, as discussed below, we wish to cap matching rates at 90 percent, but the matching rate for the expansion population is already 90 percent. Second, it would create an additional incentive for states to adopt the ACA's Medicaid expansion. Simulation evidence demonstrates that expansion is likely to make Medicaid enrollment rise considerably more in response to recessions, so encouraging the remaining states to adopt expansion would help make Medicaid a more effective automatic stabilizer (Jacobs, Hill, and Abdus 2017). Expansions implemented during a recession or its aftermath would also provide a well-timed (albeit not repeatable) fiscal stimulus. Of course, Medicaid expansion would also have important health policy benefits that are beyond the scope of this proposal (Council of Economic Advisers [CEA] 2017).

We have calibrated the increase in the matching rate under our proposal with the goal of offsetting approximately two-thirds of the historical deterioration in state budgets associated with increases in unemployment in excess of the threshold level (in states that have adopted the ACA's Medicaid expansion), although our proposal could easily be adapted to achieve a more ambitious or less ambitious target.[6] To quantify the effects of

FIGURE 4.

Changes in Real per Capita State Tax Revenues and Changes in the National Unemployment Rate, 1985–2018



Source: BEA 1978–2018a, 1978–2018b; BLS 1983–2018; Census 1978–2018; NASBO 2018b; authors' calculations.

Note: Changes in real per capita state tax revenues are adjusted for policy changes using estimates from NASBO, as described in online appendix A. Years are defined to run from July to June to align with most states' fiscal years.

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increases in unemployment on state tax revenues, we examine the historical relationship between changes in unemployment and changes in state revenues, adjusting for the effect of policy changes; as shown in figure 4, there is a strong correlation between changes in unemployment and changes in state tax revenue. On the outlay side of state budgets, the main source of cyclical pressure is likely to be increases in Medicaid and CHIP enrollment, so we examine the historical relationship between unemployment and enrollment in these programs. Notably, we find that declines in state revenues account for the large majority—more than 90 percent—of the fiscal pressure associated with increases in unemployment. Full details of our calculations are presented in online appendix A.[7]

Matching rates would be capped at 90 percent under our proposal. While it is appropriate to increase matching rates in weak economies to discourage states from making cuts to their Medicaid and CHIP programs, it is prudent to continue to provide states with some incentive to manage their programs efficiently. To ensure that states still received the full intended amount of fiscal relief, any leftover increase in the matching rate could be applied to costs incurred in an earlier year, which does not raise the same incentive concerns. Specifically, states could apply that leftover increase in the matching rate to a quarter in any fiscal year that concluded at least one year before the most recent quarter in which a state's unemployment rate was below the threshold level.

Regardless, the cap would bind relatively infrequently in practice. Over the historical period examined in the policy simulations presented later, the cap would have limited the increase in a state's matching rate in fewer than one-eighth of quarters in which a state qualified for assistance. The cap is most frequently limiting for CHIP expenditures, which the federal government matches at a higher rate under current law. Medicaid expenditures would have been constrained in only about 6 percent of quarters in which a state would have qualified for assistance.

CALCULATION OF PRELIMINARY MATCHING RATE ESTIMATES PRIOR TO START OF QUARTER

To allow states to draw down funds at the increased matching rate in real time during the quarter, CMS would produce an estimate of the increase in each state's matching rate before the start of each quarter based on a projection of the state's unemployment rate for that quarter. The projection would equal the state's unemployment rate two quarters prior plus the change in the state's unemployment rate from three quarters prior to two quarters prior; our analysis of historical data suggests that this simple projection rule would perform reasonably well.[8] Given the timeline on

which estimates of state unemployment rates are published (which is discussed in more detail below), estimates could be produced slightly more than two months before the start of each quarter.

The matching rate would be updated once the actual unemployment rate for the quarter was available, but states would be held harmless for projection errors. That is, if the matching rate increase that was calculated using the actual unemployment rate exceeded the amount that was calculated based on the projected unemployment rate, states would receive the larger amount. However, states would not need to repay the excess if the estimated increase in the matching rate based on the projected unemployment rate turned out to be too large.

SOURCE OF DATA ON STATE UNEMPLOYMENT RATES

We propose to measure state unemployment rates using the Local Area Unemployment Statistics (LAUS) published by the Bureau of Labor Statistics (BLS).[9] The LAUS unemployment rate estimates are produced using a statistical model that combines data from the Current Population Survey (CPS) and unemployment insurance claims data (BLS 2018a). Combining these data sources allows BLS to produce relatively precise estimates of state-level unemployment rates in close to real time despite the comparatively limited state-level sample sizes of the CPS. Indeed, as an empirical matter the LAUS unemployment rate estimates are at most marginally more volatile than the CPS estimate of the national unemployment rate.[10] Estimates for each month are published by BLS before the end of the subsequent month. Other federal programs already use the LAUS estimates for purposes similar to the one we envision here. For example, the LAUS estimates are one of the factors considered when determining state eligibility for extended benefits under the unemployment insurance program, as well as state eligibility for waivers from work requirements in the Supplemental Nutrition Assistance Program.

MAINTENANCE OF EFFORT REQUIREMENT

States wishing to receive increased matching rates under our proposal would be required to maintain Medicaid and CHIP eligibility rules that are at least as generous as those that were in place one year before the most recent quarter in which a state's unemployment rate was below the threshold level.[11] This maintenance of effort requirement, together with the increased matching rate itself, would help ensure that state Medicaid and CHIP programs continue to provide effective coverage to low-income populations during recessions. Congress included similar maintenance of effort requirements when it increased Medicaid matching rates on a temporary basis in 2003, 2009, and 2010.

ADMINISTRATIVE CONSIDERATIONS

We believe it would be feasible for CMS to augment its existing financial reporting and payment methodologies to account for the new financial flows under our proposal. The quarterly frequency at which the matching rate would vary under our proposal aligns with the frequency with which states report estimated and actual expenditures under existing reporting processes. Consistent with this, CMS successfully administered the temporary increases in Medicaid matching rates legislated in 2003, 2009, and 2010. Notably, the matching rate increases legislated in 2009 and 2010 varied across states, based in part on changes in state unemployment rates, similar to the matching rate increases under our proposal.

Analysis of the Historical and Future Effects of Our Proposal

In this section of the chapter, we first simulate the effects our proposal would have had on the federal budget and the national economy in the past. We then turn to projecting how our proposal would affect the budget and the economy in the future. Online appendix B provides considerable additional detail on our methods and data sources.

SIMULATION OF HISTORICAL MACROECONOMIC AND FISCAL EFFECTS

Figures 5a and 5b illustrate the breadth and depth of the matching rate increases that would have occurred under our proposal in years stretching back to 1976 based on the state unemployment rates actually observed over that period. As illustrated by the yellow line in figure 5a, all states would have received an increase in their matching rates in connection with the 2007–9 recession as well as the early 1980s recessions. By contrast, around the less severe 1990–91 and 2001 recessions, only around two-thirds of states would have had unemployment rates high enough to qualify for an increased matching rate.

As illustrated in figure 5b, the magnitude of the assistance provided varies far more widely across downturns.[12] Following the comparatively mild 1990–91 and 2001 recessions, the average increase in the matching rate would have peaked in the single digits, reflecting the fact that even the states that would have qualified for an increased matching rate generally would have exceeded their threshold unemployment levels by relatively small amounts and thus received modest increases in their matching rates. By contrast, following the 2007–9 recession the average increase in the matching rate would have peaked at 20 points. Following the early 1980s

recessions, the average matching rate increase would have peaked at almost 23 percentage points.

One consistent pattern across business cycles is that the matching rate increases under our proposal would not have peaked until after the end of each recession, reflecting the fact that the unemployment rate typically peaks after a recession formally ends and economic growth resumes. This is not necessarily a problem. The objective of our proposal is to offset the fiscal pressures that states face during economic downturns, and the analysis presented in online appendix A indicates that these pressures tend to emerge contemporaneously with increases in the unemployment rate.[13] States may also have a greater ability to avoid spending cuts or tax increases in the very early phases of economic downturns. For example, McNichol (2012) finds that, in the 2007–9 recession, states closed about two-thirds of their budget shortfalls for fiscal year 2008 by drawing down rainy-day funds or implementing timing shifts, before largely turning to other approaches in fiscal year 2009 and later years.

Increases in matching rates under our proposal also tend to persist for a long period following the end of a recession. This is also appropriate. State government revenues tend to remain depressed (and demands on Medicaid

FIGURE 5A.

Proposed and Actual Number of States Receiving an Increased Matching Rate, 1976–2018

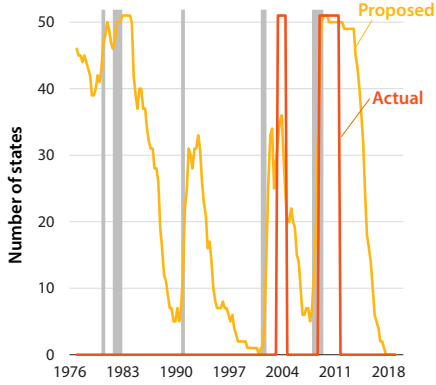
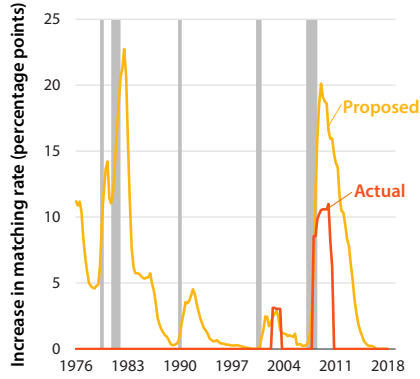


FIGURE 5B.

Proposed and Actual Average Increase in Matching Rate across States, 1976–2018



Source: BLS 1960–2018, 1976–2018; CRS 2012; Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE) 2003, 2015; Medicaid and CHIP Payment and Access Commission (MACPAC) 2019; authors' calculations.

Note: Shaded areas denote recessions. The proposed series is simulated as described in online appendix B. The average increase in figure 5b weights all states equally.

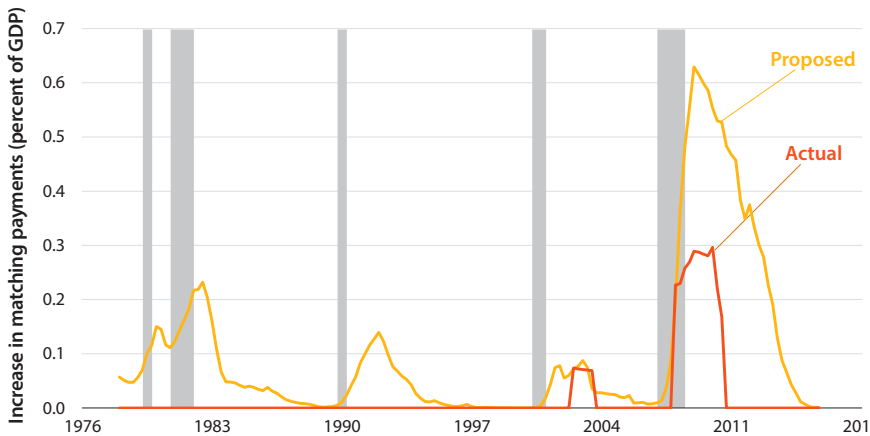
and CHIP tend to remain elevated) until the economy is once again approaching full employment. This implies that the potential for damaging fiscal adjustments is likely to persist well after the end of a recession and, therefore, that assistance to states should continue as well.

Figure 6 shows the increase in federal Medicaid and CHIP matching payments under our proposal as a share of GDP. (These estimates do not incorporate any effects of changes in state Medicaid and CHIP policy in response to the incentives under our proposal; we discuss this issue further in the context of our prospective simulations presented later.) The temporal patterns resemble those in figure 5b, with the notable exception that the increase in outlays in connection with the 1990–91 recession and the early 1980s recessions are modest in comparison to the increase in matching rates shown in figure 5b. This reflects the fact that Medicaid spending was far lower during these earlier business cycles, both because the eligible population was smaller and because overall health costs were significantly lower.

It is also worth comparing results under our proposal to the temporary increases in Medicaid matching rates enacted in connection with the 2001 and 2007–9 recessions; outcomes under those packages are depicted by the orange lines in figures 5a, 5b, and 6. Our proposal compares favorably.

FIGURE 6.

Proposed and Actual Additional Federal Matching Payments as a Share of GDP, 1978–2016



Source: ASPE 2003, 2015; BEA 1978–2016; BLS 1960–2018, 1976–2018; Centers for Medicare and Medicaid Services (CMS) 2013, 2019a, 2019b; CRS 2012; Health Care Financing Administration (HCFA) 1982, 1983, 1986, 1987, 1988, 1991, 1998; MACPAC 2019; authors' calculations.

Note: Shaded areas denote recessions.

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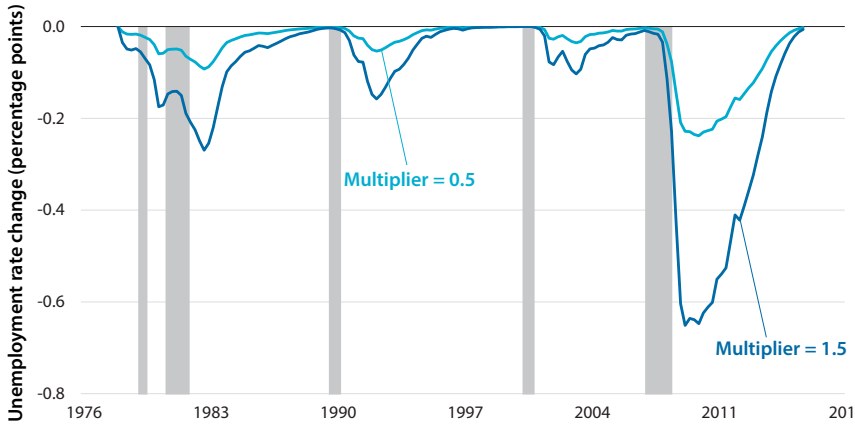
During the 2001 recession and its aftermath, our proposal begins payments earlier, consistent with when unemployment starts to rise, and payments are more concentrated in states experiencing larger downturns. During the 2007–9 recession and its aftermath, the increase in the matching rate peaks at a substantially higher level and persists for a far longer period, which is appropriate in light of the depth of the 2007–9 recession and the long period before the economy was again approaching full employment. It is important to note that the orange lines in figures 5a, 5b, and 6 do not account for the roughly one-third of the state fiscal relief included in ARRA and subsequent legislation that was delivered through non-Medicaid mechanisms (CBO 2009, 2011). Including those funds would close about half the gap between our proposal and historical experience in the immediate aftermath of the recession, but would have little effect on the differences after 2011.

Finally, we estimate the macroeconomic effects of our proposal. Consistent with the discussion earlier in the chapter, our proposal would have increased the overall level of economic activity by reducing the need for states to make contractionary fiscal changes in connection with past recessions. But the magnitude of those effects seems likely to have varied significantly over the historical period examined here. The recessions of the early 1980s were the result of deliberate decisions by the Federal Reserve to tighten monetary policy, so it is likely that the stimulative effects of our proposal would have been offset in large part by tighter monetary policy. By contrast, around the later recessions it is likely that any monetary policy offset to our proposal would have been small to nonexistent. This is particularly true around the 2007–9 recession, since the Federal Reserve brought short-term interest rates down to zero and standard policy rules suggested it would have preferred to stimulate the economy even more.

To account for these differences, figure 7 depicts the effects of our proposal on the unemployment rate under two assumptions about the fiscal multiplier (i.e., the increase in overall economic output per $1.00 increase in government spending net of taxes) relevant to our proposal. The first value of 1.5 is intended to capture periods in which the offset from monetary policy is small to nonexistent. This value could be somewhat conservative; Chodorow-Reich (2019) reviews a large number of recent studies that estimate fiscal multipliers using quasi-experimental cross-sectional variation in fiscal policy and concludes that the fiscal multiplier is at least 1.7, holding monetary policy constant.[14] The second value of 0.5 is intended to capture periods where monetary policymakers act relatively aggressively to offset the fiscal stimulus under our proposal. These two monetary policy scenarios and the associated fiscal multipliers roughly correspond to those CBO uses when analyzing the macroeconomic effects of changes in fiscal

FIGURE 7.

Simulated Change in National Unemployment Rate under Proposal, 1978–2016



Source: BEA 1978–2016; BLS 1960–2018, 1976–2018; CEA 2009; CMS 2013, 2019a, 2019b; HCFA 1982, 1983, 1986, 1987, 1988, 1991, 1998; authors' calculations.

Note: Shaded areas denote recessions. Simulations are conducted separately for assumed fiscal multipliers of 0.5 and 1.5.

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policy, as described in CBO (2014). Regardless of the multiplier that is chosen, we assume that the associated effects on output follow the time path assumed by the CEA (CEA 2009) for transfers to states, and we translate these effects on output into effects on unemployment using the historical relationship between changes in unemployment and output growth from 1985 to the present.

Our proposal would have significantly reduced the national unemployment rate during and after prior downturns and particularly during the most recent downturn. Under a multiplier of 1.5, our proposal would have reduced the unemployment rate by more than 0.6 percentage points at its peak following the 2007–9 recession. This reduction in unemployment would have been larger and considerably longer-lasting than that achieved under the increase in Medicaid matching rates that was actually enacted (not shown). On the other hand, our proposal would have offset only a relatively small portion of the overall increase in the unemployment rate during the recession, which indicates that a proposal like ours would ideally be combined with other efforts aimed at strengthening automatic stabilizers.

PROJECTIONS OF FUTURE MACROECONOMIC AND FISCAL EFFECTS

We turn next to estimating the future fiscal and macroeconomic effects of our proposal. Estimating these effects is challenging since it depends on

the expected frequency and depth of future recessions, both of which are highly uncertain. While different assumptions are plausible, we assume that the future behavior of the unemployment rate will resemble experience from 1985 to the present. We focus on this period rather than the longer historical period examined in the last section because we believe it better captures the economic dynamics and monetary policy behavior likely to be observed in the future.

Based on the frequency and amount by which state unemployment rates exceeded the threshold from 1985 to the present, we estimate that—in expectation and in the long run—our proposal would increase Medicaid and CHIP matching rates by 3.2 percentage points on a nationwide average basis before accounting for any reduction in future unemployment rates that would be caused by our proposal. It is important to note that this estimate is an average over a range of possible future outcomes. The most likely outcome for any specific future year is that unemployment will be close to its full employment level, in which case few states, if any, would qualify for higher match rates under our proposal (and those match rate increases would be small). There is some probability, however, that unemployment will turn out to be elevated in that future year, in which case many states would qualify for large matching rate increases.

Before accounting for changes in economic activity (or state behavior) that would be spurred by our proposal, this increase in expected matching rates translates into an expected cost of $33 billion (0.11 percent of GDP) in 2029 based on CBO projections of Medicaid and CHIP spending (CBO 2018a). The expected cost of our proposal would be smaller in the near term since the U.S. economy is not currently in a recession, which reduces the likelihood that our proposal would incur significant costs over the next several years. Accounting for this fact, we estimate an expected federal cost over the 10-year budget window from 2020 through 2029 of $192 billion.

In considering these costs, it is important to keep in mind that policymakers have increased matching rates under Medicaid and CHIP on a discretionary basis in response to each of the two most-recent recessions, so a portion of this amount would be spent even if policymakers merely continued past practice. On average from 1985 to the present, these discretionary actions have increased Medicaid matching rates by 0.9 percentage point. If policymakers took the same approach in future downturns (and applied that increase to the same set of spending that is covered under our proposal), that would generate expected federal costs of $54 billion over the 10-year budget window from 2020 through 2029.[15] Our proposal's 10-year cost of $192 billion would therefore constitute a $139 billion increase beyond current policy.

As in the historical analysis, reducing the need for states to make contractionary fiscal changes during recessions would increase overall economic activity. To quantify these effects, we assume a fiscal multiplier of 1.3, reflecting an assumption that assistance under our proposal would mainly be triggered in periods in which it would provoke little or no offsetting response from monetary policy. Under this assumption, we estimate that our proposal would increase the expected level of GDP by 0.12 percent in the long run and reduce the expected level of the unemployment rate by 0.10 percentage points. As above, these estimates represent an average over years in which our proposal would have no effect on economic activity because it would not be triggered and years in which it would have large effects.

These increases in economic activity would reduce our proposal's fiscal cost in two ways. First, the reduction in unemployment would directly reduce the amount of assistance delivered under our proposal. Second, the increase in overall economic activity would increase federal revenues. Based on CBO (2018a) estimates of marginal tax rates under current law, we estimate that between 22 percent and 25 percent of the overall increase in output would accrue back to the federal government in the form of higher revenues, depending on the year. Accounting for these effects reduces the expected cost of our proposal to $19 billion (0.06 percent of GDP) in 2029. Over the 10-year-budget window from 2020 through 2029, accounting for this macroeconomic feedback would reduce the cost of our proposal from $192 billion to $114 billion.

We note, however, that the dynamic analysis presented here is incomplete in two respects. First, this analysis implicitly assumes that states will not change their Medicaid and CHIP spending decisions based on our proposal. However, we believe that our proposal would reduce the extent to which states cut their Medicaid and CHIP programs during cyclical downturns since the higher matching rate would reduce both the savings that states realize from any particular program that is cut and the overall pressure on state budgets. This would, in turn, increase the proposal's cost to the federal government since the federal government receives a portion of the savings associated with these cuts. We have not attempted to quantify these costs here, since we are unaware of any existing estimates of how states' Medicaid and CHIP spending decisions change in response to temporary changes in matching rates. To provide a sense of scale, however, state actions that increased total Medicaid and CHIP spending by 1 percent during the 10-year period from 2020 through 2029 would increase federal spending by $56 billion, so these costs could be substantial.

Second, we have not accounted for how our proposal would be financed. One reasonable approach to financing our proposal would be to implement other reforms aimed at reducing federal health-care spending; such changes would, at most, very slightly change the estimated effects on output and employment reported above. Alternatively, policymakers could finance our proposal by increasing taxes or borrowing. Either approach would only very slightly reduce the positive effects on output and employment reported above.[16]

Questions and Concerns

I. Why base the amount of assistance that states receive on state, rather than national, economic conditions?

In general, targeting greater fiscal relief to states experiencing greater economic weakness increases the benefits generated for any given amount of federal expenditure. This is for two main reasons. First, the direct damage done by an additional $1.00 of cuts to state programs is likely to rise as state governments make progressively deeper cuts since states are likely to seek to avoid cutting their highest priority programs as long as possible. This logic suggests that the amount of assistance each state receives should vary roughly in proportion to the size of state budget shortfalls, as it would under our proposal.

Second, at any given point in time, fiscal expansion is likely to generate larger increases in output in state economies with greater excess capacity, so targeting assistance to states with higher unemployment rates increases the boost to overall economic activity generated by our proposal. Indeed, if the sole policy objective were increasing overall output during recessions, it could be appropriate to target virtually all assistance to the states experiencing the very deepest downturns, although constraints on states' ability to absorb and deploy those funds would likely temper this conclusion to some degree.

There is nevertheless at least one valid argument for taking some account of national economic conditions when determining the amount of state fiscal relief. In particular, our proposal would assist states experiencing idiosyncratic economic weakness even if the national economy is strong. Such assistance is likely to provide a smaller boost to aggregate output, both because a portion of the resulting increase in demand for goods and services would spill over to other states that are not demand-constrained and, related, because monetary policymakers would be more likely to make offsetting policy changes. We believe fiscal relief would still be worth providing in these instances, both because a substantial portion of the

increase in aggregate demand would fall on goods and services produced inside the state and because of the direct benefits of mitigating cuts to state services. Nevertheless, if policymakers faced a constraint on the total cost of the proposal, this argument would offer a rationale for providing less assistance to states experiencing idiosyncratic economic weakness in the context of a strong national economy and for using the savings to increase the assistance provided when the national economy is weak. In practice, however, our historical simulations find that 97 percent of the total outlays under our proposal would have occurred in quarters when the national unemployment rate exceeded 5.5 percent. Thus, as a practical matter we do not believe that the improvement in targeting from this type of change would be sufficient to justify the increase in complexity.

There are two other considerations that might argue for placing more weight on national economic conditions in determining the amount of assistance states receive, but we doubt that either is relevant in practice. First, if state-level estimates of unemployment rates are noisy (due, e.g., to limited survey sample sizes at the state level), then combining state-specific data with national data can provide a more accurate picture of actual economic conditions in each state, thereby improving the targeting of assistance. This logic implies that, if our proposal relied on raw state-level estimates from the CPS to target assistance, then incorporating national data would likely be an improvement. However, the statistical model BLS uses to produce the LAUS estimates from the raw CPS data already does a version of this national-state blending and seeks to further reduce noise by supplementing the raw CPS data with state-level administrative tallies of unemployment insurance claims (BLS 2014, 2018a). Indeed, as noted earlier, the resulting LAUS unemployment rate estimates are at most marginally more volatile than the CPS estimate of the national unemployment rate. We therefore believe that the LAUS estimates approximate the best possible estimate of state unemployment rates using the data available in real time.

Second, a portion of the decline in state tax revenues that occurs in connection with recessions could be driven by national factors such as declines in equity prices. In that case, incorporating information on national economic conditions could provide a more accurate picture of the relative fiscal stress faced by different states and thereby improve the targeting of assistance. We explore this question empirically in online appendix A and find that, at least at time horizons longer than one year, the national unemployment rate plays little or no role in explaining movements in state revenues after accounting for the state unemployment rate. This suggests that placing significant weight on national factors when determining the

level of assistance any given state should receive would not meaningfully improve targeting.

In addition to these economic arguments, we note that past practice provides ample precedent for accounting for state economic conditions when determining Medicaid and CHIP matching rates. The existing matching rate formula already incorporates data on state per capita income (although, as discussed earlier, it does so in a way designed to capture only persistent income differences, so it does not provide meaningful countercyclical support). Similarly, the increase in Medicaid matching rates enacted on a discretionary basis in response to the 2007–9 recession determined support in part based on state unemployment rates. Our proposal would thus not break fundamentally new ground in this regard.

2. Should a state become eligible for assistance if it has experienced a significant increase in its unemployment rate, even if its unemployment rate remains below the threshold level?

At least at the national level, an increase in the unemployment rate of more than 0.5 percentage points over a two-quarter period has been a reliable indicator that the economy is entering a recession (Boushey et al. 2019). In general, triggering fiscal relief based on increases in the unemployment rate would initiate fiscal relief modestly earlier than our approach of triggering fiscal relief when the unemployment rate crosses a threshold level. Additionally, unlike simply reducing the threshold level, triggering fiscal relief based on increases in the unemployment rate would not increase the amount of assistance delivered late in economic recoveries.

The question is whether triggering state fiscal relief significantly earlier in economic downturns would be desirable. While there are plausible arguments that steps to increase aggregate demand are particularly valuable early in an economic downturn, state fiscal relief may not be the best tool for doing so. As noted earlier, states are less likely to have exhausted their other options for coping with budget shortfalls early in an economic downturn, so fiscal relief may be less likely to affect states' tax and spending decisions and thus less likely to affect aggregate demand.

State budget shortfalls are also likely to be relatively small early in a downturn, so delivering significant assistance through this mechanism would likely require states to increase spending above (or reduce taxes below) where it would have been, absent the recession. While there are strong arguments for helping states avoid disruption to their existing tax and spending policies when a recession hits, it is far less clear that helping states shift to a more expansionary posture is preferable to simply implementing expansionary policies at the federal level.

Starting fiscal relief earlier in a downturn would tend to incur similar incremental fiscal cost in mild recessions and severe ones. If those additional costs had to be accommodated without increasing the overall cost of our proposal, the required changes would likely reduce assistance by a greater amount in severe recessions than in mild ones. For example, obtaining the requisite savings by reducing the increase in the matching rate for each percentage point increase in the unemployment rate would likely have this effect. All else equal, we view shifting assistance from relatively severe recessions to relatively mild ones as unappealing.

3. How does your proposal compare to the Government Accountability Office's proposal to increase Medicaid matching rates during economic downturns?

The GAO has previously proposed to temporarily increase states' Medicaid matching rates during national economic downturns (GAO 2006, 2011a, 2011b). Under the 2011 version of the GAO proposal, when at least 26 states experienced year-over-year declines in their three-month average employment-population ratio for two consecutive months, states would be eligible to receive temporary increases in their Medicaid matching rates. Eligibility for an increased matching rate would end two quarters after the number of states with declining employment-population ratios fell below 26.

In quarters in which the national criterion is satisfied, each state would receive an increase in its matching rate based on the increase in its unemployment rate and the reduction in aggregate wages and salaries relative to the best quarter of the preceding eight quarters. The unemployment component of the formula is intended to capture increases in Medicaid enrollment, while the wages and salary component is intended to capture declines in state revenues. Both components would be calculated as a proportional reduction in a state's base share of funding, so a state with a high base matching rate, such as Mississippi, would receive a smaller increase in the matching rate for a given increase in its unemployment rate than a state with a low base matching rate, such as Colorado.

While our proposal and the GAO proposal have similar aims and some features in common, we believe our proposal has two significant advantages over the GAO's. First, in a protracted downturn our proposal would continue assistance until state economies had largely recovered, whereas the GAO proposal would end assistance soon after employment stopped declining, even if employment remained quite depressed. For example, in the first quarter of 2011 neither Michigan nor North Carolina would have received assistance under the GAO proposal even though the unemployment rate was above 10 percent in both states. By the fourth

quarter of 2011, no state would have received assistance under the GAO proposal even though the national unemployment rate still averaged 8.6 percent. This outcome reflects the structure of the national trigger in the GAO proposal, which is based on the number of states experiencing *declines* in the employment-population ratio, and the short eight-quarter lookback period for calculating the amount of assistance each state receives. By contrast, the much longer 60-quarter base period under our proposal would ensure that assistance continued as long as unemployment rates remained elevated (unless a recovery lasted far longer than any observed historically).

Second, our proposal would deliver substantially more assistance than the GAO proposal in the quarters in which it was in effect. For example, following the 2007–9 recession the average increase in matching rates under our proposal would have peaked at 20 percentage points, whereas the average increase under the GAO proposal would have peaked at just 4.5 percentage points.[17] This disparity reflects a fundamental difference in objectives. Similar to our proposal, the GAO proposal aims to offset the costs to state governments of increased Medicaid enrollment. However, the GAO proposal seeks to offset declines in state tax revenues only to the extent those revenues were being used to finance Medicaid. By contrast, our proposal is calibrated to offset (two-thirds of) the decline in all state revenues and thereby comprehensively address cyclical pressures on state budgets. We note that because revenues are fungible, even to the extent one's objective is simply to insulate Medicaid from fiscal pressure, that likely requires addressing states' full budget shortfalls, and not just the portions directly related to Medicaid.[18]

A final important difference between our proposal and the GAO's is that the GAO uses a national trigger to determine whether any states qualify for assistance, whereas our proposal makes a state-by-state determination (although both proposals calculate state-specific matching rate increases). As discussed above, our approach provides greater flexibility to respond to regional downturns, but a national trigger that lacked the other problematic features of the GAO's trigger could, in principle, modestly improve the targeting of a fixed amount of assistance.

4. How would your proposal address cyclical pressures faced by local governments?

Approximately one-third of total revenues received by local governments are transfers from state governments (Tax Policy Center 2019). State budget shortfalls often lead state governments to reduce those transfers to localities, thereby transmitting that fiscal pressure to the local level (Evans,

Schwab, and Wagner 2019; Jackson, Wigger, and Xiong 2018). By insulating state governments from cyclical fiscal pressures, our proposal would help insulate localities as well.

Our proposal would not protect local governments against cyclical declines in revenues from taxes they collect directly, but such declines may not be particularly large. Local governments' tax revenues consist overwhelmingly of property taxes, and housing prices do not move in lockstep with broader economic activity. Indeed, neither the 1990–91 nor 2001 recessions saw major declines in housing prices. Housing prices did decline during the Great Recession, but that decline began before the recession began, and it is far from clear that the housing price decline would have been associated with a recession absent the underlying fragilities in the financial system that the decline in housing prices exposed. Moreover, due to the procedures that localities use to update property assessments, changes in housing prices take some time to affect revenues, which will tend to further attenuate linkages between local government revenues and the business cycle (Lutz 2008; Lutz, Molloy, and Shan 2011).

5. Would the high matching rates under your proposal encourage states to spend inefficiently on their Medicaid and CHIP programs?

We do not view this as a significant practical concern. Our proposal likely would induce states to implement smaller cuts to their Medicaid and CHIP programs during hard economic times, both by reducing the marginal cost of spending on these programs and by lowering the overall level of fiscal stress that states face. In principle, our proposal could even lead states to spend more on their programs in hard economic times than they do during good economic times. However, we view this outcome as less likely in practice since our proposal would not completely eliminate the cyclical pressures on state budgets, and states would anticipate having to reverse any such increases once the temporary higher matching rate ended.

Regardless of whether our proposal merely mitigates cuts or leads states to *increase* spending on Medicaid and CHIP during hard economic times, we view such changes as more likely to be a positive than a negative. As noted earlier, state Medicaid programs generally pay physicians considerably less than Medicare or private insurers, and there is evidence that these low payment rates can create access problems for beneficiaries. Payment rates for hospitals are higher, but are still only at rough parity with Medicare, on average (Medicaid and CHIP Payment and Access Commission [MACPAC] 2017c). We thus see relatively little risk that our proposal would lead states to set excessive provider payment rates.

We are even less concerned that states might maintain or adopt overly expansive eligibility rules or benefit packages.[19] The populations that states are allowed to cover through Medicaid and CHIP under federal law generally either have low incomes or some other characteristic, such as a disability, that makes financing their coverage a high-value use of public funds. Similarly, there are relatively few optional benefits permitted under Medicaid for which there is a strong case that the costs of providing such coverage exceed the benefits.

We would be more concerned that states would spend inefficiently on their Medicaid and CHIP programs during economic downturns if our proposal entirely eliminated states' exposure to program costs. But avoiding such a scenario is precisely why our proposal would cap matching rates at 90 percent. Furthermore, as noted earlier, matching rates would almost always remain below 90 percent in practice. This structure ensures that states would retain significant incentives to operate their programs efficiently.

Conclusion

States experience significant fiscal pressures during recessions and their aftermath, and the actions they take in response deepen economic downturns and thereby deprive states' residents of valuable public and private goods and services. We have described a proposal that would automatically deliver fiscal relief to state governments during periods of economic weakness by increasing the share of Medicaid and CHIP expenditures financed by the federal government. In so doing, our proposal would reduce states' need to undertake damaging fiscal adjustments during hard economic times, while providing particular protection to low-income people who rely on Medicaid and CHIP for their health insurance. As such, we believe our proposal could be an important component of a broader effort to strengthen the U.S. economy's system of automatic stabilizers.

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Endnotes

1. The methodology behind this estimate is discussed in detail in online appendix A. All appendices can be found at the end of the online version of this chapter.
2. These calculations use estimates of the effect of enacted state revenue changes reported by NASBO (2018b). These estimates are discussed in more detail in online appendix A.
3. This discussion assumes that the fiscal multiplier—the increase in overall output spurred by a $1.00 increase in government spending—exceeds one. As discussed in detail later in the paper, recent research finds that this is likely to be the case during recessions and their aftermath. However, public spending is frequently worthwhile even when the multiplier is well below 1. Indeed, in periods when the economy does not have excess capacity, increasing production of public services requires an essentially one-for-one reduction in the production of private goods and services—corresponding to a multiplier of 0—yet many public services are still quite worth delivering. Our proposal would thus continue to be well-justified even if the fiscal multiplier were substantially less than 1.
4. The appropriate structure of a fiscal relief program depends on the relative importance of borrowing constraints and collective action problems in driving state responses to recessions. To the extent that borrowing constraints bind, then any policy that transfers funds to states during periods of economic weakness will discourage states from implementing contractionary policy changes. If states are not borrowing constrained, however, then ameliorating the collective action problem would require either changing states' incentives to tax and spend at the margin or simply implementing expansionary policies directly at the federal level. In practice, we believe states are seriously borrowing constrained, so transferring resources to states during periods of economic weakness will have significant benefits. Nevertheless, as discussed below, the existence of a collective action problem is one of our rationales for delivering that assistance through Medicaid and CHIP in particular. More generally, it is important for policymakers to recognize that the fiscal decisions made in one state have important consequences for other states' economies.
5. Technically, the annual amount of federal funding available under CHIP is capped by Congress (in most years). In practice, however, Congress has set this cap at a high enough level that CMS has been able to fulfill all state requests for federal matching funds. To ensure that this would continue to be the case, our proposal would automatically increase CHIP allotments to accommodate the increase in the matching rate under our proposal.
6. The ratio of Medicaid and CHIP spending to state tax revenues may rise over time due to increases in the relative cost of health care and other factors. This increase in the ratio of spending to tax revenues would increase the amount of assistance delivered under our proposal relative to state tax revenues, likely causing our proposal to offset more than two-thirds of the deterioration in state budgets associated with economic downturns. To avoid this outcome, policymakers could index the increase in the matching rate to the ratio of Medicaid and CHIP spending to state tax revenues. We have not included such an indexing provision in our proposal to simplify exposition, but it would be straightforward to add one.
7. Appendices can be found at the end of the online version of this chapter.
8. This projection rule achieves an R^2 of approximately 0.94. We considered a range of alternative projection rules, some of which were considerably more complicated, and none performed meaningfully better.
9. Quarterly unemployment rates would be measured as a simple average of the seasonally adjusted estimates for the three constituent months of the quarter. Unfortunately, the LAUS program provides estimates of unemployment rates only for the 50 states and the District of Columbia. For U.S. territories we would determine the increase in the matching rate by using the national unemployment rate. Additionally, annual Medicaid payments to the territories are capped. To ensure that the territories could receive the intended amount of assistance, our proposal would increase each territory's cap by the increase in the matching rate multiplied by the territory's total Medicaid spending subject to the higher match.
10. For 1976 to the present, the standard deviation of quarter-over-quarter changes in the national unemployment rate is 0.31 percentage points. The corresponding figure for state unemployment rates, as measured using the LAUS estimates, is 0.34 percentage points in the median state.

11. We tie the maintenance of effort requirement to eligibility rules one year prior to the beginning of assistance under our proposal in order to avoid creating incentives for states to curtail eligibility during months in which it expects to become eligible for an enhanced matching rate but has not yet actually become eligible.
12. For the purposes of these historical simulations, we treat all states as Medicaid expansion states since expansion was not an option for most of this period. These estimates are also most relevant for understanding how our proposal would function in the future since most states have adopted the ACA's Medicaid expansion and we expect that more will do so in the future, particularly if our proposal were implemented.
13. Figures 5a, 5b, and 6 depict the amount of assistance ultimately paid for each quarter after that quarter's unemployment rate is known. Our simulations indicate that, at the start of recessions, the amount paid prospectively for each quarter tends to lag the amounts ultimately paid to some degree.
14. Technically the 1.7 multiplier estimate reported by Chodorow-Reich (2019) applies to increases in government purchases. In principle, the full amount of state fiscal relief need not be used in this way, since some might be used to reduce taxes or replenish rainy-day funds. However, Chodorow-Reich presents evidence that, at least in the context of the increase in the Medicaid matching rate included in ARRA, virtually all the additional funding does appear to have been used to increase government purchases.
15. Accounting for non-Medicaid state fiscal relief enacted in response to the 2007–9 recession would add modestly to this amount.
16. For example, suppose that policymakers financed the proposal through borrowing. CBO (2014) assumes that for each $1.00 increase in the deficit, investment falls by $0.33. If the 10-year cost of the proposal were the $114 billion we estimate in our partial dynamic analysis and the marginal product of an additional $1.00 of capital is $0.10 per year, then the reduction in output in 2030 would be roughly $3.8 billion (=$114 billion × 0.33 × 0.1) or about 0.01 percent of GDP. Alternatively, the $114 billion 10-year cost could be financed by an increase in the average labor tax rate equivalent to 0.1 percent of CBO's projection of total wage and salary income over that period. Assuming the average marginal tax rate on labor income under current law is 30.8 percent, in line with CBO's Spring 2018 baseline (CBO 2018c), and the elasticity of wage and salary income with respect to the net-of-tax rate is 0.2, that translates into a reduction in output of $3.9 billion in 2029 or about 0.01 percent of GDP. Additionally, on a dollar-for-dollar basis these reductions in output would have smaller effects on actual economic well-being than the increases in output spurred by our proposal. Our proposal would increase output by reducing the number of people who are involuntarily unemployed (or underemployed) and thereby lead to first-order improvements in well-being for the affected individuals. By contrast, individual decisions to adjust labor supply or savings behavior in response to marginal changes in tax rates or interest rates have no first-order effect on individual well-being.
17. For both proposals, we report the increase in the matching rate weighting all states equally.
18. The measure the GAO uses to gauge decline in revenues—the change in wage and salary income—may also understate the actual decline in state revenues. In unreported analysis, we found that the proportional decline in state tax revenues tended to be larger than the decline in broad measures of state tax bases.
19. MACPAC (2017a) provides an overview of optional populations and benefits in Medicaid.

References

American Recovery and Reinvestment Act of 2009 (ARRA) Pub. L. 111–5 (2009).

Baicker, Katherine, Sarah L. Taubman, Heidi L. Allen, Mira Bernstein, Jonathan H. Gruber, Joseph P. Newhouse, Eric C. Schneider, Bill J. Wright, Alan M. Zaslavsky, and Amy N. Finkelstein. 2013. "The Oregon Experiment—Effects of Medicaid on Clinical Outcomes." *New England Journal of Medicine* 368 (18): 1713–22.

Bernstein, Jared, and Ben Spielberg. 2016. "Preparing for the Next Recession: Lessons from the American Recovery and Reinvestment Act." Center on Budget and Policy Priorities, Washington, DC.

Boushey, Heather, Ryan Nunn, Jimmy O'Donnell, and Jay Shambaugh. 2019. "The Damage Done by Recessions and How to Respond." In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

Boyd, Donald J., and Lucy Dadayan. 2014. "State Tax Revenue Forecasting Accuracy: Technical Report." Nelson A. Rockefeller Institute of Government, State University of New York, Albany, NY.

Bureau of Economic Analysis (BEA). 1978–2016. "Gross Domestic Product (GDP)." U.S. Department of Commerce, Suitland, MD. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1978–2018a. "Gross Domestic Product: Chain-Type Price Index (GDPCTPI)." U.S. Department of Commerce, Suitland, MD. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1978–2018b. "Population (B230RC0Q173SBEA)." U.S. Department of Commerce, Suitland, MD. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1994–2017. "Regional Data: SAINC1 Personal Income Summary: Population." U.S. Department of Commerce, Suitland, MD.

Bureau of Labor Statistics (BLS). 1960–2018. "Civilian Unemployment Rate (UNRATE)." Bureau of Labor Statistics, U.S. Department of Labor, Washington DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1976–2018. "Local Area Unemployment Statistics, State Unemployment Rate." Bureau of Labor Statistics, U.S. Department of Labor, Washington DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1983–2018. "Civilian Unemployment Rate, Not Seasonally Adjusted (UNRATENSA)." Bureau of Labor Statistics, U.S. Department of Labor, Washington DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1991–2017. "Local Area Unemployment Statistics, State Unemployment Rate, Not Seasonally Adjusted." Bureau of Labor Statistics, U.S. Department of Labor, Washington DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 2003–13. "Current Population Survey Annual Social and Economic Supplement." Bureau of Labor Statistics, U.S. Department of Labor, Washington DC. Retrieved from IPUMS-CPS, University of Minnesota.

———. 2014. "Report on Revision to State and Area Time-Series Models." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 2018a. "Local Area Unemployment Statistics: Estimation." *Handbook of Methods.* Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 2018b. "Questions and Answers on Upcoming Changes to Seasonal Adjustment for Model-Based Estimates." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller. 2011. "Robust Inference with Multiway Clustering." *Journal of Business & Economic Statistics* 29 (2): 238–49.

Centers for Medicare and Medicaid Services (CMS). 2013. "2013 Statistical Supplement: Table 13.1." Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Baltimore, MD.

———. 2017. "2017 Actuarial Report on the Financial Outlook for Medicaid." Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Baltimore, MD.

———. 2019a. "Expenditure Reports From MBES/CBES." Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Baltimore, MD.

———. 2019b. "National Health Expenditure Data." Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, Baltimore, MD. Accessed April 12, 2019. https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/index.html.

Chernick, Howard, Cordelia Reimers, and Jennifer Tenant. 2014. "Tax Structure and Revenue Instability: The Great Recession and the States." *IZA Journal of Labor Policy* 3 (3) 1–22.

Chodorow-Reich, Gabriel. 2019. "Geographic Cross-Sectional Fiscal Multipliers: What Have We Learned?" American Economic Journal: Economic Policy 11 (2): 1–36.

Chodorow-Reich, Gabriel, Laura Feiveson, Zachary Liscow, and William Gui Woolston. 2012. "Does State Fiscal Relief During Recessions Increase Employment? Evidence from the American Recovery and Reinvestment Act." *American Economic Journal: Economic Policy* 4 (3): 118–45.

Clemens, Jeffrey, and Benedic Ippolito. 2018. "Implications of Medicaid Financing Reform for State Government Budgets." *Tax Policy and the Economy* 32 (1): 135–72.

Congressional Budget Office (CBO). 2009. "H.R. 1, American Recovery and Reinvestment Act of 2009." Congressional Budget Office, Washington, DC.

———. 2011. "Senate Amendment 4575, Containing Proposals Related to Education, State Fiscal Relief, the Supplemental Nutrition Assistance Program, Rescissions, and Revenue Offsets (Became H.R. 1586 and, Subsequently, Public Law 111-226)." Congressional Budget Office, Washington, DC.

———. 2014. "How CBO Analyzes the Effects of Changes in Federal Fiscal Policies on the Economy." Congressional Budget Office, Washington, DC.

———. 2018a. "The Budget and Economic Outlook: 2018 to 2028." Congressional Budget Office, Washington, DC.

———. 2018b. "Federal Subsidies for Health Insurance Coverage for People Under Age 65: 2018 to 2028." Congressional Budget Office, Washington, DC.

———. 2018c. "Key Methods That CBO Used to Estimate the Macroeconomic Effects of the 2017 Tax Act—Supplemental Material for *The Budget and Economic Outlook: 2018 to 2028*." Congressional Budget Office, Washington, DC.

———. 2018d. "Options for Reducing the Deficit: 2019 to 2028." Congressional Budget Office, Washington, DC.

Congressional Research Service (CRS). 2012, March 15. "Medicaid's Federal Medical Assistance Percentage (FMAP), FY2013." Congressional Research Service, Washington, DC.

Council of Economic Advisers (CEA). 2009. "Estimates of Job Creation from the American Recovery and Reinvestment Act of 2009." Council of Economic Advisers, White House, Washington, DC.

———. 2017. "Reforming the Health Care System." In *Economic Report of the President*, 195–298. Washington, DC: Council of Economic Advisers, White House.

Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). 2003. Notice. "Federal Financial Participation in State Assistance Expenditures; Temporary Increase of Federal Matching Shares for Medicaid for the Last 2 Calendar Quarters of Fiscal Year 2003 and the First 3 Quarters of Fiscal Year 2004." *Federal Register* 68 (116) 35889–90.

———. 2015. "Federal Medical Assistance Percentages or Federal Financial Participation in State Assistance Expenditures." Last updated January 13, 2016. Department of Health and Human Services, Washington, DC.

Dorn, Stan, Bowen Garrett, John Holahan, and Aimee Williams. 2008. "Medicaid, SCHIP and Economic Downturn: Policy Challenges and Policy Responses." Henry J. Kaiser Family Foundation, San Francisco, CA.

Evans, William N., Robert M. Schwab, and Kathryn L. Wagner. 2019. "The Great Recession and Public Education." *Education Finance and Policy* 14 (2): 298–326.

Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles, and J. Robert Warren. 2018. "Integrated Public Use Microdata Series, Current Population Survey: Version 6.0 [dataset]." IPUMS, Minneapolis, MN.

Government Accountability Office (GAO). 2006. "Medicaid: Strategies to Help States Address Increased Expenditures during Economic Downturns." Government Accountability Office, Washington, DC.

———. 2011a. "Improving Responsiveness of Federal Assistance to States during Economic Downturns." Government Accountability Office, Washington, DC.

———. 2011b. "Prototype Formula Would Provide Automatic, Targeted Assistance to States during Economic Downturns." Government Accountability Office, Washington, DC.

Health Care Financing Administration (HCFA). 1982. *The Medicare and Medicaid Data Book, 1981*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1983. *The Medicare and Medicaid Data Book, 1983*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1986. *The Medicare and Medicaid Data Book, 1984*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1987. *Medicare and Medicaid Data Book, 1986*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1988. *Medicare and Medicaid Data Book, 1988*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1991. *Medicare and Medicaid Data Book, 1990*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

———. 1998. *Medicare and Medicaid Statistical Supplement, 1998*. Baltimore, MD: U.S. Department of Health and Human Services, Health Care Financing Administration, Office of Research and Demonstrations.

Holahan, John, A., and Bowen Garrett. 2009. *Rising Unemployment, Medicaid and the Uninsured*. San Francisco, CA: Henry J. Kaiser Family Foundation.

Holgash, Kayla, and Martha Herberlein. 2019. "Physician Acceptance of New Medicaid Patients: New Findings." Presentation, January Medicaid and CHIP Payment and Access Commission (MACPAC), Public Meeting, Washington, DC.

Jackson, C. Kirabo, Cora Wigger, Heyu Xiong. 2018. "Do School Spending Cuts Matter? Evidence from the Great Recession." Working Paper 24203, National Bureau of Economic Research, Cambridge, MA.

Jacobs, Paul D., Steven C. Hill, and Salam Abdus. 2017. "Adults Are More Likely to Become Eligible for Medicaid During Future Recessions If Their State Expanded Medicaid." *Health Affairs* 36 (1): 32–39.

Kamin, David. 2015. "In Good Times and Bad: Designing Legislation That Responds to Fiscal Uncertainty." *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association* 108, 1–41.

Kodrzycki, Yolanda K. 2014. "Smoothing State Tax Revenues over the Business Cycle: Gauging Fiscal Needs and Opportunities." Working Paper 1411, Federal Reserve Bank of Boston, Boston, MA.

Lutz, Byron F. 2008. "The Connection Between House Price Appreciation and Property Tax Revenues." *National Tax Journal* 61 (3): 555–72.

Lutz, Byron, Raven Molloy, and Hui Shan. 2011. "The Housing Crisis and State and Local Government Tax Revenue: Five Channels." *Regional Science and Urban Economics* 41 (4): 306–19.

Mattoon, Richard, Vanessa Haleco-Meyer, and Taft Foster. 2010. "Improving the Impact of Federal Aid to the States." *Economic Perspectives* 34 (3) 66–82.

McGranahan, Leslie, and Richard Mattoon. 2012. "Revenue Cyclicality and Changes in Income and Policy." *Public Budgeting & Finance* 32 (4): 95–119.

McNichol, Elizabeth. 2012. "Out of Balance: Cuts in Services Have Been State's Primary Response to Budget Gaps, Harming the Nation's Economy." Center on Budget and Policy Priorities, Washington, DC.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2017a. *June 2017 Report to Congress on Medicaid and CHIP.* Washington, DC: Medicaid and CHIP Payment and Access Commission.

———. 2017b. *MACStats: Medicaid and CHIP Data Book*. Washington, DC: Medicaid and CHIP Payment and Access Commission.

———. 2017c. "Medicaid Hospital Payment: A Comparison across States and to Medicare." Issue Brief. Medicaid and CHIP Payment and Access Commission, Washington, DC.

———. 2019. "Exhibit 6. Federal Medical Assistance Percentages and Enhanced Federal Medical Assistance Percentages by State, FYs 2015–2019." Medicaid and CHIP Payment and Access Commission, Washington, DC.

Musumeci, MaryBeth, and Julia Foutz. 2018. "Medicaid's Role for Children with Special Health Care Needs: A Look at Eligibility, Services, and Spending." Issue Brief. Henry J. Kaiser Family Foundation, San Francisco, CA.

National Association of State Budget Officers (NASBO). 2018a. *State Expenditure Report: Fiscal Years 2016–2018.* Washington, DC: National Association of State Budget Officers.

———. 2018b. *The Fiscal Survey of States: Fall 2018*. Washington, DC: National Association of State Budget Officers.

Patient Protection and Affordable Care Act (ACA), Pub. L. 111-148, 124 Stat. 119 through 124 Stat. 1025 (2010).

Randall, Megan, and Kim Reuben. 2017. *Sustainable Budgeting in the States: Evidence on State Budget Institutions and Practices.* Washington, DC: State and Local Finance Initiative, Urban Institute.

Shores, Kenneth, and Matthew P. Steinberg. 2017. "The Impact of the Great Recession on Student Achievement: Evidence from Population Data." Working Paper 17-09, Stanford Center for Education Policy Analysis (CEPA), Stanford, CA.

Smith, Vernon, Eileen Ellis, Kathy Gifford, Rekha Ramesh, and Victoria Wachino. 2002. *Medicaid Spending Growth: Results from a 2002 Survey.* San Francisco, CA: Henry J. Kaiser Family Foundation.

Smith, Vernon K., Kathleen Gifford, Eileen Ellis, Robin Rudowitz, and Laura Snyder. 2010. "Hoping for Economic Recovery, Preparing for Health Reform: A Look at Medicaid Spending, Coverage and Policy Trends: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2010 and 2011." San Francisco, CA: Henry J. Kaiser Family Foundation.

Smith, Vernon K., Kathleen Gifford, Eileen Ellis, Robin Rudowitz, Molly O'Malley Watts, and Caryn Marks. 2009. *The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2009 and 2010.* San Francisco, CA: Henry J. Kaiser Family Foundation.

Smith, Vernon, Rekha Ramesh, Kathy Gifford, Eileen Ellis, and Victoria Wachino. 2003. *States Respond to Fiscal Pressure: State Medicaid Spending Growth and Cost Containment in Fiscal Years 2003 and 2004: Results from a 50-State Survey.* San Francisco, CA: Henry J. Kaiser Family Foundation.

———. 2011. *Moving Ahead Amid Fiscal Challenges: A Look at Medicaid Spending, Coverage and Policy Trends Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2011 and 2012.* San Francisco, CA: Henry J. Kaiser Family Foundation.

———. 2012. *Medicaid Today; Preparing for Tomorrow A Look at State Medicaid Program Spending, Enrollment and Policy Trends: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2012 and 2013.* San Francisco, CA: Henry J. Kaiser Family Foundation.

State Health Access Data Assistance Center (SHADAC). 2003–13. "State Health Compare." University of Minnesota, Minneapolis, MN. Retrieved from IPUMS-CPS, University of Minnesota.

———. 2009. *SHADAC-Enhanced Current Population Survey Health Insurance Coverage Estimates: A Summary of Historical Adjustments.* Minneapolis, MN: University of Minnesota.

Tax Policy Center. 2019. "Briefing Book: The State of State (and Local) Tax Policy." Tax Policy Center, Urban Institute and Brookings Institution, Washington, DC.

U.S. Census Bureau. 1978–2018. "Quarterly Summary of State and Local Government Tax Revenue, Table 3. State Tax Collections by Type of Tax." U.S. Census Bureau, Suitland, MD. Retrieved from Haver Analytics, New York, NY.

Whalen, Charles J., and Felix Reichling. 2015. "The Fiscal Multiplier and Economic Policy Analysis in the United States." Working Paper 2015-02. Congressional Budget Office, Washington, DC.

Zuckerman, Stephen, Laura Skopec, and Marni Epstein. 2017. "Medicaid Physician Fees after the ACA Primary Care Fee Bump." Health Policy Center, Urban Institute, Washington, DC.

Infrastructure Investment as an Automatic Stabilizer

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Abstract

Public infrastructure is an important input to production processes and provides valuable consumption benefits. Its construction represents real economic activity, and typically involves employment of skilled and unskilled construction workers. Infrastructure spending is mildly procyclical, in spite of previous attempts by Congress to use it to stimulate activity in downturns. We propose to reduce the procyclicality of infrastructure investment by creating a transportation infrastructure spending plan that would be automatically triggered during a recession. The plan recognizes the crucial role that states play in determining needs and allocating resources in the U.S. transportation infrastructure system. We propose a program that would provide strong incentives for states to develop a catalog of construction projects that could immediately be put into production if the labor market weakens significantly. This structure maintains the benefits of state and local decision making over transportation projects, while allowing spending to ramp up automatically, and thus quickly, when a recession begins.

Introduction

Infrastructure is an important form of wealth, and public services that infrastructure supports—like transportation services—are a fundamental underpinning for economic growth.[1] According to International Monetary Fund (IMF) calculations, the public capital stock in the United States had a value of more than $11.5 trillion in 2015, or about 64 percent of GDP in that year (IMF 2017).[2]

There are two principal ways that infrastructure spending can affect economic activity. First, in the short run, public investment means building new roads, bridges, and buildings, or purchasing new equipment. Public

investment is thus a direct contribution to economic activity—measured as part of the government sector consumption and gross investment in the national income accounts. The $370 billion (seasonally adjusted at an annual rate) that state and local governments invested in infrastructure during the fourth quarter of 2017 represented about 2 percent of total activity that quarter. So infrastructure investment is a consequential part of economic activity overall.

In addition, much of the nation's total infrastructure investment is expended on construction projects ranging from buildings to sewerage systems. Because construction is a cyclical industry, with total employment closely following the national economic cycle, the predominance of construction projects is relevant to stabilization objectives. Changes in infrastructure investment make large contributions—both positive and negative—to aggregate growth; consequently, infrastructure investments have important, direct implications for macroeconomic stabilization, and may therefore be effective as stimulus if they can be conducted during periods of economic weakness. Indeed, estimates of short-run multipliers for infrastructure grants to states and localities tend to be among the highest of any potential stimulus and range as high as 2.2, particularly in downturns (Whalen and Reichling 2015).

A second way that infrastructure affects the economy is much more long term: public capital assets provide a flow of services that are potentially valuable to firms and households. The importance of the contribution of infrastructure to economic activity is subject to some disagreement in the economics and engineering literatures. But if some of the higher estimates are to be believed, the United States faces an infrastructure deficit of substantial proportion.[3] The fact that infrastructure is a long-lived capital good that will continue to produce valuable services into the future may contribute to its effectiveness as a stimulus by altering expectations for future economic growth.

Our proposal for an automatic countercyclical infrastructure program will focus on transportation spending for several reasons. First, transportation is very consequential: transportation systems represent a large portion of the nation's public capital stock; highways alone claim about one-third of the nation's infrastructure spending. Second, in part because of its size, transportation infrastructure's effects on the economy are well studied. While some aspects remain controversial, this body of research provides a solid foundation upon which to craft policy. Third, transportation investments offer implementation advantages: there is a steady stream of high-benefit projects, and transportation investment spending is mediated through well-developed relationships between federal and state

governments. These implementation advantages are crucial to the program we propose.

Much of the nondefense public capital stock in the United States is owned and managed at the subnational level—by state and local governments. Indeed, of the $522 billion (seasonally adjusted at an annual rate) in total nondefense capital spending undertaken by governments in 2018, about three-quarters was invested by state and local governments. State and local governments own more than 95 percent of the public highways in the United States, with the federal government owning just a small number of roads on federally owned lands such as national parks (Congressional Budget Office [CBO] 2016). Our plan is designed to take advantage of the location-specific knowledge of states and the countercyclical funding responsibility of the federal government. This combination allows us to envision a countercyclical program that delivers fiscal stimulus in the short run, along with substantial transportation and economic benefits in the long run.

On those occasions when aggregate demand has slowed, the economy has entered a downturn, and monetary policy is for whatever reason unable to provide sufficient stimulus to bring the economy back to full employment, a fiscal stimulus program may be appropriate (Boushey et al. 2019). Both types of economic effects generated by infrastructure are important in their own right, and combine to make infrastructure a potentially good candidate for inclusion in such a fiscal stimulus program.

In this paper we propose a plan for including infrastructure as part of such a countercyclical fiscal program. In particular, we suggest a way to make some increase in transportation spending automatic in the face of an economic downturn. Of course, the complex nature of public investment, its payoffs, and its financing raise concerns that we will discuss as well.

The Challenge

Before considering infrastructure investment as an element in the macro stability toolkit, it is useful to understand how infrastructure investment currently interacts with the aggregate economy and the mechanisms that produce this relationship. The role of state and local governments, and the nature of the financing of transportation investments—a major component of infrastructure spending—both play important roles in the relationship between infrastructure spending and aggregate growth.

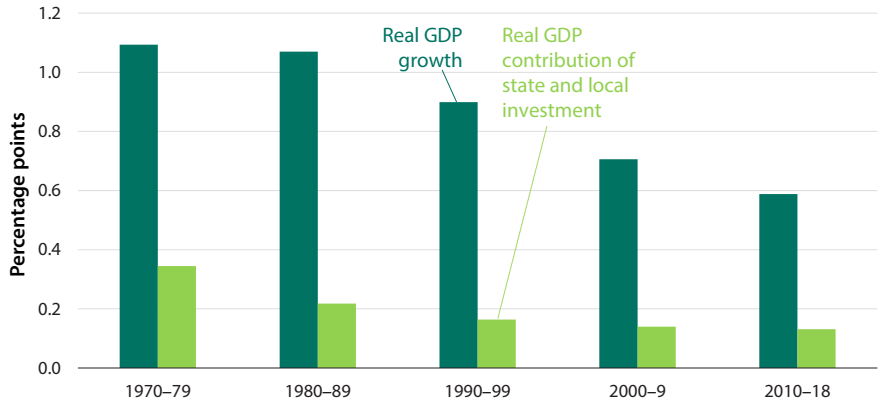
PUBLIC INVESTMENT AS A DESTABILIZER

Figure 1 shows the growth contribution of real state and local gross investment (a measure that captures the bulk of infrastructure investment), which, in spite of its relatively small share of gross domestic product (GDP), is sometimes quite substantially positive or negative. In other words, quarterly fluctuations in state and local government gross investment are sufficiently large as to be a significant factor in aggregate growth. The average absolute value of the GDP contribution during the 2010s has been 0.13 percentage points.

The data also indicate that infrastructure investment varies positively with overall economic activity; in other words, investment disproportionately occurs when macroeconomic conditions are strong, and diminishes as the economy weakens. The simple historical relationship between growth in both employment and real state and local gross investment is depicted in figure 2. Periods of declining employment growth go hand in hand with declining infrastructure investment growth, with investment tending to lag employment a bit, especially in more-recent cycles. The correlation between employment and infrastructure investment has strengthened over time: it is close to zero for the entire period (1950–2018), but positive for decades starting with the 1970s and strongly positive (at about 0.37) in

FIGURE I.

State and Local Infrastructure Contribution to Quarterly Fluctuations in Real GDP, 1970–2018



Source: Bureau of Economic Analysis [BEA] 1970–2018c, 1970–2018d; author's calculations.

Note: For each series, we calculate the average absolute value of quarterly growth over the course of a decade. Data are not yet available for 2019.

THE HAMILTON PROJECT Equitable Growth

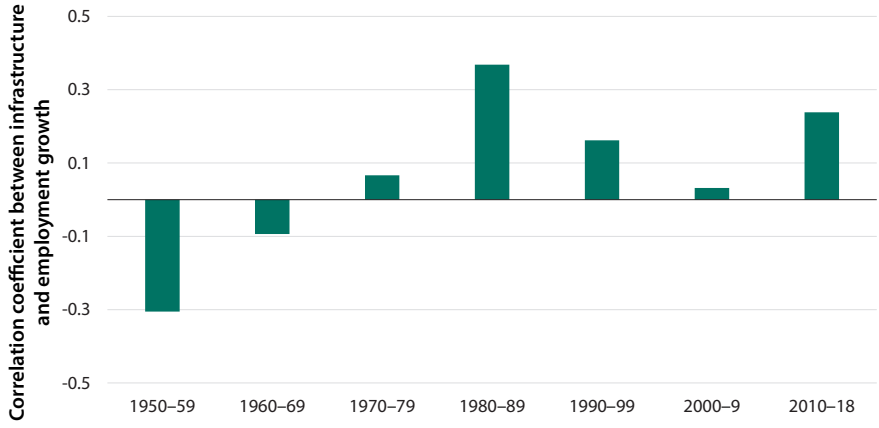
the 1980s. Allowing for one or two period lags, with investment following employment change, does not change this conclusion.

The relationship between real GDP growth and the change in infrastructure investment (not depicted) is also positive, regardless of the range of postwar data one examines and regardless of whether one accounts for lags. Finally, although the quarterly average growth rate of state and local gross investment during expansions since 1975 is 2.8 percent, the rate during recessions is 0.4 percent, only one-seventh as high. Even excluding the collapse of state and local investment during the 2007–9 recession, average recession growth is just 0.5 percent (BEA 1950–2018a). So the recent data suggest that infrastructure investment has become procyclical: as the overall economy slows, state and local capital spending slows as well. These facts suggest that state and local infrastructure investment serves to amplify macroeconomic fluctuations. At a minimum, there is little evidence that flows of infrastructure investment have served to stabilize the economy over the past several decades.

The fact that changes in infrastructure investment are positively related to overall activity in recent decades is perhaps surprising considering previous uses of infrastructure spending as fiscal stimulus. Such spending programs, reviewed in the Transportation Research Board (TRB), were enacted by Congress in response to recessions in 1960–61, 1973–75, 1981–82, 1990–91,

FIGURE 2.

Correlation between Civilian Employment Growth and State and Local Infrastructure Investment Growth, 1950–2018



Source: BEA 1950–2018a; Bureau of Labor Statistics [BLS] 1950–2018; author's calculations.

Note: Civilian employment growth is the percent change from one year prior. State and local infrastructure investment growth is the percent change from the preceding quarter. Data are not yet available for 2019.

THE HAMILTON PROJECT Equitable Growth

and 2007–9 (National Academies of Sciences, Engineering, and Medicine [NASEM] 2014). With the exception of the 2007–9 example, however, these programs were small and—compounded by delays associated with congressional action—were insufficient to reverse the procyclicality of infrastructure spending. We will discuss the lack of success of previous infrastructure spending programs as fiscal stimulus later in the Questions and Concerns section.

Any attempt to understand the relationship between aggregate activity and infrastructure investment must immediately confront the fact that subnational governments play a dominant role in infrastructure spending. The state and local government share of nondefense public investment has not fallen below 72 percent since 1996 and has been above 65 percent since at least 1947. This means that the aggregate public investment figure that is consequential for the macroeconomy is in fact determined in large degree by the 50 states and more than 80,000 local governments across the country (U.S. Census Bureau 2012).

The decentralized nature of actual infrastructure spending would seem to constitute an impediment to coordinating it over the business cycle, but the federal government is far from irrelevant in the process. Indeed, although states and localities do the actual spending, infrastructure investment is financed through a complex set of institutions in some of which the federal government plays an important role. Understanding these mechanisms provides insights into the value and challenges that a plan of using infrastructure to provide countercyclical stimulus would present.

HOW DO STATES FINANCE HIGHWAY INVESTMENTS?

To facilitate that understanding and for the purpose of providing a firm basis for the policy proposal below, we now focus our attention on transportation, particularly highway spending, which is in dollar terms the largest category of infrastructure spending. Our policy proposal will focus on transportation spending in part because of its size and in part because of the comparatively straightforward preexisting mechanisms to allocate funds across levels of government. In other areas of infrastructure spending, the total size of the program and/or the federal role are relatively small.

In 2016, governments at all levels expended a combined $107 billion for highway capital investment (Federal Highway Administration [FHWA] 2018).[4] This is about one-third of all public investment in the United States, and underlines the importance of highway spending in the overall infrastructure picture. Of that total, state governments expended $78 billion, and local governments $28 billion; the direct federal expenditure was just

$500 million (less than 0.5 percent). However, the revenues from which those state expenditures were drawn included a $40.6 billion transfer from the federal highway trust fund to the states (the net intergovernmental income amount shown in figure 3a—$29 billion—nets out more than $11 billion transferred by states to their localities). Federal government transfers represent a very significant share of state highway funding.

A review of figure 3a reveals the other major sources of funding for the nation's highway program in 2016. In addition to transfers from the federal highway trust fund, which is funded by a combination of federal fuel taxes levied on drivers and general federal revenues, states and localities drew on several other funding sources to finance their highway investments.

In particular, state governments borrowed about $13 billion in 2016 to finance highway investments, representing 17 percent of the $78 billion they spent on capital in that year. (Local governments borrowed and spent additional funds as well.) State and local borrowing in bond markets is an important source of funding for infrastructure investment. States and localities generally face requirements to balance their operating budgets, but in many cases are able to borrow in public markets to fund long-lived capital investments in structures such as buildings, bridges, and highways.

FIGURE 3A.

Sources of State Highway Funding, 2016

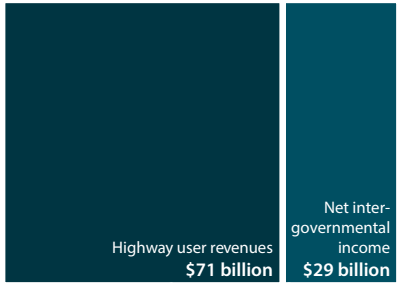
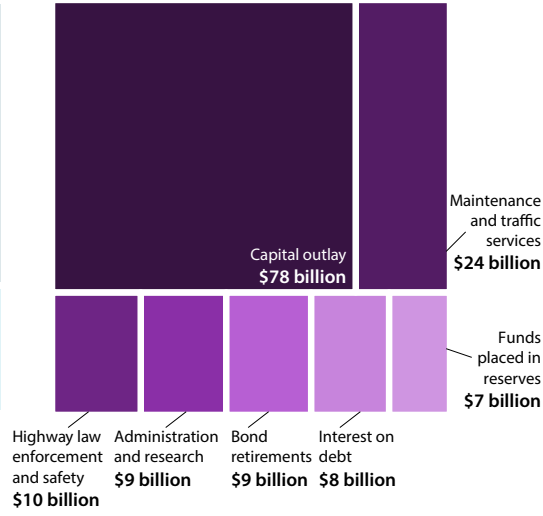


FIGURE 3B.

Objects of State Highway Funding, 2016



Source: FHWA 2018.

Note: The total receipts and spending at the state level were $138 billion, not including funds drawn from or placed in reserves.

THE HAMILTON PROJECT

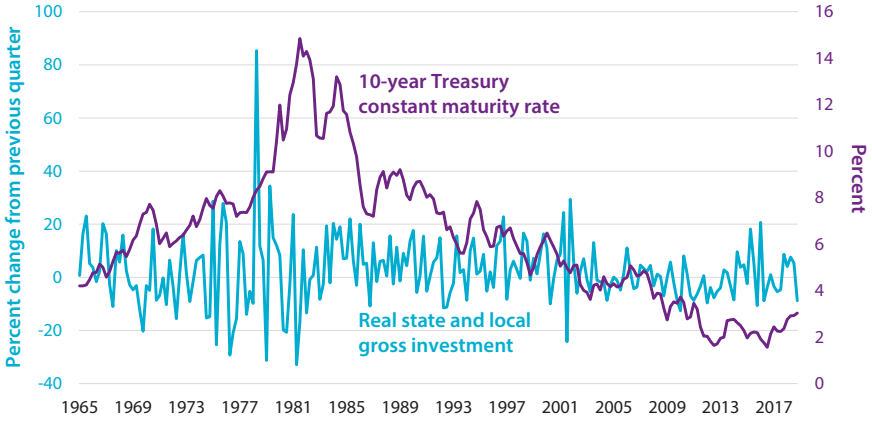
Equitable Growth

In theory, this reliance on debt finance might suggest that public capital investment would be sensitive to interest rates, and thus monetary policy. That is, an accommodative monetary policy, designed to spur activity during economic slowdowns, is expected to encourage state and local governments to undertake investments. In practice, however, this is not the case: the correlation between changes in investment and long-term interest rates is positive for the great majority of the period since 1965 (see figure 4). Thus, the traditional impact of monetary policy—increasing interest rate–sensitive spending during downturns by cutting rates—does not seem to apply for states and localities with respect to their infrastructure investment decisions.

Understanding the weak positive relationship between public investment and interest rates requires an understanding of the ways in which lower interest rates could induce additional infrastructure investment.[5] In spite of requirements that they balance their operating budgets, states are typically able to finance long-term infrastructure investments with debt. Lower interest rates reduce the cost of such borrowing, which might be expected to induce additional spending. But states choose to finance much of their new investment on a pay-as-you-go basis; as shown in figure 3a, in 2016 almost 80 percent of funding for new highway investments is not directly related to interest rates, even in a year of unusually low rates. This insight helps to justify the weak relationship between interest rates and infrastructure

FIGURE 4.

Growth in Long-Term Interest Rates and Real State and Local Investment, 1965–2018



Source: BEA 1965–2018a, 1965–2018b.

Note: The result is similar when using the 20-year Treasury constant maturity rate.

THE HAMILTON PROJECT Equitable Growth

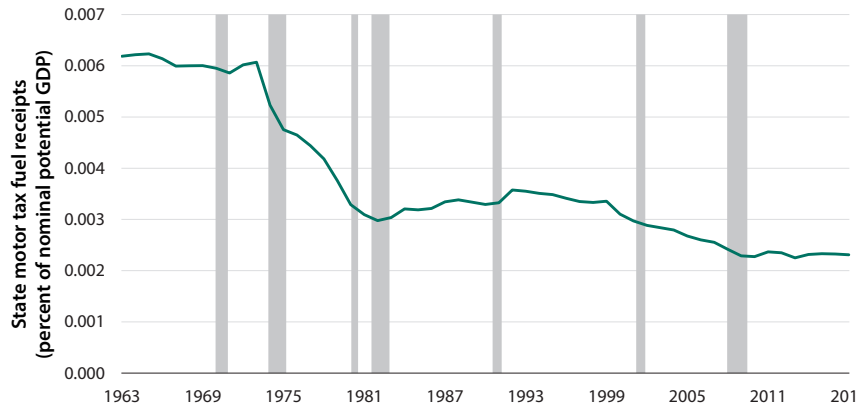
investment, but is insufficient to explain a positive correlation; the correlation must be driven by dependence of state funding on factors that move positively with the business cycle (and interest rates).

Indeed, the key factor in funding highways is the highway trust fund revenues (labeled "highway user revenues" in figure 3a) that make up nearly 50 percent of the funds available for investment. A large share of these funds are fuel tax revenues that depend directly on fuel excise tax rates and the number of vehicle miles traveled, which determines how much fuel is consumed. (In recent years the federal government has also contributed general revenues to the highway trust fund, since fuel tax revenues have been insufficient to finance federal transfers to states for highways [CBO 2016].)

Figure 5 depicts the time series of state motor fuel tax receipts relative to potential GDP since 1963. It is clear from the figure that tax receipts, and thus the major source of revenue for funding highway investments, are procyclical. In addition to a long-term downward trend, one can see that revenue as a share of GDP dips during recessions (shaded bars in the figure). This connection, operating through the financial channel, between current economic activity and the investment behavior of states and localities extends beyond transportation.

FIGURE 5.

State Motor Fuel Tax Receipts as a Percent of Nominal Potential GDP, 1963–2017



Source: CBO 1963–2017; FHWA 1963–2017.

Note: Shaded bars denote recessions. We use CBO's potential GDP measure.

THE HAMILTON PROJECT Equitable Growth

The Proposal

The size of the nation's annual infrastructure investment, its current procyclical behavior (i.e., its destabilizing quality), and its relative insensitivity to interest rates together suggest that an automatically stabilizing component of the nation's public investment could have consequential effects on macroeconomic fluctuations.[6] Our evaluation of the potential for infrastructure to play a role in the nation's suite of automatic stabilizers will make use of the well-known description of effective stimulus as timely, targeted, and temporary.

In order to consider the proposal on consistent grounds, we make a few general assumptions here: first, infrastructure investments, when properly selected, create durable assets that can increase the aggregate welfare of American citizens through increased productivity or quality of life. A large academic literature exists on the productivity benefits of infrastructure with results ranging from low benefits concentrated in specific locations receiving new investments to large national benefits (Leduc and Wilson 2013b). Papers exploring the ultimate welfare effect of infrastructure investments indicate that effects are positive. While as discussed above there remain disputes on this issue, most recent evidence suggests that at least some projects offer positive long-run multipliers for employment and a positive welfare effect (Leduc and Wilson 2013a).

Second, the proposal aims to provide automatic stabilization at the national rather than the regional level. We discuss measurement of the business cycle and its relevance for the timeliness of an increase in public investment below.

Third, we assume that monetary policy has limited room for reaction to this proposal, and that it does not offset the benefits provided. That is, as noted in a framing chapter within this volume, the Federal Reserve may wish to stimulate the economy more than it is able to in a recession, and it will not tighten policy to offset increased infrastructure spending (Boushey et al. 2019).

Fourth, the existence of an automatic infrastructure stabilization fund will be well known to all agents in the economy, including the monetary authority as well as private firms and households. These actors will thus form their expectations about future economic conditions knowing that a level of fiscal stimulus will occur if and when the economy enters a contraction.

Finally, we observe that it is a principle of fiscal federalism (the financial relationships among levels of government) that governments closest to the

people are better positioned to identify what investments will best suit local needs, while the federal government must attend to issues of macroeconomic growth and stability, which are outside the ability of individual state or local governments to influence (Oates 1972). In our context, this means that for any locality the investment projects with the highest benefits are likely to be identified locally, but determination of the appropriate level of funding for macroeconomic stability purposes comes from the federal government. Overcoming this disconnect between the source of identification of high-value projects and the source of funding to support macroeconomic stability requires a strong link between state and federal decisions that can be utilized during both expansions and downturns.

AN AUTOMATIC INFRASTRUCTURE INVESTMENT PROGRAM

The proposal described in this section is intended to address each of the concerns of targeting, timeliness, and project selection by leveraging an existing mechanism for delivering infrastructure dollars from the federal government through states to construction firms and workers. The program we base our plan on is the Better Utilizing Investments to Leverage Development (BUILD) program. BUILD is a U.S. Department of Transportation (USDOT) program intended to support transportation projects by awarding funding on a competitive basis to applications received from state departments of transportation and other state and local agencies (see box 1 for more information). The proposal below alters some aspects of BUILD to make it a more-effective stimulus program, but a key element of the plan is to take advantage of the existing structure since state and federal officials are familiar with it. BUILD operates by authorizing

BOX 1.

The Better Utilizing Investments to Leverage Development (BUILD) Program

Previously known as the Transportation Investment Generating Economic Recovery (TIGER) program, the BUILD program solicits applications from state and local governments for road, rail, transit, and port infrastructure projects. The proposed projects are often undertaken by multiple public entities in collaboration, and USDOT reviews the applications in a competitive, merit-based process.

From 2009 to 2018, the TIGER/BUILD program has awarded more than $7 billion, with fiscal year 2018 awards equal to $1.5 billion.

reimbursements for state or local agency expenditures, allowing funds to be spent quickly; USDOT subsequently reimburses the states (USDOT 2019).

We propose a program that would have the following characteristics (see also box 2 for a hypothetical example):

1. States increase their catalog of construction projects submitted for BUILD funding such that they have planned five years' worth of eligible projects.
    a. The federal government should reimburse production of these plans.
    b. Applications for BUILD grants in each year will include benefit-cost analysis of each project proposed.
    c. States must also indicate the time frame over which expenditures for each project will be made, after funds are provided by USDOT.
2. If the three-month average unemployment rate has risen at least 0.5 percentage points above its low in the previous 12 months, then the economy has entered a downturn, and the program becomes active (see also Sahm [2019], where this trigger was developed).
3. The baseline annual funding for BUILD would be $2 billion. The existence of a downturn automatically increases the authorization amount for BUILD grants, bringing forward the next four years' worth of funding and making it available in the quarter following the designation of a downturn. The extra funds will create a supplemental BUILD fund. Generally, this would mean quintupling the current spending authorization.
4. Among the set of projects that can expend at least half their funds within one year of award, USDOT will make supplemental BUILD fund project selection decisions on the basis of the net economic benefits of the program in the long run. Projects will be awarded to the projects in decreasing order of benefit-cost ratio until all funds are exhausted (or until a benefit-cost ratio of 2.0 is reached, whichever comes first).
5. In the default case, BUILD funding would be halved (relative to baseline) in the four subsequent fiscal years to help recoup used funds. However, if the three-month average unemployment rate rises 2 percentage points above its level at activation, BUILD funding in the fiscal year following the initial stimulus would be 2.5 times the baseline level, with the next three years' funding falling to half the baseline level. Our modeling of costs assumes that four years have elapsed since the initial stimulus year, and thus the fund has partially rebuilt, but in the rare event of a double-dip recession, the trigger would still generate an increase in funding even if four years have not elapsed.[7]

BOX 2.

A Hypothetical Example of the Proposal in Action

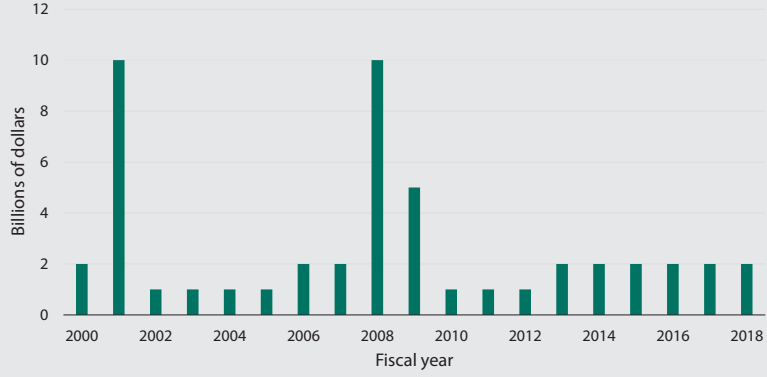
BUILD is initially authorized to spend $2 billion in a given year (fiscal year 1) and in each subsequent year (adjusted for inflation). During fiscal year 1 a downturn is declared. The supplemental BUILD fund is activated with $8 billion in budget authority, raising the total of BUILD to $10 billion.

USDOT administrators determine which state projects will expend at least 50 percent of funds within one year of approval. From this set of projects, USDOT selects those with the highest benefit-cost ratios, continuing to fund projects with successively lower benefit-cost ratios until the aggregate approved amounts equal $10 billion. No proposals with benefit-cost ratios below 2.0 will be funded; if projects with benefit-cost ratios above 2.0 are insufficient to exhaust the authorized funds, extra funds will be held in reserve.

During fiscal years 2 through 5, the baseline funding would be halved to $1 billion. Supposing that the unemployment rate rises to at least 2 percentage points above its initial level during fiscal year 2, however, the supplemental BUILD fund would instead extend and provide $5 billion in additional funds. Box figure 1 provides an illustration of the funding structure that would have occurred if this program had been active from 2000–18.

BOX FIGURE I.

Hypothetical Automatic Infrastructure Authorizations, 2000–18



Source: BLS 2000–18; author's calculations.

THE HAMILTON PROJECT

Equitable Growth

It is important to note that there will likely be continued spending out of the fiscal year 1 (and possibly fiscal year 2) authorization during the period in which spending is reduced to half the baseline level, given that transportation infrastructure projects typically cannot be completed within a single year.

DISCUSSION

The proposal outlined here offers the potential of improving macroeconomic stability not only by injecting cash into the economy when economic activity is declining, but also by altering agents' expectations for future economic growth. It is intended to exploit the benefits of federalism by combining state and local governments' expertise on local needs with federal government's role in financing and promoting macroeconomic stability. Thus both state and federal governments play crucial roles in the plan, and development of effective coordination among levels of government is important for the plan to succeed.

Next we discuss each of the five steps involved in the proposal to further explain the logic and implementation.

I. Development of the Catalog

Planning for projects that will be undertaken in the event of a recession is a crucial component of the plan, and is in our view a strict requirement of any policy proposal that will take advantage of the beneficial economic effect of infrastructure investment while remaining timely. State departments of transportation typically develop their expenditure plans in conjunction with metropolitan planning organizations that comprise local area transportation experts and professionals who are in a position to determine the benefits and costs of individual projects. If spending is to avoid the timeliness problems experienced by earlier infrastructure investment programs in response to economic slowdowns, a catalog of ready-to-go ("shovel-ready") projects must be developed, ready to implement upon recognition of a downturn. Since the motivation for developing this catalog is part of a program to stabilize the macroeconomy, it seems appropriate that the federal government should fund its creation. As noted below, during a downturn the decisions made on these proposals will depend more heavily than current processes do on benefit-cost ratios and timely execution, so these must be spelled out in each proposal. This emphasis on timely execution in particular is a change from current practice for BUILD proposals.

2. Declaration of a Downturn

Unlike some other automatic stabilizers whose spending increases naturally as unemployment rises (unemployment insurance) or incomes fall (Supplemental Nutrition Assistance Program, or SNAP), an infrastructure stabilizer will require a determination to be made that the economy is in a downturn and that spending should increase. Here we propose a rule based on the unemployment rate. This specific rule is not central to the argument. Instead, what is important is that the determination be based on ex ante determined outcomes, that it be as timely as possible, and that it be based on macroeconomic, rather than region- or sector-specific conditions.

3. Funding for Supplemental BUILD Funds

In the event of a declared economic downturn, we propose that a supplemental BUILD fund be activated and made available for current spending, with funding equivalent to four years' worth of normal BUILD funds. Once the downturn has ended, funds will be repaid into the supplemental BUILD fund over the subsequent four-year period as new BUILD spending is halved. This design is intended to allow the program to spur economic activity in a downturn while moderating the previous level of transportation infrastructure spending. In this way, the program partly avoids the current controversy about the appropriate level of infrastructure spending and focuses attention on its timing: overall (nominal) spending will be controlled under the program.

The baseline proposal envisions a quintupling of the BUILD obligation amount, although this would remain a very small amount relative to the national economy. In December 2018, for example, Transportation Secretary Chao announced $1.5 billion in BUILD awards. If the program at small scale is deemed a success, consideration could be given to scaling it up. Current BUILD grants are a maximum of 80 percent federal funds, with a minimum of 20 percent coming from states or other sources. The federal share could and perhaps should be increased to 90 or 95 percent for these supplemental BUILD grants to encourage spending the full authorized amount.

4. Project Selection

The intention of these supplemental BUILD grants is to induce the creation of high-productivity projects that can be built quickly. The proposal limits consideration to projects that can expend at least half the funds within one year of obligation, with the balance to be spent over subsequent years.[8]

This is designed to limit the supplemental funding to shovel-ready projects with a quick spend rate in order to deliver the stimulus while the economy

is still in a downturn. The design is intended to ensure that only projects with high benefit-cost ratios are funded, specifically those that lay the groundwork for future economic growth. Analysis by CBO and FHWA suggests that the highest payoffs at the margin are in major repairs to non-interstate urban highways (CBO 2016, Fig. 2-1). States, with the assurance of federal funds available, would not need to wait for the federal government to send the money: they could undertake these projects almost immediately, with the assurance that BUILD would reimburse them when the projects were completed.

5. Return to Baseline

The four-year period following a trigger of the program would recoup some of the initial outlay by halving funding relative to baseline. If it is deemed desirable to use this program as a mechanism to increase total transportation investment further, then this feature could be relaxed and BUILD authorizations after a trigger year could be set at the baseline level.

Implementation of such a program would induce additional infrastructure spending in economic downturns, with presumably salubrious effects on current activity through direct spending increases and through the expectations channel (i.e., consumers, workers, and businesses would anticipate additional infrastructure-related economic activity during downturns). While the timing of investments would change, total investment spending would not deviate too far from original levels. The strong emphasis on benefit-cost analysis should result in more economic benefit for each dollar spent than usual.

ADVANTAGES AND CHALLENGES TO A HIGHWAY SPENDING AUTOMATIC STABILIZER

There are several important considerations that govern the design of an automatic infrastructure stabilizer. These relate to the well-accepted view that effective fiscal stimulus should be targeted, timely, and temporary (Elmendorf and Furman 2008). Spending directed to highway investment will in most recessions be well targeted to the lower-wage workers and the firms that are harmed during a downturn. The construction sector, to which the great majority of funds expended under the present proposal would be directed, is a particularly cyclical industry, with employment rising during expansions and frequently falling sharply during national recessions (Hadi 2011). Furthermore, of the 337,000 employees in the North American Industry Classification System (NAICS) sector Highway, Street and Bridge Construction (NAICS 237300) in 2017, the majority—more than 222,000—were in construction occupations such as laborers, pipelayers, and machine operators, while just 19,000 (fewer than 6 percent) were in management.

Among the construction employees, the average hourly wage was $23.42 in May 2017, well below the average of $26.22 reported by BLS for that month, so these are relatively low-paying jobs even in a strong economy (BLS 2017). It is thus plausible to expect that funds directed to increasing demand for the services of the highway construction industry would be well targeted to firms and workers who would spend them at high rates. This is consistent with estimates of short-run multipliers—as high as 2.2—for infrastructure grants to states and localities that are among the highest of any potential stimulus.

The more complex question is whether a highway infrastructure spending plan can be temporary and timely while remaining productive. This issue requires a brief discussion of the debate on the value of additional infrastructure spending. In principle, there would be substantial benefits from a timely stimulus package that would increase the nation's stock of productive public wealth while at the same time providing well-targeted liquidity to a sector characterized by weak demand and workers with high marginal propensities to consume. Such a program can complement other automatic stabilizers, such as those that are focused on restoring liquidity and thus supporting the consumption of unemployed and otherwise distressed households. By investing in the nation's physical capital, an infrastructure program could complement these consumption-based programs with an investment-based program. Encouraging investment and hiring in the short run could improve expectations of future economic and productivity growth more than would a purely consumption-based stimulus program.

This argument, however, is contingent on conducting investments in such a way that they increase subsequent economic growth. Here, there is considerable dispute among the many different scholars and practitioners who have examined the evidence, with some finding a strong need for infrastructure projects and others disagreeing. The ASCE, for example, assigns the United States a grade of D+ in its 2017 Infrastructure Report Card (ASCE 2017). ASCE estimates that the United States needs a $2 trillion investment plan to bring the stock to a state of good repair and raise the grade to B (ASCE 2017).

In economics, where need is typically defined in terms of the economic value of additional infrastructure spending, results have been more varied. Turner (2019), for example, concludes that the state of repair of the road system is improving already, that new investments simply induce more driving, and that any new local activity associated with new roads is largely redirected from other locations. Taken together, these conclusions suggest low marginal productivity of transportation investments, and that massive

new investments in transportation infrastructure are unlikely to be worth their costs. CBO (2016) concurs with the evidence on improvements in road quality over time, but concludes that state and local governments do not emphasize economic benefits of investments in their decision making, which helps to explain Turner's (2019) conclusion. CBO's analysis implies that there is significant heterogeneity in the economic benefits produced by the variety of investments in the road system, and that reallocating spending toward projects with high benefit-cost ratios would significantly increase the productive effect of federal spending. Given what is known about benefits and costs of various types of projects in various places, this change would allocate significantly more resources to increasing spending on major repairs to urban, non-interstate federal-aid highways (CBO 2016, Fig. 2-1).

The variety of returns to different highway investment projects suggests that project selection is a crucial determinant of the overall economic impact of a planned investment. Given the need to select high-return projects, it is natural to be concerned about the timeliness of productive investments. How can state departments of transportation implement projects quickly enough that stimulus spending does not come too late—for example, after the recession is already over? Under the usual process, infrastructure spending requires a long process of environmental review, planning, and permitting; most of these steps are at the state level but some involve federal agencies as well. The typical requirement in the highways program is that federal funds must be obligated by states within four years of their becoming available (NASEM 2014). This is not fast enough to be ideal for the vast majority of recessions—only one documented recession in American history has lasted at least four years, and that was in 1873–79. That being said, the economy generally still struggles for years after a recession's end with the unemployment rate often peaking well after the recession has officially ended and the Federal Reserve remaining in an accommodative stance for years after the official end of a recession. Still, a successful program design for stimulative infrastructure spending must provide a means of significantly speeding up the delivery of funds to states, as an automatic stabilizer would be expected to do, and to speed up spending of funds by the states once they are received.

One approach to the last concern—speeding up spending by the states—is to simply require that funds be spent quickly. This was the approach taken in the American Recovery and Reinvestment Act of 2009 (ARRA), which is often identified as an example of the successful use of infrastructure spending as stimulus (NASEM 2014). The intention of these regulations was to induce states to spend the additional stimulus funds on shovel-ready

projects that could deliver fiscal stimulus quickly, partly because of the historical record of slow delivery of infrastructure stimulus.

Nonetheless, almost one-third of ARRA's highway funds and more than 90 percent of its transit funds had not been expended by March 2012, 33 months after the official recession trough. While the actual stimulus—construction contracts delivered by states to construction firms—may have already occurred, and the federal reimbursement to states was what was lagging, this still suggests a relatively slow payout under ARRA. In the case of the 2007–9 recession, it is arguable that this slow payout was a feature, not a bug: the recession was long and deep and the labor market remained weak long after the official end of the recession. From this perspective, one could argue that an infrastructure stabilizer with a relatively long spend-out period (compared to unemployment insurance, for example) can serve as insurance against a long recession or a sluggish recovery.

In addition, state transportation officials found the requirement to spend money quickly to be onerous. Many of the projects undertaken required low levels of planning and review, suggesting that they were more minor in nature, such as repaving roads rather than implementing new construction projects (Meyer 2012). This may in turn undermine a major perceived benefit of an infrastructure investment plan: the fact that investment in a productive asset—public works—will have beneficial effects on expectations of future economic growth by firms and households, increasing the stimulative effect of the spending relative to other forms of stabilization like unemployment compensation.

The ability of a plan to overcome this obstacle is perhaps the most important consideration in determining the value of an infrastructure investment plan as automatic stimulus. In order for an infrastructure stimulus plan to achieve its promise, and to distinguish it from other automatic stabilizers that support consumption, it is important for the investments it supports to have the highest possible productivity and consumption payoff.

The most natural method of overcoming the project selection difficulties introduced by planning delays is for states (specifically state departments of transportation) in conjunction with metropolitan planning organizations to conduct those reviews in advance, and to create a catalog of approved projects that are ready to go at all times (NASEM 2014). This catalog would need to be continually refreshed for two reasons. First, designs permitting, environmental impact reviews and other necessary preparations are limited in duration. Because technology and conditions change over time, these reviews and other preparations become outdated and will need to be examined. Second, and perhaps just as constraining, if they are truly high-

payoff projects, they will be high priorities for the states and will get built under the regular process, even if the additional funds from a stimulus package do not become available because the economy remains in a growth phase.

Questions and Concerns

In this section we present questions and concerns that might arise with respect to the policy proposal, and our responses to those questions and concerns.

1. The proposal seems likely to concentrate additional transportation spending in a few states rather than spreading it out evenly across the country.

Yes, the proposal would use benefit-cost analysis, conditional on the timeliness of project spending, to make decisions on which projects to fund. This structure potentially comes at the cost of abandoning an even distribution of funding across states on population grounds. But it is fair in the sense that all states have an equal opportunity to submit proposals for projects that generate high returns in short time frames.

2. Evidence suggests that, in the long run, system expansions simply induce more driving and business relocations, damaging the environment rather than contributing to economic growth. Won't the funds spent on system expansion go to waste?

By emphasizing projects that have fast spend-out and high benefit-cost ratios, we anticipate that the bulk of funding will be dedicated to maintenance and major repairs to urban non-interstate highways. Such projects may improve environmental outcomes by reducing congestion. In addition, the baseline proposal does not drastically increase spending over a five-year period, but instead concentrates it in downturns, and on quick-turnaround and high-benefit projects. Overall, the proposal should increase the net economic benefits from the nation's highway investments.

3. Are benefit-cost analyses likely to be carefully done and weighted appropriately in decision making?

It is important for the effectiveness of the nation's overall transportation investment program that project benefits and costs are carefully analyzed and considered before funds are expended, quite apart from the implementation of the program described here. The USDOT Office of Inspector General discusses this important topic and suggests sensible ways to make progress (Office of Inspector General 2018).

4. How will the plan avoid delays in spending that might inadvertently serve to overheat an already growing economy?

A recent TRB report included an evaluation of attempts to use infrastructure spending as economic stimulus in recessions prior to 2007–9, and concluded, "Each was enacted after the recession that apparently motivated it had ended [according to the business cycle definitions of the National Bureau of Economic Research]" (NASEM 2014). That is, not only were the intended stimulus dollars delivered when the economy was already recovering, but also the decision to deliver those dollars was taken when the economy was already in recovery.

There are several aspects of the plan intended to avoid this problem. First, states prepare project proposals to be used over the next several years in full knowledge of the decision rules that will be used to allocate funding in both expansions and downturns. USDOT will already possess these proposals when a downturn is declared, therefore no congressional or administration funding action will be required. Second, the choice of proposals is quite deterministic, allowing for quick selection of projects. Finally, there is a requirement that the proposals funded will be those that can spend the funds quickly, ensuring that the timing matches the business cycle. It is also worth reiterating here that in the event of a slow labor market recovery, spending that spills into subsequent years may be considered a feature rather than a bug.

5. How will the proposal address the fact that state departments of transportation and agencies are limited in the amount of contracting they can do on short notice?

State departments of transportation and agencies are staffed for the average year, and not for a year with large additional amounts of funding being distributed. States will need to consider their own constraints when developing proposals to submit to BUILD. USDOT can enforce the requirement that funds be spent quickly by reimbursing only those funds expended consistent with the agreed-on schedule.

6. One concern is that the additional funds authorized to go to states for their supplemental BUILD projects might simply replace funds that states or localities would have spent themselves absent a federal subsidy, resulting in no net increase. How would one avoid this?

This is a concern in many fiscal stimulus programs. A possible response would be to include maintenance of effort requirements in supplemental BUILD grants. These were included in ARRA transportation infrastructure grants, with mixed success—see NASEM (2014) for further discussion.

7. Is the program as described here too small to have a meaningful effect on macroeconomic stability?

A program that produced additional spending of around $6 billion to $8 billion in the first year of an economic downturn would indeed be small. However, it might be a wise strategy to test the program before trying to scale it up. Ultimately, an automatic infrastructure stabilizer could be an order of magnitude larger ($60 billion to $80 billion), but such a program would require a considerably larger base than BUILD.

Conclusion

Infrastructure's important role in the economy, the cyclicality of construction employment and public investment spending, and the need for a more complete suite of fiscal stimulus programs combine to argue in favor of an automated infrastructure investment plan. The proposal described here, initially set to a baseline annual $2 billion, is based on USDOT's existing BUILD program, which is designed to deliver federal funds to state and local agencies to pursue special projects. By leveraging BUILD, our proposal takes advantage of the combination of local knowledge of economic and transportation conditions and federal interest in macroeconomic stability.

Acknowledgments

The views expressed here are mine, and do not necessarily reflect those of the Federal Reserve Bank of New York or the Federal Reserve System. I thank Heather Boushey, Richard Crump, Ryan Nunn, Jay Shambaugh, and Andrea Tambalotti for comments which improved the paper. Remaining errors are my own.

Endnotes

1. We use the terms "infrastructure" and "public capital" interchangeably in this paper. Here, the terms refer to nondefense physical capital held by public sector entities. Prominent examples include roads, schools, and sewerage systems. In the United States this definition excludes some elements of the capital stock that are sometimes considered infrastructure, but that are typically privately held, such as the electric grid and telecommunications infrastructure.
2. Because of their public nature, it is difficult to determine a market value for public capital stocks. The estimates reported here are based on IMF's Investment and Public Capital Stock Dataset, which uses the perpetual inventory technique to provide estimates of the replacement value of the infrastructure stock in member countries (IMF 2017). Because infrastructure services are not frequently sold in markets, infrastructure has no market value and its replacement cost is the primary alternative measure. We produce these estimates by converting the IMF's constant 2011 international dollar figures into nominal dollars.
3. See, for example, the 2017 Infrastructure Report Card of the American Society of Civil Engineers (American Society of Civil Engineers [ASCE] 2017).

4. That total excludes other elements of the highway program like maintenance ($24 billion), administration ($20 billion), law enforcement ($18 billion) and interest on debt ($11 billion); see figure 3b for the state component of these amounts.
5. Direct research evidence on this issue is difficult to obtain because of the endogeneity of state borrowing costs.
6. This chapter focuses on transportation infrastructure, but the destabilizing quality we describe may pertain to other types of infrastructure as well.
7. It is important to consider the conditions under which a trigger can be reactivated. One possibility is to allow the trigger to reactivate only if the three-month average unemployment rate is no longer 0.5 percentage points higher than its low in the previous 12 months.
8. It might be possible to incorporate accounting for scale—for example, relaxing the restriction for projects above a certain cost threshold such that they would only need to be able to expend a fourth of funds within one year of obligation rather than half—but this could introduce complexity as well as opportunities for gaming.

References

American Society of Civil Engineers (ASCE). 2017. "2017 Infrastructure Report Card: A Comprehensive Assessment of America's Infrastructure." American Society of Civil Engineers, Reston, VA.

Boushey, Heather, Ryan Nunn, Jimmy O'Donnell, and Jay Shambaugh. 2019. "The Damage Done by Recessions and How to Respond" In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

Bureau of Economic Analysis (BEA). 1950–2018a. "Real Government Gross Investment: State and Local: Gross Investment." Bureau of Economic Analysis, U.S. Department of Labor, Washington, DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1965–2018b. "10-Year Treasury Constant Maturity Rate." Bureau of Economic Analysis, U.S. Department of Labor, Washington, DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1970–2018c. "Contributions to Percent Change in Real Gross Domestic Product: Government Gross Investment: State and Local." Bureau of Economic Analysis, U.S. Department of Labor, Washington, DC. Retrieved from FRED, Federal Reserve Bank of St. Louis, St. Louis, MO.

———. 1970–2018d. "Real Gross Domestic Product." Bureau of Economic Analysis, U.S. Department of Labor, Washington, DC. Accessed via Haver Analytics, New York, NY.

Bureau of Labor Statistics (BLS). 1950–2018. "Current Population Survey." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 2017. "Occupational Employment Survey." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

Congressional Budget Office (CBO). 1963–2017. "Potential Gross Domestic Product." Congressional Budget Office, Washington, DC. Retrieved from Haver, New York, NY.

———. 2016. *Approaches to Making Federal Highway Spending More Productive.* Washington, DC: Congressional Budget Office.

Elmendorf, Douglas W., and Jason Furman. 2008, January 26. "Three Keys to Effective Fiscal Stimulus." Op-Ed. Brookings Institution, Washington, DC.

Federal Highway Administration (FHWA). 1963–2017. "Table MF-1: State Motor-Fuel Taxes and Related Receipts." Federal Highway Administration, U.S. Department of Transportation, Washington, DC.

———. 2018. "Table HF-10: Funding for Highways and Disposition of Highway-User Revenues, All Units of Government, 2016." Federal Highway Administration, U.S. Department of Transportation, Washington, DC.

Hadi, Adam. 2011. "Construction Employment Peaks before the Recession and Falls Sharply throughout It." *Monthly Labor Review* (April): 24–27.

International Monetary Fund (IMF). 2017. *Estimating the Stock of Public Capital in 170 Countries*. Updated January 2017. Washington, DC: International Monetary Fund.

Leduc, Sylvain, and Daniel Wilson. 2013a. "Roads to Prosperity or Bridges to Nowhere? Theory and Evidence on the Impact of Public Infrastructure Investment." In *NBER Macroeconomics Annual*, vol. 27, edited by Daron Acemoglu, Jonathan Parker, and Michael Woodford, 89–142. Chicago, IL: University of Chicago Press.

———. 2013b. *Should Transportation Funding Be Included in a Stimulus Program?* Washington, DC: Transportation Research Board.

Meyer, Michael D. 2012. *Impact of Program Implementation on the Effectiveness of the American Recovery and Reinvestment Act: The Case of Transportation*. Special Report 312: Transportation Investments in Response to Economic Downturns. Washington, DC: Transportation Research Board.

National Academies of Sciences, Engineering, and Medicine (NASEM). 2014. *Transportation Investments in Response to Economic Downturns*. Washington, DC: National Academies Press.

Oates, Wallace. 1972. *Fiscal Federalism*. New York, NY: Harcourt Brace Jovanovich.

Office of Inspector General (OIG). 2018. "Improvements Are Needed to Strengthen the Benefit-Cost Analysis Process for the TIGER Discretionary Grant Program." Office of Inspector General, U.S. Department of Transportation, Washington, DC.

Sahm, Claudia. 2019. "Direct Stimulus Payments to Individuals." In *Recession Ready: Fiscal Policies to Stabilize the American Economy*, edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

Turner, Matthew A. 2019. "Local Transportation Policy and Economic Opportunity." Policy Proposal 2019-03, The Hamilton Project, Brookings Institution, Washington, DC.

U.S. Census Bureau. 2012, August 30. "Census Bureau Reports There Are 89,004 Local Governments in the United States." Newsroom Archive. U.S. Census Bureau, Washington, DC.

U.S. Department of Transportation (USDOT). 2019. "About BUILD Grants." Updated Wednesday, April 17, 2019. U.S. Department of Transportation, Washington, DC.

Whalen, Charles J., and Felix Reichling. 2015. "The Fiscal Multiplier and Economic Policy Analysis in the United States." Working Paper 2015-02, Congressional Budget Office, Washington, DC.

Unemployment Insurance and Macroeconomic Stabilization

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Abstract

Unemployment insurance (UI) provides an important cushion for workers who lose their jobs. In addition, UI may act as a macroeconomic stabilizer during recessions. This chapter examines UI's macroeconomic stabilization role, considering both the regular UI program which provides benefits to short-term unemployed workers as well as automatic and emergency extensions of benefits that cover long-term unemployed workers. We make a number of analytic points concerning the macroeconomic stabilization role of UI. First, recipiency rates in the regular UI program are quite low. Second, the automatic component of benefit extensions, Extended Benefits (EB), has played almost no role historically in providing timely, countercyclical stimulus while emergency programs are subject to implementation lags. Additionally, except during an exceptionally high and sustained period of unemployment, large UI extensions have limited scope to act as macroeconomic stabilizers even if they were made automatic because relatively few individuals reach long-term unemployment. Finally, the output effects from increasing the benefit amount for short-term unemployed are constrained by estimated consumption responses of below 1. We propose five changes to the UI system that would increase UI benefits during recessions and improve the macroeconomic stabilization role: (I) Expand eligibility and encourage take-up of regular UI benefits. (II) Make EB fully federally financed. (III) Remove look-back provisions from EB triggers that make automatic extensions turn off during periods of prolonged unemployment. (IV) Add additional automatic extensions to increase benefits during periods of extremely high unemployment. (V) Add an automatic federally financed increase in the weekly UI benefit amount during recessions. We caution that these reforms may not by themselves have a large macroeconomic impact. Still, they would help to better align the UI system with its *microeconomic* objective. Together with other policy reforms to automatic stabilizers, these proposed changes to the UI system could help to mitigate future recessions.

Introduction

Government-administered unemployment insurance (UI) benefits serve society in two ways. First, they provide a cushion for individuals experiencing a period of joblessness. UI kept millions of jobless workers and their families out of poverty during the Great Recession. Second, by transferring resources to households with high propensities to consume—those that spend, rather than save, additional income—and by mitigating income risk from job loss, UI can increase aggregate expenditure in periods of economic slack and serve as a *macroeconomic stabilizer.*

This chapter concerns the macroeconomic stabilizer role of UI and the scope for enhancing its potency. We start by reviewing the current UI system in the United States. In brief, each state administers its own system, known as the regular UI program. Regular UI provides up to 26 weeks of benefits in most states. A permanent, joint state-federal program called Extended Benefits (EB) automatically extends the number of weeks of benefits available when a state's unemployment rate crosses a statutory threshold. In addition, during national recessions Congress has historically passed legislation providing emergency benefits that further extend the number of weeks an individual can collect.

We then make four analytic points:

1. Recipiency rates among short-term unemployed are quite low, in part due to how some states implement the regular UI program. If all states followed the practices of high recipiency rate states, then UI transfers would reach substantially more individuals, especially during recessions.
2. Historically, EB, the automatic extension component of UI, has played almost no role in providing timely, countercyclical stimulus. Emergency programs have reached more individuals during periods of high unemployment but are subject to implementation lags.
3. Except during an exceptionally high and sustained period of unemployment, large UI extensions have limited scope to act as macroeconomic stabilizers even if they were made automatic. Instead, during typical recessions or early in severe recessions, not enough individuals reach long-term unemployment to make UI extensions quantitatively important as macroeconomic stimulus.
4. A federally financed increase in the benefit amount for the short-term unemployed—the bulk of the unemployed early in a recession—likely has an output multiplier of between 0.5 and 1 when monetary policy is constrained due to estimated propensities to spend of well below 1, but the evidence cannot rule out a multiplier as small as 0 or as large as 2.

We then offer proposals that would improve on the countercyclical provision of UI benefits: (I) Expand eligibility and encourage take-up of regular UI benefits. (II) Make EB fully federally financed. (III) Remove look-back provisions from EB triggers that make automatic extensions turn off during periods of prolonged unemployment. (IV) Add additional EB triggers at 9 percent and 10 percent unemployment rates, which would cumulatively provide individuals up to 73 total weeks of weeks of benefits in periods of very high unemployment. And (V) add a federally financed increase in the weekly benefit amount when a state triggers onto EB.[1] For the reasons discussed in the body of the chapter, we do not expect adoption of these reforms to have a large macroeconomic impact. Still, they would help to better align the UI system with its *microeconomic* objective and also somewhat improve the automatic stabilizer role that UI plays. As part of a portfolio of policy reforms to enhance automatic stabilization, these proposals could help to mitigate the severity and duration of economic downturns.

The chapter proceeds in four sections. The first overviews the current UI system and the historical pattern of UI transfers. The second section examines in greater detail the potential for UI extensions to raise transfers, including a detailed accounting of UI transfers during the Great Recession and simulations of unemployment duration in several different recession scenarios. The third section reviews evidence on the marginal propensity to consume (MPC) out of UI benefits, other effects of UI including on job search effort, and the overall UI multiplier. The final section details the policy proposals and presents estimates of their quantitative impact in different recession scenarios. The chapter also includes three online appendices.[2] Appendix A contains additional details on the simulation exercises. Appendix B reviews the academic literature on the theory of optimal UI transfers. Appendix C lists important characteristics of the regular UI program by state.

Background

This section describes the UI system in the United States, including the role of the EB program and temporary emergency extensions enacted during periods of high unemployment.

Each state administers its own UI program, including determining eligibility for benefit receipt. Eligibility depends on both nonmonetary and monetary factors. In almost all states, nonmonetary eligibility refers to the requirement that the individual became unemployed involuntarily and not for cause and that the individual engage in active search for new employment if not on temporary layoff. Monetary eligibility refers to

sufficient prior earnings over the previous quarters. Prior earnings also determine the individual's weekly benefit amount. In 2018 the average weekly benefit amount was $359 but with substantial variation (a standard deviation of $75) across states.

Eligible individuals who file a UI claim first receive benefits under their regular UI state program. These benefits are paid from a state's UI trust fund that is financed by payroll taxes levied on employers. Prior to 2008 every state had a maximum potential benefit duration for regular UI benefits of at least 26 weeks. As of this writing, 39 states and the District of Columbia offer up to 26 weeks of benefits, Massachusetts and Montana offer up to 30 and 28 weeks, respectively, and 9 states (Arkansas, Florida, Georgia, Idaho, Kansas, Michigan, Missouri, North Carolina, South Carolina) cap regular UI benefits at fewer than 26 weeks.[3]

The federal EB program triggers on when unemployment in a state exceeds certain statutory requirements known as trigger thresholds. When this happens, UI recipients in that state who have maxed out on their weeks of benefits may receive up to an additional 20 weeks of benefits depending on the state's unemployment rate. Under current law, the federal government finances 50 percent of EB. Table 1, adapted from Chodorow-Reich, Coglianese, and Karabarbounis (2019), lists the eligibility criteria for Tier

TABLE I.

Extended Benefits Criteria

Tier	Weeks	Triggers
1	13	A state must have either • an insured unemployment rate of at least 5 percent and that is at least 120 percent larger than the average of the last two years during the same reporting period; • (optional) an insured unemployment rate of at least 6 percent; or • (optional) a total unemployment rate of at least 6.5 percent and that is at least 110 percent of the minimum of the rate during the same reporting period in the last two years.
2	7	(Optional) A state must have a total unemployment rate of at least 8 percent and that is at least 110 percent of the minimum of the rate during the same reporting period in the last two years.

Source: Adapted from Chodorow-Reich, Coglianese, and Karabarbounis 2019 (table A.1).

Note: The insured unemployment rate used for the EB triggers is the average of the insured unemployment rate in the 13 weeks ending 2 weeks before the week of the trigger notice. The total unemployment rate used for the EB triggers is the average of the total unemployment rate in the three months ending with the last month of data reported as of the third Friday before the Sunday starting the week of the trigger notice. All programs and tiers obey a 13-week rule whereby once triggered on a tier a state remains on that tier for at least 13 weeks (barring any changes in law), and once triggered off a tier the state remains off for at least 13 weeks.

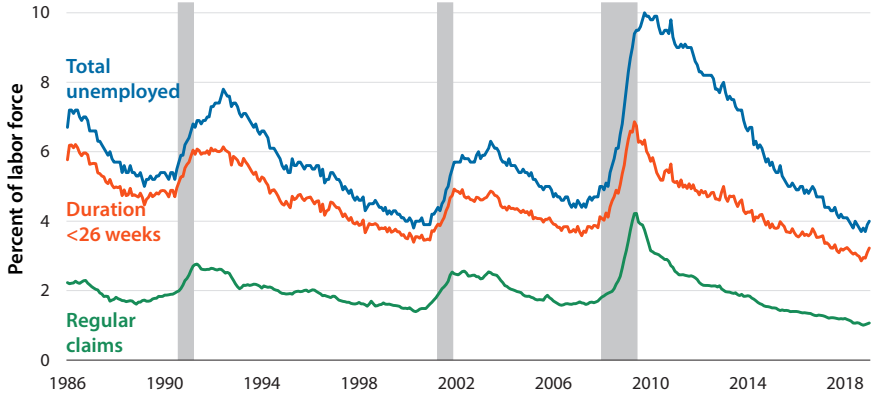
1 (13 weeks of benefits) and Tier 2 (7 additional weeks of benefits) of EB. Tier 1 contains one mandatory trigger based on both the level and the rate of increase in the insured unemployment rate (IUR)—the ratio of regular UI claimants to employment covered by UI law—and two optional triggers, one based on the level of the IUR and the other based on the level and rate of increase in the total unemployment rate (TUR). The TUR is a broader measure of unemployment that includes all unemployed workers, regardless of whether they are receiving UI. The Tier 2 trigger is entirely optional and depends on the current and past TUR. Whether a state adopts the optional triggers depends on state law. Essentially all triggers onto EB during the 2008–13 period occurred via the TUR triggers rather than the IUR triggers, which have become harder to reach as recipiency rates in regular UI programs have declined.

The federal government also may enact temporary emergency legislation to provide additional weeks of benefits beyond EB, commonly known as Emergency Unemployment Compensation (EUC). Typically, such legislation provides for a uniform increase in weeks in all states and additional weeks in states with high unemployment. In addition, such benefits are fully paid for by the federal government.

Figures 1 and 2 summarize historical patterns of UI recipiency. Figure 1 focuses on the regular UI state program. The green line illustrates the stabilizer role of UI; in each recession (demarcated by the gray shaded areas), the share of the labor force receiving regular UI benefits rises, with the

FIGURE I.

Regular UI Claims, 1986–2019



Source: U.S. Department of Labor 1986–2019, Bureau of Labor Statistics 1986–2019b.

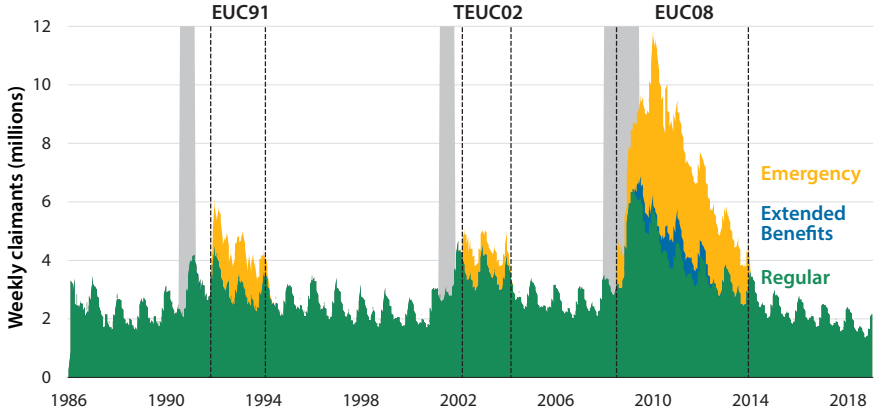
Note: Shaded areas denote recessions.

peak occurring roughly coincident with the end of the recession. The large vertical differences between the green line and the orange and blue lines, on the other hand, demonstrate the relatively low recipiency rate of regular UI benefits. For example, in 2018 only 28 percent of unemployed individuals, or 35 percent of unemployed individuals reporting unemployment duration of fewer than 26 weeks, received regular UI benefits. The low recipiency rate reflects a combination of restrictive monetary and nonmonetary eligibility criteria as well as a take-up rate of well less than one among qualifying individuals.

Figure 2 compares regular UI benefit receipt with EB and emergency programs. The gray shaded areas again demarcate recessions, while the dashed vertical lines show periods during which emergency programs were in effect. Three features stand out. First, the vast majority of UI recipients receive regular UI state benefits, and did so even during the 1991 and 2002 emergency programs. Why? All individuals start by receiving regular UI state benefits; even during these periods of heightened unemployment many individuals became reemployed quickly, leaving fewer individuals who are unemployed for longer than 26 weeks. Second, there is a policy lag between the onset of a recession and the enactment of an emergency program. Indeed, the 1991 and 2002 emergency programs began *after* the recessions had already ended. Third, EB has historically accounted for little

FIGURE 2.

Number of UI Recipients, 1986–2018



Source: U.S. Department of Labor 1986–2019.

Note: Gray, shaded areas denote recessions. EUC91 refers to the Emergency Unemployment Compensation Act of 1991. TEUC02 refers to the temporary extended unemployment compensation under the Job Creation and Worker Assistance Act of 2002. EUC08 refers to the EUC enacted under the Supplemental Appropriations Act of 2008.

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benefit receipt even among the long-term unemployed who are receiving benefits.[4]

To summarize, UI payments increase early in recessions primarily because more individuals receive regular UI program benefits. In contrast, extensions of UI benefits have historically played a surprisingly small role in providing macroeconomic stimulus early in recessions. Temporary federal emergency programs typically ramp up transfers late in recessions or even after the recession has ended, while the automatic part of benefit extensions, EB, has accounted for very little benefit receipt historically.

UI Extensions and UI Transfers

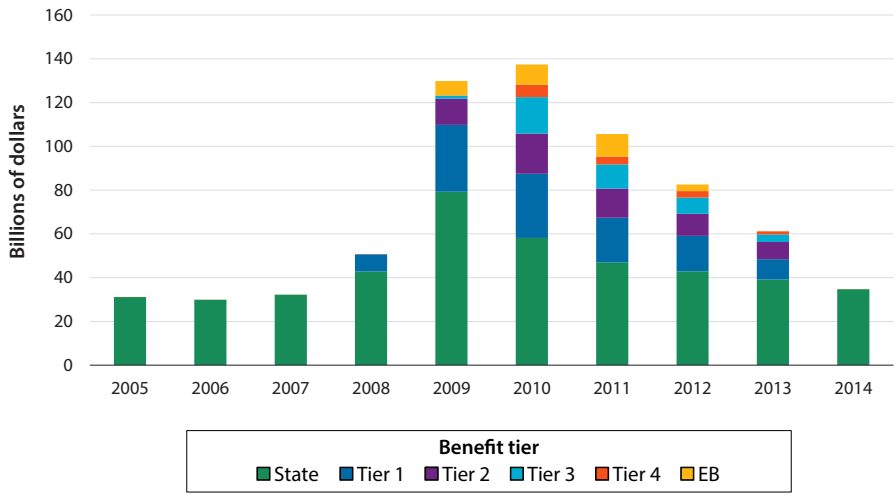
This section investigates further the scope for UI extensions to affect the magnitude of UI transfers. It shows that, except in historically rare circumstances of very high and persistent unemployment, benefit extensions have only a modest effect on total UI transfers because relatively few individuals reach very long-term unemployment.

UI EXTENSIONS DURING THE GREAT RECESSION

The Great Recession offers a useful starting point for assessing the potential for UI benefit extensions to increase total UI transfers. The period 2008–13

FIGURE 3.

UI Spending By Tier, 2005–14



Source: U.S. Department of Labor 2005–14; authors' calculations.

Note: Amounts are not adjusted for inflation. Each tier provides additional maximum weeks of benefits according to unemployment rate thresholds specified in law.

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featured a series of benefit extensions—both automatic and discretionary—that pushed the maximum number of consecutive weeks an individual in a high unemployment state could receive UI to a record 99 weeks. At the same time, the unemployment rate rose from a prerecession low of 4.4 percent in May 2007 to a peak of 10.0 percent in October 2009, and did not fall below 8.0 percent until September 2012.

Figure 3 shows total UI outlays over 2005–14 by benefit tier (i.e., state-provided regular UI, EB, and the four tiers of EUC benefits). Before the Great Recession began, virtually all UI payments consisted of regular UI state benefits. Federal emergency legislation provided EUC benefits that began in July 2008, which allowed individuals in all 50 states and the District of Columbia to receive an additional 13 weeks of benefits. This was expanded in November 2008 to provide 20 (rather than 13) weeks of additional benefits in all 50 states and the District, and an additional 13 weeks of benefits in states with an unemployment rate above 6 percent. Of the $18 billion increase in total UI transfers in 2008 relative to 2007, these benefit extensions account for $8 billion and additional claims of regular UI state benefits account for the remainder.

The national unemployment rate averaged 9.3 percent in 2009 and total UI payments reached $130 billion. The $98 billion increase in UI payments between 2007 and 2009 demonstrates the potential for the UI system to serve as a macroeconomic stabilizer. However, figure 3 shows that roughly half ($47 billion) of this increase occurred solely as the result of additional claims of regular UI benefits. An additional $31 billion of the increase came from Tier 1 EUC benefits covering the first 20 additional weeks of benefit receipt after exhaustion of regular UI benefits. Because of the high unemployment rate, a number of states already qualified for an additional 20 weeks of benefits under the EB program. Therefore, of the $98 billion increase in UI in 2009 relative to 2007, at least $64 billion could have occurred even without *any* new federal legislation.[5] This result simply reflects the fact that throughout 2009 relatively few unemployed workers had been unemployed for more than 46 weeks.

The new tiers of EUC benefits play a more important role starting in 2010. Their increased importance largely reflects the shifting distribution of unemployed workers toward longer durations by that year. Nonetheless, even in 2010 the majority of UI went to regular UI or EUC Tier 1 claimants who had fewer than 46 weeks of benefit receipt. Only $15 billion went to claimants on EUC Tier 4 or EB who had duration greater than 73 weeks. A similar pattern holds in 2011 and 2012.

The Great Recession therefore offers three lessons for the scope for increasing UI transfers during recessions:

1. Even in a severe recession, regular UI provides the bulk of the increase in transfers. As such, reforms to enhance the automatic stabilizer properties of UI should also address regular UI benefits.
2. Even in a severe recession, early on, relatively few unemployed workers have duration long enough for UI extensions to affect them.
3. In the later years of the Great Recession, UI extensions raised total UI transfers by about 0.5 percent of GDP, but very little of this increase came from payments to individuals with duration longer than 73 weeks.

EVIDENCE FROM SIMULATIONS

The next recession will have a different trajectory from that of the Great Recession. This subsection complements the previous analysis by using labor market simulations to explore the distribution of unemployment duration under a wide array of unemployment rate paths.

We consistently find the following patterns:

1. Most UI-eligible individuals are unemployed for 26 weeks or less.
2. Rarely do a substantial share of the unemployed have a duration past 46 weeks, except for the later years in the most severe scenario.
3. The share of unemployed with duration longer than 73 weeks remains small even in the most severe scenario.

The simulations build from individual-level labor force transitions, which depend on both the business cycle and an individual's labor market history. Online appendix A describes the procedure in detail. In brief, we start by dividing labor market status into four categories: employed, unemployed and UI-eligible, unemployed and UI-ineligible, or nonparticipating. We construct monthly transition rates across these labor market statuses, accounting for differences across states as well as the difficulty that long-term unemployed have in finding employment.[6] This analysis enables us to simulate unemployment in different recessions.

Figure 4a plots the path of the unemployment rate and figure 4b shows the cross-sectional duration distribution of unemployment at the unemployment rate peak for a simulated recession that approximates the experience of the Great Recession, which we label the Severe Recession.[7] As in the Great Recession, the simulated unemployment rate increases by more than 5 percentage points before falling steadily during the recovery. The peak in the simulated unemployment rate occurs about two and a

half years after the start of the recession. Even at the peak, relatively few unemployed individuals have very long durations, with two thirds of the unemployed having spells of less than 26 weeks and 85 percent having spells of less than 46 weeks. Only 5 percent of unemployed workers have unemployment spells longer than 73 weeks.

We also consider three additional recession scenarios: Mild, Short Severe, and Very Severe Recessions. In the Very Severe Recession, we multiply the inflows into unemployment by 150 percent and multiply the inflows into employment by 50 percent relative to the Severe Recession. In the Mild Recession, we instead multiply inflows into unemployment by 50 percent and inflows into employment by 150 percent. Finally, in a Short Severe Recession, we alter the flows as in the Very Severe Recession but force these fluctuations to revert in half of the time.[8]

Figure 5 shows for each scenario the number of unemployed individuals (as a fraction of the labor force) by UI eligibility and, for those who are potentially UI-eligible, by unemployment duration broken down into bins representing different hypothetical tiers of UI extensions. Each scenario features a large increase in the number of individuals eligible to collect regular UI benefits (i.e., those unemployed for 26 weeks or fewer). Potential UI extensions play a smaller role. In the Great Recession–like Severe scenario, one year into the recession only 0.8 percent of the aggregate labor force has duration between 27 and 46 weeks and could potentially collect benefits; this share peaks two years into the recession at 1.2 percent. The

FIGURE 4A.

Simulated Unemployment Rate: Severe Recession

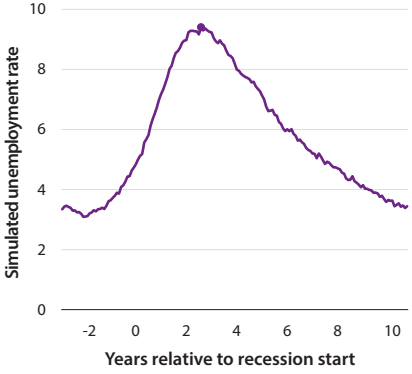
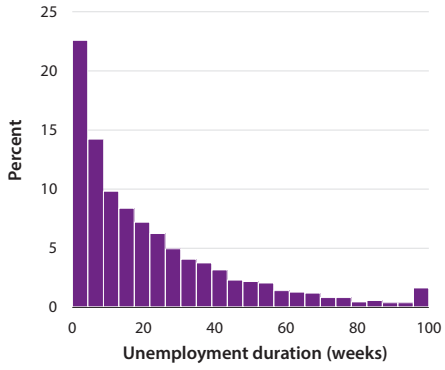


FIGURE 4B.

Simulated Duration Distribution: Severe Recession



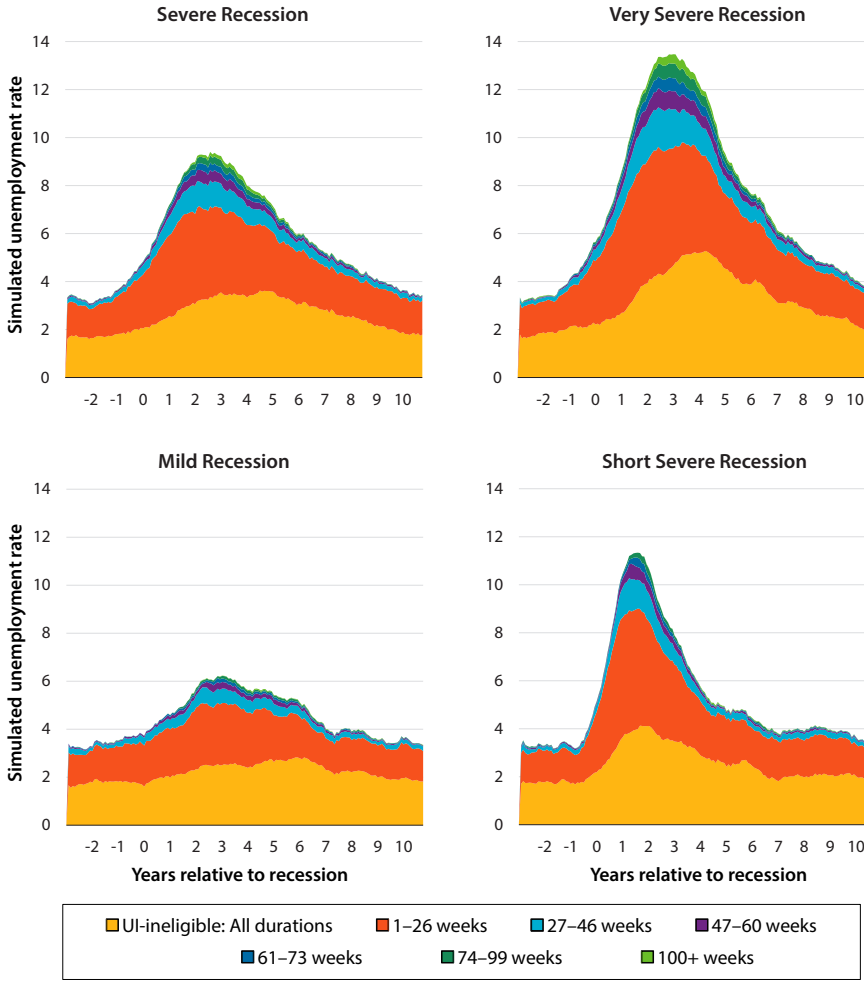
Source: Authors' calculations.

Note: Figure 4a shows the simulated unemployment rate, with the peak observation marked. Figure 4b shows the distribution of unemployment duration at the unemployment peak, with the distribution truncated at 100 weeks.

share unemployed for longer than 46 weeks who could collect benefits does not exceed 1 percent of the aggregate labor force until two years into the recession, and the share unemployed past 73 weeks never exceeds 0.45 percent.

FIGURE 5.

Simulated Unemployment by Duration and Eligibility



Source: Authors' calculations.

Note: Each panel shows the evolution of simulated unemployment, broken down by duration and UI eligibility. The Severe scenario uses aggregate trends for each transition rate as observed in the Great Recession. The Very Severe Recession scenario is based on 50 percent larger fluctuations in aggregate trends relative to the Severe scenario, while the Mild Recession scenario is based on fluctuations that are 50 percent smaller than the Severe scenario. The Short Severe Recession scenario is 50 percent larger than the Severe scenario but lasts half as long.

The Mild Recession contains few potentially eligible individuals with duration longer than the 26 weeks covered by the regular UI system. Most of these individuals fall into the 27- to 46-week range covered by EB. The share of the labor force potentially eligible for UI with duration greater than 46 weeks peaks two and a half years after the start of the recession at 0.6 percent; this share equals 0.4 percent in the month of the unemployment rate peak.

The Short Severe Recession scenario features a more substantial increase in long-term unemployment. Again, most of these individuals have durations in the range of 27–46 weeks. The share unemployed for longer duration peaks around the period of the unemployment rate peak at 1.4 percent. Of these, only 0.3 percent have duration longer than 73 weeks.

The Very Severe Recession scenario offers the largest potential for benefit extensions beyond 46 weeks to matter. However, such extensions become quantitatively important only after most of the rise in unemployment has already occurred. Fourteen months after the beginning of this recession, the unemployment rate has already surpassed 10 percent, yet potentially UI-eligible individuals who have been unemployed for more than 46 weeks remain below 1 percent of the labor force. This share continues to grow, reaching 2.4 percent of the labor force at the unemployment rate peak two and a half years after the start of the recession.

In summary, in none of these scenarios would extending UI benefits beyond the additional 20 weeks available under the EB program have resulted in an appreciable increase in the number of individuals receiving UI benefits within the first year of the recession. In the Mild Recession scenario, few individuals would have been able to collect UI beyond regular UI and EB benefits at any point during the recession and recovery, while in the more severe scenarios more long-term unemployed individuals eventually appear but only years after the start of the recession. This lag prevents UI extensions from providing timely automatic stabilization, while also pointing to the potential contribution to macroeconomic stabilization later in very severe recessions.

Evidence on UI Multipliers

This section reviews evidence on the marginal propensity to consume out of UI transfers and other aspects related to the UI multiplier.

UI EFFECTS ON CONSUMPTION

The most obvious channel through which UI can stabilize the macroeconomy is by supporting consumption expenditure by UI recipients. Gruber (1997)

provides the most widely cited estimate of the effects of UI on consumption using data on food expenditure from the Panel Survey on Income Dynamics (PSID) and cross-state variation in UI replacement rates. He finds that a 10-percentage-point increase in the replacement rate (i.e., the UI benefit as a fraction of the previous wage) is associated with a 2.7-percentage-point smaller reduction in food expenditure upon unemployment, implying that, without any UI, consumption declines during unemployment would be three times larger than they actually are. However, because his data contain only food expenditures and because he can identify UI eligibility but not actual UI receipt, Gruber's estimate does not easily translate into an MPC. Subsequent papers that have faced many of the same challenges have found, if anything, smaller consumption responses to UI.

A recent article by Ganong and Noel (forthcoming) surmounts these hurdles and provides important new evidence on the propensity to consume out of UI income. The authors use deidentified individual-level financial account data to estimate how much the average spending drop in the first month of receipt of UI depends on the average replacement rate in the individual's state of residence. They estimate an MPC on nondurable goods and services of 0.27, meaning that individuals are consuming slightly more than one quarter of UI income in the form of nondurables.[9] They also report a total marginal outflow from an individual's checking account of $0.83 for a marginal dollar of UI receipt but caution that this total includes transfers to savings accounts and paying down debt, in addition to consumption.

Landais and Spinnewijn (2018) offer another recent estimate of the MPC while unemployed using administrative data from Sweden and variation in replacement rates across municipalities and household types. They report an annual MPC (for total consumption expenditure) of 0.4 for employed individuals and between 0.5 and 0.6 for unemployed individuals. Of course, other differences in wealth and the social safety net between the United States and Sweden could limit the relevance of these estimates for the United States.

What about evidence on MPCs in other contexts? Johnson, Parker, and Souleles (2006) and Parker et al. (2013) provide quasi-experimental estimates of the MPC out of the Economic Growth and Tax Relief Reconciliation Act of 2001 tax rebates and the Economic Stimulus Act of 2008, respectively. Both pieces of legislation initiated large ($300–$1,200 per household), one-time payments, and random variation in the timing of receipt of the payments across households allows the authors to trace out the response of consumption expenditure. Johnson, Parker, and Souleles (2006) find an MPC on nondurable goods and services of 0.2–0.4 in the first three months of receipt of the 2001 rebates, rising to roughly two thirds over the first six

months of receipt, and no response of spending on durable goods. Parker et al. (2013) report an MPC on nondurable goods and services of 0.12–0.3 in the first three months of receipt of the 2008 rebate, only small effects on spending thereafter, but a large response of durable goods (especially vehicles), which raises the response of total consumption expenditure to 0.5–0.9. The response of nondurable consumption thus appears broadly similar to the Ganong and Noel (forthcoming) evidence, although differences in the horizon make precise comparisons difficult. Regarding the response of durable goods expenditure, Parker et al. (2013) speculate that the large MPC for the 2008 rebate may reflect a tendency for large one-time payments to serve as down payments for purchases of durable goods, a channel unlikely to apply in the context of monthly UI receipt. Moreover, unemployed individuals may be unlikely to undertake new expenditures on durable goods when they can alternatively continue use of already owned durable goods. Johnson, Parker, and Souleles (2006) and Parker et al. (2013) also find larger consumption responses among low-income households, a finding echoed in other work that finds larger consumption responses among households likely to face liquidity constraints (see, e.g., Baker 2018).

Summarizing this research, plausible estimates of the MPC for recently unemployed individuals are around 0.3–0.4 in the short run (first three months) and around 0.5–0.6 in the medium run (first year). However, statistical uncertainty and inconsistency in the horizon and results across studies make these estimates somewhat tentative. No evidence exists of the MPC for the very long-term unemployed, although economic theory predicts a higher MPC for these individuals because their liquidity has deteriorated further.

OTHER CHANNELS THROUGH WHICH UI CAN PROVIDE STIMULUS

The direct consumption response of UI by recipients constitutes the most obvious but not the only channel through which UI could provide macroeconomic stimulus. Hsu, Matsa, and Melzer (2018) provide evidence of a house price and foreclosure channel. Using both state-level variation in replacement rate generosity and variation in extensions during the Great Recession, they estimate that an additional $3,600 in (annual) benefits reduces the probability of delinquency by 1.44 percentage points and an additional week of benefit extensions reduces foreclosure starts by 0.27 percentage points. They also find that higher UI generosity mitigated the relationship between county-level house price declines and unemployment during the Great Recession.

More speculatively, both Kekre (2016) and McKay and Reis (2017) point out that higher UI can increase consumption by *employed* individuals by reducing their need to engage in precautionary savings. This channel has

BOX I.

Optimal UI

UI has the positive feature of helping workers to smooth their consumption: that is, it avoids the necessity of dramatic cuts in consumption after job loss. But UI also can induce moral hazard: workers delay taking a new job because UI benefits make this delay less costly to them. Relatedly, increased liquidity from UI can raise the wage that workers expect upon reemployment. The optimal UI rule originally developed by Baily (1978) and extended by Chetty (2006) balances the consumption smoothing benefit against reduced job-finding related to both moral hazard and higher worker wage expectations. The recent literature extends this approach to additionally incorporate the effect of UI benefits on macroeconomic conditions through changed aggregate search effort and increased aggregate demand. Online appendix B provides a detailed exposition of the economic theory that governs optimal UI.

the potential to substantially increase the scope for UI to increase aggregate consumption. Empirically, Engen and Gruber (2001) use cross-state variation in replacement rates to estimate that halving the replacement rate would increase savings by 0.8 percent of income. Intuitively, individuals at risk of unemployment already tend to have low savings, meaning that more-generous UI cannot further reduce this savings by very much.

MORAL HAZARD AND OTHER NEGATIVE IMPACTS

Provision of UI also may affect the labor market directly by reducing job search effort, increasing reservation wages, and deterring firms from creating job openings. The strength of these effects remains fiercely debated. Krueger and Meyer (2002) survey early studies examining the relationship between UI benefit amount and unemployment duration and report an average elasticity of about 0.5 for the United States, meaning a 10 percent increase in benefit amount increases an individual's unemployment duration by about 5 percent.

Studies that examine the relationship between *benefit duration* and *unemployment duration* typically find smaller effects, with a 13-week benefit extension increasing average unemployment duration by about 1 week (Card, Chetty, and Weber 2007; Card and Levine 2000; Farber and Valletta 2015; Rothstein 2011), although Johnston and Mas (2018) is an

important exception. Consistent with a smaller elasticity from extensions, Kolsrud et al. (2018) find that the moral hazard effect of increasing benefits on search effort declines with the length of the unemployment spell. Additionally, Kroft and Notowidigdo (2016) find evidence of a smaller moral hazard effect during recessions, possibly reflecting the increased difficulty of finding work.

Besides reducing search effort, UI benefits could prolong unemployment by raising the wage individuals require to accept new employment, known as the reservation wage. Using survey evidence, Feldstein and Poterba (1984) found that a 10-percentage-point increase in the benefit replacement rate raises the reservation wage by 4 percentage points for job losers not on layoff. More recently, Krueger and Mueller (2016) and Jäger et al. (2018) reexamine this relationship and find *no* effect of benefits on reservation wages.

Importantly, these *microeconomic* effects of UI on individual search effort and reservation wages do not equate to the *macroeconomic* effect on overall unemployment, because they do not account for market-wide changes in wages, firm vacancy creation, and efficiency in matching of job seekers and vacancies that occur in response to a market-wide change in UI benefits nor do they include the positive stimulus channels discussed in the previous two sections.

OVERALL STABILIZATION IMPACT OF UI

The total output multiplier from UI outlays combines all the channels described above as well as additional general equilibrium feedback effects. These general equilibrium effects mirror the Keynesian multiplier that applies to direct government purchases. For example, a no-monetary-policy-response government purchases multiplier of 1.7 (Chodorow-Reich 2019), an MPC out of UI of 0.6, and no disincentive effects for job seekers together yield a UI output multiplier of $1.7 \times 0.6 = 1.0$ when monetary policy is constrained. A higher MPC or positive impact on consumption of employed individuals would generate a higher multiplier. The Congressional Budget Office (2012) similarly uses an output multiplier of 1.1 for UI extensions whereas the Obama administration assumed a slightly higher multiplier of 1.6 based on an assumed annual MPC out of UI benefits of 1. To put these numbers in perspective, recall that total UI outlays under EB and EUC peaked at $79 billion in 2010, or about 0.5 percent of GDP. Applying an output multiplier of 1 would imply an increase in GDP of 0.5 percent; further applying an Okun's law coefficient of 2.5 would imply a decline in the unemployment rate of roughly 0.2 percentage points as a result of the extensions.

A few studies have estimated the effect of UI extensions on employment or unemployment directly. An empirical challenge arises because, as noted earlier, state UI extensions themselves depend on the state unemployment rate. Chodorow-Reich, Coglianese, and Karabarbounis (2019) circumvent this challenge by examining responses to extensions due to measurement error in the real-time unemployment rate used to determine extension eligibility. They find near-zero effects of UI extensions on state-level unemployment or employment and can statistically reject that a marginal one month of extensions raises or lowers the unemployment rate by more than 0.04 of a percentage point. While their sample mostly contains relatively transient extensions from a high baseline level, they show similar results in subsamples with baseline duration less than 66 weeks and with persistent extensions. Linearly extrapolating their point estimate of –.01 (lower bound of –.04) to the 17-month extension of benefits at the peak of the Great Recession implies a decrease in unemployment due to benefit extensions of 0.17 (lower bound of 0.7) percentage points.

Hagedorn et al. (2015), Boone et al. (2016), and Dieterle, Bartalotti, and Brummet (forthcoming) study counties on either side of a border between states subject to different UI extensions. Hagedorn et al. (2015) find that extensions *raise* unemployment and interpret their finding as the result of reduced vacancy creation by firms deterred by higher reservation wages of workers in high extension areas. Boone et al. (2016) and Dieterle, Bartalotti, and Brummet (forthcoming) question the empirical specification and causal interpretation of the Hagedorn et al. (2015) results and present alternative estimates that find smaller effects similar in magnitude to those in Chodorow-Reich, Coglianese, and Karabarbounis (2019). Di Maggio and Kermani (2015) instead compare replacement rate generosity and estimate an output multiplier of 1.9.

To summarize, both the MPC evidence and the direct evidence on labor markets appear consistent with a federally financed UI multiplier of between 0.5 and 1 when monetary policy does not respond, although this evidence cannot rule out a multiplier as small as 0 or as large as 2. The multiplier may be larger for UI extensions than increases in benefit levels and smaller when monetary policy is active.

Proposals

This section offers a number of proposals that would make UI a better macroeconomic stabilizer. As we discuss in online appendix B, these proposals also have grounding in economic theory of the optimal provision of UI.

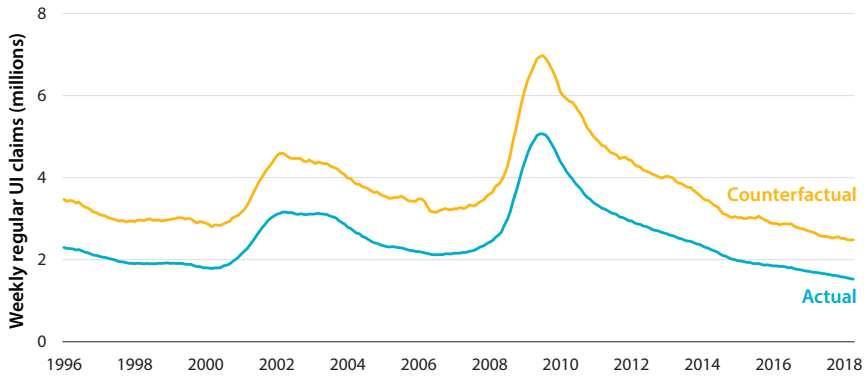
PROPOSAL I: EXPAND ELIGIBILITY AND ENCOURAGE TAKE-UP OF REGULAR UI BENEFITS.

One factor limiting the scope UI plays in countercyclical stimulus is the limited receipt of benefits shown in figure 1. The hurdles to successful completion of an application have received notice in both the popular press (Robles 2014) and the academic literature (Chodorow-Reich and Karabarbounis 2016). Regarding limited eligibility, two factors stand out: (1) harmonizing monetary eligibility across states, including adoption of alternative base periods for calculating earnings; and (2) extending eligibility to part-time workers and individuals seeking part-time employment. Both these reforms would better align the eligibility criteria to a modern labor market in which many individuals have short spells out of the labor force or prefer part-time employment due to family obligations or other considerations.

We have less certainty on how to encourage take-up among eligible individuals because low take-up rates reflect a myriad of administrative and possibly psychological hurdles that resist easy cataloging. West et al. (2016, 70–71) offers several suggestions including reporting employer Federal Unemployment Tax Act (FUTA) contributions on annual tax returns to foster a sense of program entitlement by employees, mandating that employers inform terminated employees of their eligibility, and improving online claims systems. To this list, we would add raising weekly benefit amounts, which would increase the return to filing a claim. As shown

FIGURE 6.

Actual and Counterfactual Regular UI Claims, 1996–2018



Source: U.S. Department of Labor 1996–2019; Current Population Survey (CPS), Bureau of Labor Statistics 1996–2019; authors' calculations.

Note: Counterfactual claims rate is calculated applying the average recipiency rate of the highest ten states to the United States as a whole. Weekly claims are presented as a 12-month moving average.

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by Chodorow-Reich and Karabarbounis (2016), periods of higher weekly benefit amounts have coincided, historically, with higher take-up.

To assess the potential for higher recipiency to increase UI transfers during recessions, we turn to the cross-section of states. (We refer to the share of individuals with duration below the maximum who collect regular UI benefits as the recipiency rate for the regular UI system.) Online appendix table C.1 lists the recipiency rate by state for 2018. The recipiency rate ranges from a low of 10.8 percent in North Carolina to a high of 63.4 percent in New Jersey. These differences reflect several factors, including different rules for monetary and nonmonetary eligibility across states, different systems for applying for and collecting UI benefits, and differential generosity of replacement rates. We consider a counterfactual where all states' recipiency rates were raised to the average level in the 10 states with the highest recipiency rates.[10] Figure 6 shows that regular UI claims would have been substantially higher under this counterfactual. The difference is roughly 1 million throughout most of the 1996–2018 period and even larger during recessions, with counterfactual claims greater than actual claims by about 1.5 million during the deepest point of the 2001 recession and by nearly 2 million during the Great Recession. At the current average weekly benefit amount, the additional increase of 1 million recipients during the Great Recession translates into an additional $20 billion of UI transfers per year. Of course, the evidence on MPCs for short-term unemployed may imply a smaller macroeconomic impact of these transfers than transfers under benefit extension programs.

PROPOSAL II: MAKE EXTENDED BENEFITS FULLY FEDERALLY FINANCED.

The EB program has played a small role historically, in part because only a few states have opted into the optional TUR triggers. In fact, except during the period 2009–13 when emergency legislation made EB fully federally financed, at no time have more than 11 states adopted the optional triggers. States can be reluctant to do so because EB is a joint state-federal program, half of which is paid for by the states. While the federal government could make the TUR triggers mandatory or lower the threshold for the IUR trigger, we believe a more effective solution is to make EB fully federally financed, thereby removing the disincentive for states to opt in. Making EB fully federally funded satisfies an additional objective of enhancing regional insurance and alleviating constrained state government finances during economic downturns.

PROPOSAL III: REMOVE LOOK-BACK PROVISIONS FROM EXTENDED BENEFIT TRIGGERS.

As we have argued, only severe and long-lasting increases in unemployment leave enough individuals long-term unemployed for long-term extensions to be macroeconomically important. Yet the look-back provisions, which require the unemployment rate to be above the level in previous years to remain eligible for EB, force states off EB exactly in these circumstances. Policymakers responded in the Great Recession by temporarily extending the look-back horizon to three years. We propose removing these provisions entirely.

PROPOSAL IV: ADD EXTENDED BENEFIT TRIGGERS AT 9 PERCENT AND 10 PERCENT TOTAL UNEMPLOYMENT RATES.

The simulations in figure 5 reveal a small but growing share of the labor force with unemployment duration beyond 46 weeks in the Severe, Very Severe, and Short Severe scenarios. To cover these individuals, we propose two new permanent triggers: one that would extend the sum of regular UI benefits and EB to 60 weeks when the unemployment rate crosses 9 percent and one that would provide an additional 13 weeks (73 weeks total) when the unemployment rate crosses 10 percent.

We do not see a macroeconomic stabilization rationale for additional automatic tiers beyond 73 weeks (i.e., EB of 47 weeks) since there is little prospect of such tiers mattering quantitatively in providing macroeconomic stimulus. Even in the Very Severe Recession scenario in which the share of the labor force with unemployment duration beyond 73 weeks briefly surpasses 1 percent, this occurs more than two years after the recession starts, giving policymakers ample time to adapt if necessary. Of course, policymakers may still wish to create tiers beyond 73 weeks to provide consumption insurance to individuals who remain unemployed beyond that duration.

PROPOSAL V: ADD A FEDERALLY FINANCED INCREASE IN WEEKLY BENEFIT AMOUNT WHEN A STATE TRIGGERS ONTO EXTENDED BENEFITS.

UI extensions have limited potency as automatic stabilizers because they affect a large number of individuals only after unemployment has already risen and remained elevated for a sustained period. Increasing the weekly benefit amount (WBA), in contrast, raises transfers immediately since it affects both short- and long-term UI recipients at once. On the other hand, since the MPC of short-term unemployed appears to be well less than 1, the output multiplier associated with this policy likely falls below that of direct spending or recently estimated multipliers from tax changes (e.g., Romer and Romer 2010).

TABLE 2.

Annual UI Outlays for Proposals III, IV, and V, by Scenario (Billions of Dollars)

Scenario	(1) Current law EB	(2) + No look-back provisions	(3) + Additional tiers	(4) + $50 WBA increase	(5) Total additional outlays
Severe	15.7	+7.7	+3.1	+17.6	+28.5
Very Severe	20.6	+10.9	+18.2	+23.7	+52.8
Short Severe	21.8	+6.1	+11.5	+23.1	+40.6
Mild	13.0	0.0	0.0	+13.3	+13.3

Source: Authors' calculations.

Note: All estimates are reported as the average annualized rate of UI outlays during the period in each scenario in which the unemployment rate exceeds 6.5 percent. Column (1) reports the average simulated UI outlays using only the TUR triggers for EB. Column (2) reports the increase in simulated UI outlays from removing the look-back provisions in the EB program. Column (3) reports the increase relative to Column (2) from adding an additional tier of 14 weeks when the unemployment rate exceeds 9 percent and an additional tier of 13 weeks when the unemployment rate exceeds 10 percent. Column (4) reports the increase relative to Column (3) from increasing the weekly benefit amount (WBA) for all regular UI and EB recipients by $50. Column (5) reports the total increase from Columns (2)–(4). All simulations use the national-level unemployment rate for determining which tiers of EB are active and assume 100 percent UI take-up among eligible individuals and a constant WBA equal to $353.88 (the national average WBA in 2018).

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As a rule, each additional $1 in the WBA of all UI recipients nationally would create a budgetary cost of between $200 million and $400 million in the first year of a recession. In the most recent recession, the American Recovery and Reinvestment Act raised the WBA for all UI recipients by $25. We propose that all states triggered on to EB receive a $50 WBA increase for all recipients (to be indexed to inflation). This would add between $10 billion and $20 billion in UI transfers in the first year of a recession if it applied to all states (i.e., if all states triggered on to EB). This proposal also dovetails with the first proposal insofar as raising the WBA will induce higher take-up of regular UI benefits in periods of high unemployment.

SUMMARY OF PROPOSALS

To measure the potential impact of Proposals III, IV, and V on total UI transfers during a recession, we return to our simulations described earlier. We start by simulating UI transfers from the EB program in its current form within each scenario.[11] For simplicity, we simulate the EB program at a national level rather than a state level and assume 100 percent take-up with a constant WBA equal to the 2018 national average WBA. We then measure the increase in UI transfers from removing the look-back provisions, adding two additional tiers to EB, and increasing the WBA for all UI recipients by $50 when EB is active.

Table 2 reports the annualized average increase in UI outlays from enacting Proposals III, IV, and V during the period in each scenario in which unemployment exceeds 6.5 percent. We project that removing the look-back provisions would raise UI outlays in the Severe Recession scenario by $7.7 billion/year. Adding two additional tiers at 9 percent and 10 percent unemployment would raise outlays in the Severe Recession scenario by a an additional $3.1 billion/year, and the $50 WBA increase by an additional $17.6 billion/year. In total, enacting Proposals III, IV, and V would result in an increase of $28.5 billion/year in the Severe scenario.

During deeper recessions, the additional tiers provided by Proposal IV would result in substantial additional UI outlays. In the Very Severe Recession scenario, these added tiers increase UI outlays by $18.2 billion/year when the unemployment rate exceeds 6.5 percent, about $15 billion/year more than in the Severe Recession scenario. On the other hand, the additional tiers and removing the look-back provisions have no projected impact in the Mild Recession scenario.

Questions and Concerns

I. The incomes of unemployment insurance recipients are higher than those of recipients in many other safety net programs (e.g., SNAP or TANF). Does this mean that UI is a more poorly targeted program?

UI eligibility depends on having sufficient earnings in the recent quarters prior to involuntary job loss. In addition, while weekly UI benefits are capped, they are not limited to individuals with low levels of assets or low household income. These design features make UI a program that reaches households across the income distribution, by contrast to programs like SNAP that are more targeted to low-income households.

However, unemployment insurance has the unique advantage of targeting individuals and families that have experienced large (and often unexpected) income losses. Because it supports consumption for people in this situation, UI is likely more effective as fiscal stimulus than would be income transfers to people with the same incomes, but who had not experienced job loss.

2. Would your proposal replace the need for Emergency Unemployment Compensation?

When it expired at the beginning of 2014, Emergency Unemployment Compensation provided eligible workers with up to 47 additional weeks of UI benefits (depending on state unemployment rates), all of which were to be received by a worker prior to receipt of any Extended Benefits. Under our proposal, the Extended Benefits program would be made more generous in

terms of weekly benefit amounts, maximum duration, and the likelihood of workers being able to access benefits in their states.

We designed our proposals to provide timely fiscal stimulus that would deliver substantial macroeconomic benefits across a wide variety of recession scenarios. However, in the event of a more prolonged or severe recession than we anticipate—or in the event that additional benefits are deemed desirable for reasons other than macroeconomic stabilization—policymakers may elect to supplement this proposal with emergency benefits.

Conclusion

In this chapter, we have proposed reforms to enhance the role of the UI system in providing macroeconomic stabilization to the U.S. economy. We have also emphasized the limitations for expanding this role, arising from the distribution of unemployment duration and a marginal propensity to consume below one among short-term unemployed workers. Still, together with other policy reforms to automatic stabilizers, these proposed changes to the UI system could help to mitigate future recessions.

Our reform proposals also have merit beyond stabilization of the national macroeconomy. By increasing benefits during economic downturns, these reforms would increase the *microeconomic* benefits of UI for unemployed workers and their families. This objective is especially important for the long-term unemployed who, while rarely a large enough share of the population to have a large macroeconomic impact, may nonetheless benefit the most from the income-smoothing aspect of benefit extensions. Furthermore, federally financed benefit extensions and increases in benefit amounts direct federal aid toward communities experiencing large job losses and a high level of long-term unemployment. The impact on economic activity in these areas likely exceeds the average impact on the national economy which we have emphasized in this chapter.

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Endnotes

1. We purposefully limit ourselves to the objective of enhancing the contribution of UI to macroeconomic stabilization. See West et al. (2016) and O'Leary and Wandner (2018) for a review of reforms to other aspects of the UI system.
2. Online appendices can be found at the end of the online version of this chapter.
3. ansas has a fixed maximum duration of 16 weeks while Michigan, Missouri, and South Carolina have fixed maximum durations of 20 weeks. Florida, Georgia, Idaho, Kansas, and North Carolina have duration limits that vary with the state unemployment rate and can range as low as 12 weeks in Florida and as high as 26 weeks in Idaho and Kansas.
4. The insignificance of EB reflects several factors. First, in the 1990–91 recession the TUR trigger and second tier of EB did not yet exist and the national IUR peaked at 3.3 percent, so that relatively few states had unemployment high enough to trigger EB. Similarly, during the 2001 recession the national IUR peaked at 3.0 percent and the national TUR peaked at 6.3 percent, again yielding only a few states with unemployment rates high enough to trigger EB. Second, except during 2009–13 when emergency legislation made EB fully federally financed, at no time have more than 11 states even adopted the optional TUR trigger for EB. Finally, in states with both EB and an emergency program, recipients collect benefits under the emergency program first.
5. We calculate this number by summing total monthly EUC Tier 1 payments in states that triggered onto both tiers of EB and then add the increase in regular UI benefits. The total excludes states that had not adopted the optional EB triggers as well as an additional $7 billion of payments in states that qualified for some EB but not the full 20 weeks over the full month.
6. Specifically, we estimate transition rates between the four labor market statuses using individual-level regressions estimated from longitudinally matched Current Population Survey (CPS) panel data, accounting for both common trends at the state level as well as duration dependence at the individual level. In addition to allowing the simulations to track eligibility, dividing unemployment into eligible and ineligible categories allows for differences in the labor market dynamics of these groups during recessions. Individuals separating from employment during recessions are more likely to have been fired or laid off, a distinction that is important for understanding changes in the distribution of unemployment duration over the business cycle (Ahn and Hamilton 2016). For these simulations, we abstract away from earnings history tests and focus on reason for separation as the sole determinant of UI eligibility.
7. This simulation uses national averages of the estimated trends for each transition rate over the 2005–18 period and the estimated duration dependence parameters to randomly simulate labor force transitions in a scenario resembling the Great Recession. Even for historical episodes, simulating the distribution of unemployment duration has several advantages over using the self-reported duration in the CPS. The CPS asks unemployed individuals how long they have been searching for a job and records this self-reported duration. Self-reporting introduces two sources of measurement error. First, individuals often report round even numbers for the duration of their unemployment spell, biasing estimates of the duration distribution around important thresholds. Second, individuals frequently report the duration since their last stable job, even if this duration covers periods of nonparticipation or short-term employment.
8. Each of these scenarios uses the same path of the quit rate as in the severe simulation, which changes little over the simulated recession period. Differences in the cyclicality of ineligible unemployment across scenarios are instead due to differences in the path of the average job finding rate as well as the average reentry rate. The exact procedure for each of these simulated scenarios is described in online appendix A.
9. Interestingly, they find a similar cross-state slope for the decline in consumption expenditure in the first month after benefit exhaustion. However, translating a cross-state slope into an MPC requires that households in high- and low-benefit states do not differentially anticipate the change in income; otherwise, the consumption amount in the pre-period could already respond differentially to the income change. For the MPC in the first month of receipt of UI, this assumption amounts to either (1) households do not anticipate job loss, or (2) households do not know if they live in a high- or low-UI-replacement state. The assumption appears more problematic at exhaustion since by then households know the amount of their weekly UI check and the date of exhaustion is a deterministic

function of time since the start of the benefit spell. For this reason, Ganong and Noel (forthcoming) do not emphasize the cross-state slope at exhaustion. Nonetheless, ignoring these caveats would suggest an MPC at exhaustion of regular UI benefits similar in magnitude to the MPC at onset.

10. Specifically, we compute recipiency rates at the state level as the ratio of the 52-week moving average of regular UI claims in a state to the 12-month moving average of the number of individuals unemployed for a duration covered by the regular UI system in the state. Then, for each month we compute the counterfactual number of UI claimants for each state as if its recipiency rate were equal to the average recipiency rate among the top 10 states in that month. The exact group of 10 highest recipiency states varies from month to month, but nearly always includes Alaska, Connecticut, Massachusetts, New Jersey, Pennsylvania, and Wisconsin.
11. We consider only the current TUR triggers, including the TUR threshold and look-back provisions, and do not simulate the IUR triggers for both EB tiers. The simulations do not account for any feedback from the amount of UI transfers to the unemployment rate path.

References

Ahn, Hie J., and James D. Hamilton. 2016. "Heterogeneity and Unemployment Dynamics." Working Paper 22451, National Bureau of Economic Research, Cambridge, MA.

American Recovery and Reinvestment Act of 2009 (ARRA) Pub. L. 111–5 (2009).

Baily, Martin N. 1978. "Some Aspects of Optimal Unemployment Insurance." *Journal of Public Economics* 10 (3): 379–402.

Baker, Scott R. 2018. "Debt and the Response to Household Income Shocks: Validation and Application of Linked Financial Account Data." *Journal of Political Economy* 126 (4): 1504–57.

Boone, Christopher, Arindrajit Dube, Lucas Goodman, and Ethan Kaplan. 2016. "Unemployment Insurance Generosity and Aggregate Employment." Discussion Paper 10439, Institute of Labor Economics (IZA), Bonn, Germany.

Bureau of Labor Statistics. 1986–2019. "The Employment Situation." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 1996–2019. "Current Population Survey." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

Card, David, Raj Chetty, and Andrea Weber. 2007. "Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market." *Quarterly Journal of Economics* 122 (4): 1511–60.

Card, David, and Phillip B. Levine. 2000. "Extended Benefits and the Duration of UI Spells: Evidence from the New Jersey Extended Benefit Program." *Journal of Public Economics* 78 (1): 107–38.

Chetty, Raj. 2006. "A General Formula for the Optimal Level of Social Insurance." *Journal of Public Economics* 90 (10–11): 1879–901.

———. 2008. "Moral Hazard versus Liquidity and Optimal Unemployment Insurance." *Journal of Political Economy* 116 (2): 173–234.

Chodorow-Reich, Gabriel. 2019. "Geographic Cross-Sectional Fiscal Multipliers: What Have We Learned?" *American Economic Journal: Economic Policy* 11 (2): 1–36.

Chodorow-Reich, Gabriel, John Coglianese, and Loukas Karabarbounis. 2019. "The Macro Effects of Unemployment Benefit Extensions: A Measurement Error Approach." *Quarterly Journal of Economics* 134 (1): 227–79.

Chodorow-Reich, Gabriel, and Loukas Karabarbounis. 2016. "The Cyclicality of the Opportunity Cost of Employment." *Journal of Political Economy* 124 (6): 1563–618.

Congressional Budget Office. 2012. *Unemployment Insurance in the Wake of the Recent Recession*. Washington, DC: Congressional Budget Office.

Crepon, Bruno, Esther Duflo, Marc Gurgand, Roland Rathelot, and Phillippe Zamora. 2013. "Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Experiment." *Quarterly Journal of Economics* 128 (2): 531–80.

Di Maggio, Marco, and Amir Kermani. 2015. "The Importance of Unemployment Insurance as an Automatic Stabilizer." Research Paper No. 15-31, Columbia Business School, Columbia University, New York.

Dieterle, Steven, Otávo Bartalotti, and Quentin O. Brummet. Forthcoming. "Revisiting the Effects of Unemployment Insurance Extensions on Unemployment: A Measurement-Error-Corrected Regression Discontinuity Approach." *American Economic Journal: Economic Policy*.

Economic Growth and Tax Relief Reconciliation Act of 2001, Pub.L. 107-16 (2001).

Economic Stimulus Act, Pub.L. 110–185, 122 Stat. 613 (2008).

Emergency Unemployment Compensation Act of 1991, Pub L. 102-164 (1991).

Engen, Eric, and Jonathan Gruber. 2001. "Unemployment Insurance and Precautionary Saving." *Journal of Monetary Economics* 47 (3): 545–79.

Farber, Henry S., and Robert G. Valletta. 2015. "Do Extended Unemployment Benefits Lengthen Unemployment Spells? Evidence from Recent Cycles in the U.S. Labor Market." *Journal of Human Resources* 50 (4): 873–909.

Feldstein, Martin, and James Poterba. 1984. "Unemployment Insurance and Reservation Wages." *Journal of Public Economics* 23 (1): 141–67.

Ganong, Peter, and Pascal J. Noel. Forthcoming. "Consumer Spending During Unemployment: Positive and Normative Implications." *American Economic Review*.

Gruber, Jonathan. 1997. "The Consumption Smoothing Benefits of Unemployment Insurance." *American Economic Review* 87 (1): 192–205.

Hagedorn, Marcus, Fatih Karahan, Iourii Manovskii, and Kurt Mitman. 2015. "Unemployment Benefits and Unemployment in the Great Recession: The Role of Macro Effects." Working Paper 19499, National Bureau of Economic Research, Cambridge, MA.

Hsu, Joanne W., David A. Matsa, and Brian T. Melzer. 2018. "Unemployment Insurance as a Housing Market Stabilizer." *American Economic Review* 108 (1): 49–81.

Jäger, Simon, Benjamin Schoefer, Samuel G. Young, and Josef Zweimuller. 2018. "Wages and the Value of Nonemployment." Working Paper 25230, National Bureau of Economic Research, Cambridge, MA.

Job Creation and Worker Assistance Act of 2002, Pub.L. 107-147 (2002).

Johnson, David S., Jonathan A. Parker, and Nicholas S. Souleles. 2006. "Household Expenditure and the Income Tax Rebates of 2001." *American Economic Review* 96 (5): 1589–610.

Johnston, Andrew C., and Alexandre Mas. 2018. "Potential Unemployment Insurance Duration and Labor Supply: The Individual and Market-level Response to a Benefit Cut." *Journal of Political Economy* 126 (6): 2480–522.

Kekre, Rohan. 2016. "Unemployment Insurance in Macroeconomic Stabilization." Working Paper, Harvard University, Cambridge, MA.

Kolsrud, Jonas, Camille Landais, Peter Nilsson, and Johannes Spinnewijn. 2018. "The Optimal Timing of Unemployment Benefits: Theory and Evidence from Sweden." *American Economic Review* 108 (4–5): 985–1033.

Kroft, Kory, and Matthew J. Notowidigdo. 2016. "Should Unemployment Insurance Vary with the Unemployment Rate? Theory and Evidence." *Review of Economic Studies* 3 (83): 1092–124.

Krueger, Alan B., and Bruce D. Meyer. 2002. "Labor Supply Effects of Social Insurance." In *Handbook of Public Economics*, Vol. 4, edited by Alan J. Auerbach and Martin Feldstein, 2327–92. Amsterdam, Netherlands: Elsevier.

Krueger, Alan B., and Andreas I. Mueller. 2016. "A Contribution to the Empirics of Reservation Wages." *American Economic Journal: Economic Policy* 8 (1): 142–79.

Landais, Camille. 2015. "Assessing the Welfare Effects of Unemployment Benefits Using the Regression Kink Design." *American Economic Journal: Economic Policy* 7 (4): 243–78.

Landais, Camille, Pascal Michaillat, and Emmanuel Saez. 2018. "A Macroeconomic Approach to Optimal Unemployment Insurance: Theory." *American Economic Journal: Economic Policy* 2 (10): 152–81.

Landais, Camille, and Johannes Spinnewijn. 2018. "The Value of Unemployment Insurance." Slide show. Available at http://econ.lse.ac.uk/staff/clandais/cgi-bin/Articles/slidesVoI.pdf

McKay, Alisdair, and Ricardo Reis. 2017. "Optimal Automatic Stabilizers" Working Paper 22359, National Bureau of Economic Research, Cambridge, MA.

Michaillat, Pascal. 2012. "Do Matching Frictions Explain Unemployment? Not in Bad Times." *American Economic Review* 102 (4): 1721–50.

O'Leary, Christopher J., and Stephen A. Wandner. 2018. "Unemployment Insurance Reform: Evidence-Based Policy Recommendations." In *Unemployment Insurance Reform: Fixing a Broken System*, edited by Stephen A. Wandner, 131–210. Kalamazoo, MI: Upjohn Institute for Employment Research.

Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson, and Robert McClelland. 2013. "Consumer Spending and the Economic Stimulus Payments of 2008." *American Economic Review* 103 (6): 2530–53.

Robles, Frances. 2014, January 7. "Faulty Websites Confront Needy in Search of Aid." *New York Times*.

Romer, Christina D., and David H. Romer. 2010. "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks." *American Economic Review* 100 (3): 763–801.

Rothstein, Jesse. 2011. "Unemployment Insurance and Job Search in the Great Recession." *Brookings Papers on Economic Activity* (2): 143–214.

Supplemental Appropriations Act, 2008, Pub.L. 110-252 (2008).

U.S. Department of Labor. 1986–2019. "Unemployment Insurance Weekly Claims." U.S. Department of Labor, Washington, DC.

———. 2005–14. "ETA 5159 Reports: Claims and Payment Activities." Employment and Training Administration, U.S. Department of Labor, Washington DC.

———. 2018. "Significant Provisions of State Unemployment Insurance Laws." Effective January 2018 and July 2018. Employment and Training Administration, U.S. Department of Labor, Washington DC.

West, Rachel, Indivar Dutta-Gupta, Kali Grant, Melissa Boteach, Claire McKenna, and Judy Conti. 2016. "Strengthening Unemployment Protections in America." Center for American Progress, Washington, DC.

Improving TANF's Countercyclicality through Increased Basic Assistance and Subsidized Jobs

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Abstract

The Temporary Assistance for Needy Families program (TANF) is a core part of our nation's economic security system, intended to assist families with children facing deep economic insecurity. Yet, TANF's effectiveness in supporting basic living standards—especially through cash assistance as well as job preparation, creation, and placement—has fallen considerably, particularly during recessions, which is when families most require assistance.

I propose policymakers immediately establish a TANF Community and Family Stabilization Program to meet families' basic needs while also acting as an automatic economic stabilizer. As an intermediate step to broader TANF reform, this program would offer a generous and open-ended match to state efforts to provide families with two specific types of support:

1. **Basic assistance:** Cash and vouchers, including emergency assistance, to meet the basic needs of families during recessions. This assistance will stimulate the economy, reduce immediate hardship, and likely lead to longer-term benefits for affected children.
2. **Subsidized jobs with wraparound support services:** Programs, administered throughout the business cycle, that offset the cost of employers hiring workers who likely would have not been otherwise hired (for positions that likely would not have otherwise existed). These programs would also partially match state spending on related job preparation and training as well as on wraparound support services.

Introduction

The Temporary Assistance for Needy Families (TANF) program—a mix of state spending and a fixed (unadjusted for inflation) $16.5 billion federal block grant to states—serves low-income families with children. As a rare source of cash support for working-age families without access to good jobs, disability benefits, or unemployment insurance (UI), TANF remains a core part of our nation's economic security system. TANF also can provide holistic support services—in theory offering a multifaceted approach helping to address some of the barriers to decent employment that many families with very low incomes face.

Unfortunately, TANF suffers from widely recognized (Germanis 2018; Mathur 2015) and profound structural and other flaws (Edelman, Dutta-Gupta, and Grant 2015). Chief among them, TANF's block grant structure has limited state accountability for access and outcomes, while also reducing both its responsiveness to changing economic needs and its usefulness as an automatic stabilizer. In addition, excessive flexibility for types of allowable state spending have led states to use TANF funds in ways that are not well-targeted to support the basic living standards of families with the greatest need (Brumfield et al. 2019). Its design has incentivized states to shrink family-stabilizing cash assistance, even while states spend little on job preparation, placement, creation, and supports (Schott, Floyd, and Burnside 2019).

As a result of these flaws, the TANF program has fallen considerably short in (1) reaching a sizeable share of very disadvantaged families with children, (2) keeping families and children out of deep poverty, and (3) responding to changes in need, particularly driven by economic crises, but also demographic or even environmental crises and changes (the latter two topics not covered here)—despite the existence of a TANF Contingency Fund created for such a purpose (Bitler and Hoynes 2016; Center on Budget and Policy Priorities [CBPP] 2018a; Mitchell 2017).

This paper focuses on changes in the demand for TANF driven by deteriorating economic conditions. During the Great Recession, the number of unemployed individuals increased by 7 million (Pavetti 2014) and official poverty among families with children rose by 1.3 million—from 15.0 percent in 2007 to 18.5 percent in 2010—yet the number of families participating in TANF grew by just 191,161 from December 2007 through December 2010 (U.S. Census Bureau [Census] 2018; U.S. Department of Health and Human Services [HHS] 2018d; author's calculations).[1] Even that increase may be attributable largely to the temporary TANF Emergency Fund (Schott and Pavetti 2010a) created by the American Recovery

and Reinvestment Act of 2009 to provide basic assistance and one-time emergency assistance, and to support subsidized jobs—a provision that serves as an illustrative model for the proposal here.

As a step to a broad, structural TANF overhaul, I propose creating a new, permanent, and uncapped Community and Family Stabilization Program (Stabilization Program) within TANF. Targeting the most-expansive universe of plausibly eligible TANF participants, including some youths (Lower-Basch 2010) and even noncustodial parents for subsidized jobs, this program would create an effective countercyclical aspect to TANF through increased (1) cash and other basic assistance to families *during particularly poor labor markets* and (2) support for subsidized jobs programs with related support services *throughout the business cycle*.

1. **Basic assistance:** The Stabilization Program would provide a federal match—rising with state and national unemployment rates—for additional TANF basic assistance spending. Increasing the availability of basic assistance—cash and, to a lesser extent, vouchers for specific services like child care, as well as one-time emergency assistance—is an important countercyclical measure that supports spending by families with very low incomes. It may also have positive impacts on health, student achievement, and earnings in adulthood for affected children (Hoynes and Schanzenbach 2018). It would reasonably be expected to stimulate a shrinking economy because it would be well-targeted to families who would almost assuredly immediately spend the money, addressing a serious flaw in current policy. In 2017 only 23 percent of TANF families with children received basic assistance—a far cry from the 68 percent of low-income families who received such assistance in 1996 (the year of TANF's enactment)—and a share that did not rise markedly during and in the aftermath of the Great Recession. The share of TANF's spending on basic assistance continues to decline even though it is often the sole source of such public support for struggling families who are ineligible for disability assistance (Floyd, Burnside, and Schott 2018a).

2. **Subsidized jobs with wraparound support services:** The Stabilization Program would also provide subsidized jobs and wraparound services throughout the business cycle. Subsidized jobs programs offset the cost of public and private (for profit and nonprofit) employers hiring workers they probably would not otherwise have hired and in positions that likely otherwise would not have existed. Job preparation, on-the-job training, and wraparound support services—including assistance with transportation, caregiving, job searching, legal issues, and post-placement job search—are essential complements to help program

> participants overcome some of the barriers to employment they face. Subsidized jobs can serve as an effective way to raise very low family incomes when workers participate. As with other income boosts, boosting incomes through jobs likely has sizeable long-term benefits for young children in these families (Sherman and Mitchell 2017).

As I detail in this proposal, the Stabilization Program is designed in light of evidence on the performance of TANF as well as past, existing, and proposed subsidized jobs programs (Dutta-Gupta et al. 2016; Dutta-Gupta et al. 2018; Lower-Basch 2011; Mitchell 2018; Office of Senator Tammy Baldwin 2016; United States Senate Committee on Finance 2019; West, Vallas, and Boteach 2015). In particular, the temporary TANF Emergency Fund created during the most-recent national recession provides both a useful model and lessons to be learned for the Stabilization Program. Its experience demonstrates that, with substantial federal support, states can design and implement countercyclical basic assistance and subsidized jobs programs at a reasonable cost, including through cost-sharing with employers. These lessons also indicate potential pitfalls. For example, states were reluctant to draw on uncertain funding from the 2009–10 TANF Emergency Fund and permanent TANF Contingency Fund to provide benefits, underscoring why the Stabilization Program must provide consistent, adequate, and responsive funding (throughout the business cycle in the case of subsidized jobs).

To support basic assistance during downturns, I project that the Stabilization Program would provide annual federal funds of $44 billion at the peak of a deep recession. To support subsidized jobs throughout the business cycle, I project program spending of $3.5 billion (outside of a recession) to $10.8 billion (during a recession) in annual federal funds in current dollars.

Policymakers should establish the Stabilization Program immediately, before the next recession materializes and while states have the necessary time to build up their capacity to implement subsidized jobs programs. Such a program is harmonious with and is easily integrated into the current TANF program—and state and local agencies administering TANF—since TANF already supports (albeit inadequately) both basic assistance and subsidized jobs. The program could act as a stepping-stone to reforming TANF and establishing a stronger, farther-reaching, stand-alone, national subsidized jobs program (Dutta-Gupta et al. 2018).

The Challenge

In August 1996 President Clinton signed into law the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, creating TANF, among

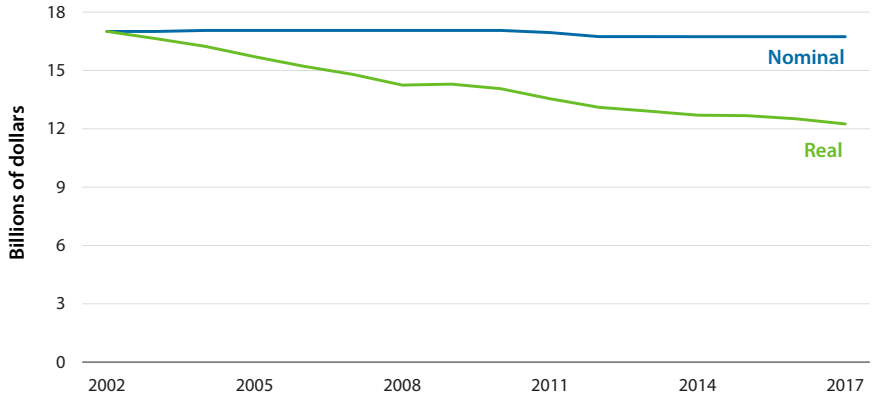
numerous other changes. TANF replaced Aid to Families with Dependent Children (AFDC), which was a 60-year old cash assistance and work program for families with children when they have very low incomes (HHS 2009). Under AFDC, states could access unlimited matching federal funds to subsidize their own spending (HHS 1998), which meant that increased countercyclical state spending necessarily increased federal funding (HHS 2009; Ziliak 2016). Any family eligible to receive assistance under AFDC could receive assistance, though cash assistance levels varied from state to state and were typically modest (Page and Larner 1997).

TANF, by contrast, is a capped, nominally fixed (i.e., unadjusted for inflation; see figure 1) block grant program that gives states significant discretion in designing their TANF programs. This flexibility in determining eligibility and in allowable state spending, combined with the capped funding structure, has limited participation even as need has grown (HHS 2009). To receive federal TANF block grants, states must demonstrate a maintenance of effort (MOE) by spending at least 75 percent of their 1994 AFDC spending (unadjusted for inflation) (HHS n.d.a).

States use TANF funds to provide participants with basic assistance (cash and vouchers) as well as other supports like child care, early childhood

FIGURE I.

Real and Nominal Temporary Assistance for Needy Families (TANF) Funding, 2002–17



Source: Adapted from Schott, Pavetti, and Finch 2012 using data from U.S. Department of Health and Human Services (HHS) 2002–17; author's calculations.

Note: Years are fiscal years. Total budget authority includes State Family Assistance Grants, Family Assistance Grants to Territories, Matching Grants to Territories, Supplemental Grants, Healthy Marriage Grants, and the Tribal Works Program. It excludes the Contingency Fund and Emergency Contingency Fund. Real dollars adjusted using Consumer Price Index Research Series Using Current Methods (CPI-U-RS), not seasonally adjusted.

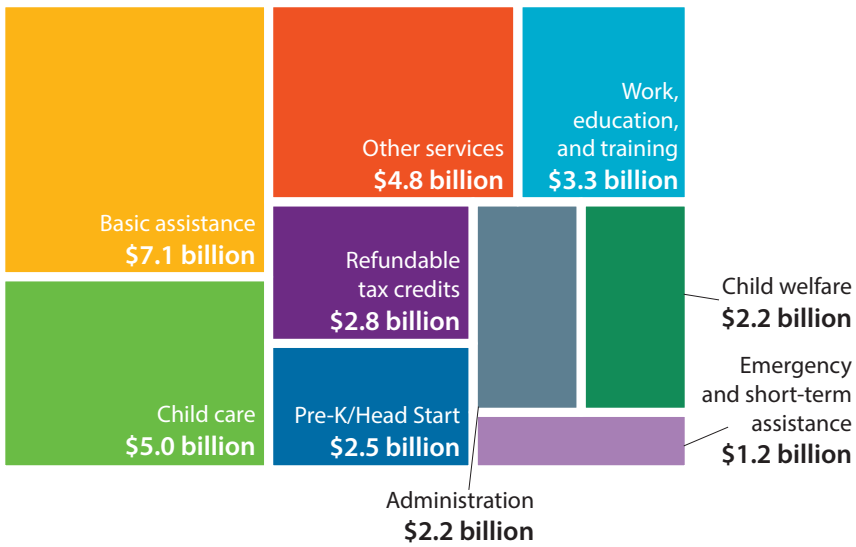
THE HAMILTON PROJECT Equitable Growth

programs, work education, training activities, and subsidized employment (Falk 2017). In 2017 states spent only around half of state and federal TANF funds in core programmatic areas—basic assistance, work supports and activities, and childcare (see figure 2)—with nine states spending less than 30 percent in these areas. Basic assistance totaling $7.1 billion represented less than 23 percent of total spending (Schott, Floyd, and Burnside 2019). Subsidized jobs spending by state TANF programs likely falls under the "Work, education, and training" spending category, which represented $3.3 billion in fiscal year 2017 (see figure 2). But estimating spending on these programs is challenging given that each state has different programs and may categorize their spending in different ways.

When compared to AFDC, TANF lifts fewer children and families out of poverty—and particularly few out of deep poverty—as a result of limited access and weak benefit generosity. According to CBPP, 68 families received TANF for every 100 families in poverty in 1996; in 2017 only 23 families received TANF for every 100 families in poverty (Floyd, Burnside, Schott 2018a). Those who do participate in TANF generally receive small benefits: as of July 2016, the maximum TANF cash payment for a family of three ranged from $170 (Mississippi) to $923 (Alaska) per month, and was below 50 percent of poverty-level income in all states (CRS 2019). Looking at all

FIGURE 2.

TANF Spending, by Category



Source: Congressional Research Service (CRS) 2019.

Note: Figures may not add to total due to rounding. Data are for fiscal year 2017.

THE HAMILTON PROJECT Equitable Growth

TANF spending, average real federal TANF dollars spent have dropped 32 percent from 1997 to 2016, from $1,860 per child in poverty to $1,273 per child in poverty (in 2016 dollars; Brumfield et al. 2019). Whereas AFDC lifted more than 2 million children out of deep poverty in 1995, TANF lifted only 635,000 children out of deep poverty in 2010 (CBPP 2018a).

TANF FAILS TO ADJUST TO CHANGES IN NEED AND RESPONDS POORLY TO SHRINKING ECONOMIES

TANF both falls short of meeting need and fails to *adjust* appropriately in response to *changing* need. In fact, it sometimes shifts counter to growing need, having procyclical effects. As a fixed block grant program, federal TANF funds are capped and have remained at around $16.5 billion since 1996, eroding their value (by approximately one-third), impact, and responsiveness over time (CRS 2019). Since spending is fixed and capped, and since states do not increase spending during poor economic conditions, block grant programs like TANF struggle to respond adequately to economic downturns, yet these are precisely the times when securing and maintaining stable and decent employment is toughest.

Despite the existence of a TANF Contingency Fund (HHS 1997) for the very purpose of responding to economic distress (HHS 2010), the TANF program has proven itself increasingly ill-suited as an automatic stabilizer for families, communities, and state and national economies (Pavetti, Schott, and Lower-Basch 2011). This is due to structural and programmatic features—such as the fixed block grant, work participation rate, and caseload reduction credit—discussed below (Pavetti, Schott, and Lower-Basch 2011).[2]

The TANF Contingency Fund Is Poorly Designed to Respond to a Weak Economy

Congress has persistently underfunded the TANF Contingency Fund: its original $2 billion allocation from 1996 was depleted by December 2009 (Schott and Pavetti 2011). This initial depletion took more than a decade because of the triggers and spending requirements. However, the baselines for the triggers are frozen and all states now meet them. As a result, states can qualify for funds amidst an economic expansion because of the outdated triggers that sometimes reflect little about growing economic hardship and distress in the state (Schott and Pavetti 2011). In fiscal year 2018, though 17 states qualified for and requested resources from the Contingency Fund for 12 months, the Fund's $608 million in available funding had been depleted by May 2018 (HHS 2018b). The situation was similar for fiscal years 2014–17 (HHS 2014b, 2015a, 2016, 2017): State requests exhausted the Fund well before the end of the year.[3]

Beyond its lack of funding, the design and eligibility structure of the TANF Contingency Fund is complicated and outdated. States can access the TANF Contingency Fund based on two economic-need triggers: (1) changes in the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) caseloads relative to 1994–95 or (2) increasing unemployment relative to the prior two years (Schott and Pavetti 2011). The first trigger leads to poor targeting not only because it is based on a now-irrelevant measure, but also because SNAP participation has been affected by far more than economic conditions (e.g., including legislated expansions) especially prior to the Great Recession (Schott and Pavetti 2011). The second measure is also flawed since states with persistent high unemployment—as was the case in many states during and following the Great Recession—may not qualify for contingency funds simply because their unemployment rate fell slightly below that of the prior two years (Schott and Pavetti 2011). In another chapter in this volume, Gabriel Chodorow-Reich and John Coglianese (2019) discuss the problems with such look-back periods in the context of extended unemployment benefits.

If a state is eligible under either of these triggers in a particular month, it can qualify for funds only for that month and the following month, making planning difficult (Schott and Pavetti 2011). To be sure, states can use their own funds or base federal funding (not Contingency Fund dollars) in preparation for downturns. However, the possibility of abrupt discontinuation of eligibility means that states receiving Contingency Fund money do not necessarily increase total TANF spending when economic conditions warrant doing so. For example, Arizona did just this, requesting and spending Contingency Fund dollars during and immediately following the Great Recession, while cutting its TANF benefits and program (Schott and Pavetti 2011).

The Overall TANF Program Has Performed Poorly in Each Recession since Its Enactment

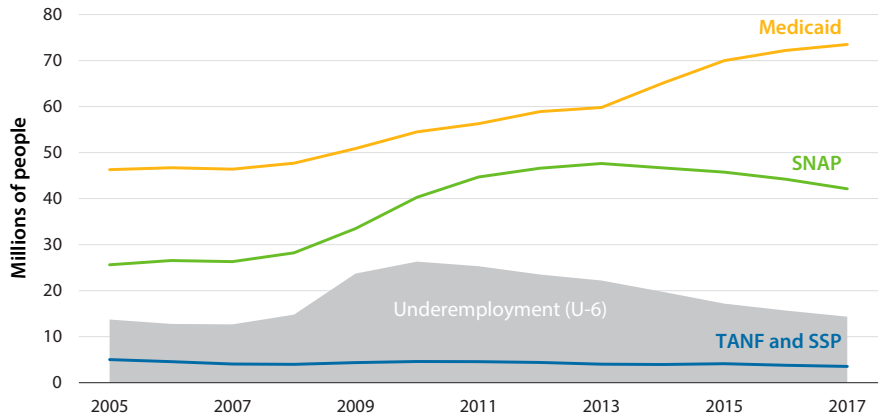
In fact, TANF has fallen short during the two recessions since its inception: the 2001 recession and the Great Recession of 2007–9 (Bitler and Hoynes 2010). During and following the 2001 recession, which saw the number of unemployed individuals rise by more than 3.2 million people (Bureau of Labor Statistics [BLS] 2001–03; author's calculations) and the number of families with children experiencing poverty rise by nearly 1 million, the number of participating families actually declined (Zedlewski 2008), continuing a downward trend that began in the final years of AFDC (CBPP 2018b).

TANF's failure to respond to growing need was starker still during the Great Recession, especially in comparison to other government programs that serve families living in poverty such as Medicaid and SNAP (see figure 3; Germanis 2016). While the number of unemployed individuals increased by 7 million during the Great Recession (Pavetti 2014) and official poverty among families with children rose by 1.3 million—from 15.0 percent in 2007 to 18.5 percent in 2010—the number of participating families grew by just 191,161 (Census 2018; HHS 2018d; author's calculations). Even that increase may be attributable largely to congressional action temporarily establishing a new $5 billion TANF Emergency Fund (Schott and Pavetti 2010a).

The poor performance of TANF as an automatic stabilizer is also reflected in its inability to respond to extreme weather events (Mitchell 2017) and other crises, which are increasingly likely (Melillo, Richmond, and Yohe 2014) in light of the rapid rise of global temperatures. Fixed block grant funding without supplemental and responsive mechanisms stand in contrast to the ability of better-structured programs (e.g., Medicaid and SNAP) that have both historically and recently responded automatically and more robustly to changes in need, including after extreme weather events and other crises. Similarly, the Medicaid block grant in Puerto Rico has posed challenges in response to hurricanes and public health crises when compared to the

FIGURE 3.

Participants in Medicaid, SNAP, and TANF, FY 2005–17



Source: HHS 2018d; U.S. Department of Agriculture 2019; Statista 2019; U.S. Department of Labor [DOL] DOL 2005–17; Bureau of Labor Statistics (BLS) 2005–17; author's calculations.

Note: The "TANF and SSP" series refers to the number of TANF participants based on average annual participation in a given fiscal year and includes those from separate state program (SSP)–MOE. Annual UI participants are the average of weekly participants based on the fiscal year calendar.

THE HAMILTON PROJECT Equitable Growth

open-ended match-based Medicaid program in 50 states and the District of Columbia (Brumfield et al. 2019).

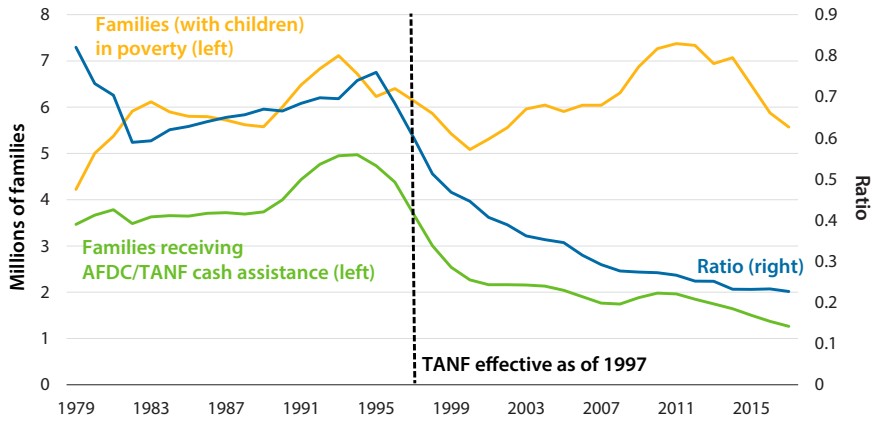
As shown in figure 4, the number of families receiving cash assistance under TANF has not substantially increased during recessionary periods (March–November 2001 and December 2007–June 2009); it covered just 15 percent of the growth in families with children experiencing poverty during the Great Recession (Census 2018). While TANF cash assistance participation grew by barely 12 percent (Floyd, Burnside, and Schott 2018b; author's calculations), SNAP participation grew by 81 percent (Greenstein, Keith-Jennings, and Rosenbaum 2018). Overall access to TANF cash assistance has declined substantially since TANF's inception. In 1997 states spent $14 billion on cash assistance—67 percent more than 2017 levels after adjusting for inflation (Schott, Floyd, and Burnside 2019).

THE UNITED STATES NEEDS ROBUST SUBSIDIZED JOBS SPENDING

Reducing involuntary unemployment to its minimum requires changes in monetary, exchange rate, regulatory, and fiscal policy throughout the business cycle (Bivens 2018). Within this framework, I have elsewhere called for substantial fiscal investments that would lead to net job creation at all times, which would help us meet our nation's substantial and unmet

FIGURE 4.

Families (with Children) Experiencing Poverty and Families Receiving AFDC/TANF Cash Assistance, 1979–2017



Source: Floyd, Schott, and Burnside 2018b; author's calculations.

Note: The "Ratio" series refers to the number of families (with children) receiving AFDC/TANF cash assistance divided by the number of families (with children) in poverty. Poverty figures use the official poverty measure. TANF was enacted in August 1996 and took effect in early 1997.

THE HAMILTON PROJECT Equitable Growth

caregiving needs (Dastur et al. 2017). (See also Bernstein [2018] for a general discussion of and a proposal for maintaining full employment to encourage wage growth.) Even with all these reforms and even during periods of strong economic growth, some workers with serious or multiple barriers to employment (e.g., caregiving responsibilities, disabilities, or criminal records)[4] would remain involuntarily unemployed or underemployed without efforts focused on addressing the barriers they face (Dutta-Gupta et al. 2016). Subsidized jobs can target precisely these workers and thus are likely an essential component to ensuring job opportunities for all who want them.

Subsidized jobs could help many of these workers, potentially in a cost-effective way that is more beneficial than alternatives, yet subsidized jobs continue to be underutilized (see box 1; Dutta-Gupta et al. 2016). These jobs offer critical income in exchange for productive work; reduce the risk an employer perceives (e.g., when hiring someone with a criminal conviction) or the cost an employer may incur from hiring a worker or increasing a worker's pay; and improve the well-being of participating workers and their families (Dutta-Gupta et al. 2016).

Subsidized jobs programs have had varying success in boosting post-participation labor market outcomes, but many have demonstrated sustained positive impacts, including well after workers complete participation, and several have been socially cost-beneficial for some populations (Dutta-Gupta et al. 2016). Impacts range from higher employment and earnings, to reduced rates of depression and criminal justice system interaction, to improved psychological well-being and outcomes for children in participating families (Dutta-Gupta et al. 2016).

Subsidized jobs, which range from partial- to full-wage subsidies, also enable nonprofit and for-profit employer placements, thus expanding the range of opportunities for disadvantaged workers while taking advantage of an expansive hiring and employment infrastructure to meet changes in need as rapidly as possible. Allowing placements with for-profit (and nonprofit) private employers can help stabilize communities. Notably, there is also evidence that workers are more likely to benefit in the long-term from placements with private employers (Card, Kluve, and Weber 2015). In contrast to direct public hiring, however, subsidized jobs will directly improve the profitability of some for-profit firms, creating concern about whether the public sector should provide such support. (Please refer to the Questions and Concerns section of this chapter for additional discussion of this issue.)

BOX I.

Basic Assistance and Subsidized Jobs Are Underutilized

TANF likely led initially to increases in employment and earnings among single mothers through some combination of work requirements, a larger initial spending level, and other aspects of the TANF reform. However, these beneficial employment and earnings impacts are far smaller than those generated by the combination of a tight labor market, Earned Income Tax Credit (EITC) expansions, and increased child-care assistance (Ziliak 2016). Even so, these increased earnings were largely canceled out by decreased TANF benefits and, in some cases, benefits were lost without gains in employment, pushing families deeper into poverty (Moffitt 2015). As noted above, states have redirected some of their assistance to higher-income TANF participants and used the TANF block grant to substitute for existing state programs, leaving behind those with the most challenges, including people with disabilities and mental health challenges.

For TANF to effectively meet families' and children's needs, it must increase the support that families most require—basic assistance and subsidized jobs with wraparound support services. These strategies are underutilized in part because of the incentives set up by TANF's capped, block grant structure that allows states to instead use federal TANF dollars to fill budget gaps. Case in point: one of the program's only accountability measures—the required work participation rates—creates powerful incentives to avoid enrolling families with the greatest need, while doing little if anything to promote positive medium- to long-term labor market outcomes. At the same time, TANF's provision of cash assistance has shrunk considerably, despite evidence for persistent (unmet) need (Hoynes and Schanzenbach 2018).

Adding a subsidized jobs program would address states' general failure to use their TANF programs to increase disadvantaged parents' employment and earnings. This shortcoming may be unsurprising given the lack of accountability and the actual incentives that states face. Each state is subject to federal work participation rates that require a share of TANF participants to be engaged in formal employment or approved work-related activities. TANF's programmatic requirements limit its ability to reach parents, to

promote positive labor market outcomes throughout the business cycle, and to adjust (minimally or not at all) in response to recessions.

While promoting work (including through child-care assistance) and job preparation (including through education and training) is among the core purposes of TANF beyond basic assistance, CBPP found that "states spent only about 30 percent of their federal and state TANF dollars on the other core areas combined: child care, and work activities and supports" (Schott, Floyd, and Burnside 2019). In some cases, this spending simply replaced existing spending, freeing up state funds for unrelated purposes (Schott, Floyd, and Burnside 2019). The focus of this proposal is to ensure that TANF plays its part through subsidized employment, until and unless TANF is dramatically reformed and a stand-alone national subsidized jobs program is established. The experience of this proposed Stabilization Program could help with both of those longer-term policy change goals.

Part of the challenge is that ill-designed work participation rate schemes have encouraged states to apply for caseload reduction credits that reduce their overall program enrollment (aside from changing eligibility requirements) (Schott and Pavetti 2013). Statewide work participation rate requirements begin at 50 percent for families with adult participants (90 percent for two-parent families) that have a member who meets these work requirements, but few states meet these thresholds (CRS 2017; Hahn, Kassabian, and Zedlewski 2012). During the first 12 years after TANF's inception, the national average work participation rate for non-two-parent TANF families typically hovered between 31 and 35 percent (Hahn, Kassabian, and Zedlewski 2012). To meet even these lower requirements, states redirected assistance to relatively better-off families (which improves state work participation rates), especially following enactment of the Deficit Reduction Act of 2005 (Hahn, Kassabian, and Zedlewski 2012). For example, states have gone out of their way to retain families with employed adults and have focused on job-ready families, serving those with the greatest barriers to employment (if at all) through solely state-funded programs (Hahn, Kassabian, and Zedlewski 2012).

In recent years, work participation rates have increased substantially, reaching a 53 percent all-family rate in fiscal year 2017, largely due to increased state spending on earning supplement programs that benefit higher-income working families (CRS 2017, 2019). In other words, the increase does not stem from greater employment or work-related engagement of typical TANF participants (CRS 2019). Even so, states spend less than one-eighth of total TANF dollars on work activities and supports, and the available evidence indicates little or no improvement in

employment outcomes for participants that is attributable to the program (CBPP 2018a; Germanis 2015; Pavetti 2015).

The Proposal

I propose a new Community and Family Stabilization Program (the Stabilization Program) within TANF to meet the growing need for (1) basic assistance (e.g., ongoing cash assistance, vouchers, and one-time emergency assistance) during recessionary periods and (2) subsidized jobs with related support services throughout the business cycle. States would be able to decide which purposes they want to put funds toward, and federal funding would be consistent, generous, and responsive to meeting participants' needs. Because TANF is a federal-state partnership, the Stabilization Program would be run as an extension of that partnership, ideally with universal state participation. For the subsidized jobs component, the Stabilization Program and participating states will also leverage financial contributions by public sector, nonprofit, and especially private sector employers. Both the basic assistance and subsidized jobs components would expand to meet increased need during economic downturns.

The proposal contains the following core features:

1. Two unemployment-based triggers—one at the national level and one at the state level—that would increase federal spending during economic downturns. In combination, the triggers would allow TANF to respond to a national recession as well as regional economic weakness.
2. A countercyclical federal match rate on additional TANF basic assistance spending, ranging from 0 to 100 percent as national and state triggers are activated.
3. A countercyclical federal match rate on subsidized employment spending, ranging from a state-specific base match rate (never lower than 75 percent) to 100 percent.
4. Sufficient funding to offset the vast majority or even all of the cost of each job, subject to state policy and implementation decisions.
5. In order to maintain eligibility, states would be required to demonstrate an increase in enrollment and costs relative to baseline (i.e., pre-trigger) periods. In the case of subsidized jobs, states would be asked to show that their programs targeted jobs that would have otherwise not existed.

Below, I outline the proposed program's structure and countercyclical features, administration, eligibility and funding process, and accountability measures. Then I discuss the Stabilization Program's expected costs. Much

of this proposal and its features are drawn from the TANF Emergency Fund experience (see box 2), which should give policymakers confidence that the Stabilization Program can be well implemented by the federal and state governments alike, to the direct benefit of workers and communities devastated by poor economic conditions. At the national level, the Stabilization Program would constitute an automatic stabilizer, supporting consumption and employment for low-income individuals and families during downturns.

PROPOSED STRUCTURE AND COUNTERCYCLICALITY FEATURES

The proposed Stabilization Program should be funded such that it covers all those who apply for and receive benefits and is fully able to match state spending. Unlike the base TANF program, it would be funded through an uncapped federal match of state spending on allowable spending (discussed below). The basic model is akin to a more generous and more automatically countercyclical version of the federal-state Medicaid partnership, which similarly funds a wide range of services and supports through intermediaries (e.g., health-care providers in the case of state Medicaid spending). For the proposed Stabilization Program, the intermediaries would be community-based organizations and employers. This structure ensures that states will be able to access generous, consistent, and predictable funding that is responsive to economic changes and will be able to adequately serve the needs of program participants.

The TANF Emergency Fund and TANF Contingency Fund experiences bring to light the importance of long-term predictable funding in any basic assistance and/or subsidized jobs program. States were reluctant to provide more cash assistance in case they would have to pay for it themselves when Emergency Fund funding expired (Hall 2015b). The temporary Emergency Fund was allowed to expire despite clear and persistent need. The TANF Contingency Fund is particularly vulnerable to cuts: the Trump administration's budget for fiscal year 2018 proposed eliminating the Contingency Fund altogether (First Focus 2018). While contingency funds could be designed to work better, nothing will be as responsive and effective as permanent, open-ended, guaranteed federal funding that automatically aligns spending with state and national need.

Historically, states have managed their finances in a manner that would deepen rather than counteract recessions, in part due to state laws and state constitutional restrictions on borrowing. The federal government's historic ability to borrow affordably allows it to offset this tendency. Expansive eligibility standards (encouraged by the generous federal match) and automatic growth in federal cost-sharing would ensure that this

BOX 2.

The TANF Emergency Fund Points a Way Forward

The TANF Emergency Fund, created as part of the American Recovery and Reinvestment Act of 2009, provided $5 billion over 20 months to help states boost basic assistance, including cash, one-time emergency benefits, and subsidized employment for low-income parents and youths (HHS 2012). Federal funds could be used by states to cover up to 80 percent of increased costs in these three areas relative to 2007 or 2008 levels (Pavetti 2011). Notably, states could cover the remaining 20 percent in increased costs not just through additional state spending and TANF block grant funds, but also through employer contributions, allowing states to ramp up subsidized jobs programs with minimal budgetary commitment (Pavetti 2011).

Much of the TANF Emergency Fund was used for subsidized employment. Using $1.3 billion in federal funds, 39 states and the District of Columbia placed 260,000 low-income adults and youths in temporary jobs before the Emergency Fund expired on September 30, 2010 (Pavetti 2011).[5] Some state programs focused on securing subsidized jobs for workers who were recently laid off, while others focused on supporting individuals who have the most-substantial employment barriers (Farrell et al. 2011). Around half of the placements were summer jobs for youths (Farrell et al. 2011). Many states placed a majority of participants with private employers, with some states hoping for the win-win result of also easing small business burdens during the recessions (Farrell et al. 2011).

Research on, and evaluation of, the TANF Emergency Fund's overall impacts on recipients, employers, and local economies is limited. However, from anecdotal evidence and a detailed analysis of five jobs programs (Roder and Elliot 2013), we can glean important considerations for the design of future subsidized jobs programs.[6]

1. States had less than one year to either create or expand existing subsidized jobs programs, demonstrating that it is possible to rapidly create a subsidized jobs program within TANF (Farrell et al. 2011), and to do so at a reasonable cost, including through cost-sharing with employers (Pavetti 2011).

2. Subsidized jobs can have significant impacts on employment and earnings, especially for those experiencing long-term unemployment. Program participants in Florida experienced a $4,000 increase between the year before and the year after the program—$3,000 more than a plausible control group that did not participate, according to a nonexperimental evaluation (Roder and Elliot 2013).
3. Employers faced challenges in working with program participants with respect to basic job skills and dependability (Schott and Pavetti 2010b), underscoring the need for wraparound support services and preplacement training as a complement to placements.
4. Subsidized jobs may reduce other public benefits spending, including other TANF spending. Following the closing of an auto parts shop employer in Perry County, Tennessee, the county arguably reduced its soaring unemployment rate by one-third by using TANF Emergency Funds (Schott and Pavetti 2010b). South Carolina's rising TANF participation dropped after the state launched its subsidized jobs program (Schott and Pavetti 2010b). These are far from definitive findings, given that the subsidized jobs were not provided in a way that facilitates rigorous evaluation, but the stories are suggestive and were consistent across the country.
5. Participating small and large business owners found subsidized labor helpful at a time when profit margins and sales were squeezed by the recession (Roder and Elliot 2013; Schott and Pavetti 2010b). For example, a San Francisco–based dry cleaning company, Laundry Locker, told interviewers that the JobsNOW! subsidized jobs program helped the company hire additional staff and thus helped them avoid being a casualty of the recession (Schott and Pavetti 2010b).
6. Private employers generally did not find participating in subsidized jobs programs administratively burdensome (Farrell et al. 2011).

program avoid the pitfalls of the fixed TANF block grant. The increase in basic assistance would raise recipient spending, thereby improving local economies. Similarly, supporting subsidized jobs also injects money into local economies and can help keep businesses and nonprofits afloat.

The new program would include two transparent and easily administered triggers for increased federal funding (see table 1). One trigger would be national and the other would be state-specific, and both would be updated at least every calendar quarter by HHS. The national trigger would be based on a three-month average of the U-6 alternative measure of labor underutilization. That measure counts as underutilized those workers who are unemployed, part time for economic reasons, and marginally attached to the labor force. The state trigger would be based on the three-month average state unemployment rate.

When activated, each trigger would lead to either a national or a state-specific percentage increase in the federal match rate (see table 1). A given state would receive the more generous of the match rate increases provided for under the two triggers.

After activation, the trigger would remain on through the current and subsequent fiscal year, allowing for necessary state planning and for a 12-month wind down of the higher match rate.[7] To ensure that increased federal expenditures would result in increased TANF spending, state recipients of increased match rates would be required to raise both enrollment and their own spending. In addition, during periods of full federal matching, I propose that states be subject to a cap of 110 percent of federal spending per participant when compared to the most-recent period during which a relevant state received less than full federal funding.

Rather than specifying the details of how to deliver subsidized jobs with wraparound support services to varying populations, the program would allow a wide range of expenses to be eligible for federal funding, as long as the spending is tied to a specific job placement for a specific participant. Requiring state contributions helps to avoid low-quality state spending, while encouraging better integration of state-subsidized jobs programs with state TANF programs and state workforce systems.

When the economy deteriorates, state finances will also suffer, and states will typically find it challenging to increase spending. Third party (often employer) spending will be allowed to count toward state spending requirements when any trigger is hit. Though there generally will be no third party whose contributions will count toward basic assistance, states will be incentivized to provide cash assistance, which draws a similar or more-generous federal match. They will likely substantially expand basic

TABLE I.

Proposed Economic Triggers for TANF Community and Family Stabilization Program

Triggers		Subsidized jobs			Basic assistance
National trigger (3-month average U-6 underemployment rate)	State trigger (3-month average total unemployment rate)	Federal match	Federal match example A	Federal match example B	Federal match
less than 8.0%	less than 6.00%	Base FSEM (never lower than 75%)	75%	85%	0%
8.0% to <9.0%	6.00% to <6.25%	Rises by 1/8 of the gap between base FSEM and 100%	78%	87%	20%
9.0% to <10.0%	6.25% to <6.50%	Rises by 1/4 of the gap between base FSEM and 100%	81%	89%	40%
10.0% to <11.0%	6.50% to <6.75%	Rises by 3/8 of the gap between base FSEM and 100%	84%	91%	60%
11.0% to <12.0%	6.75% to <7.00%	Rises by 1/2 of the gap between base FSEM and 100%	88%	93%	80%
12.0% to <13.0%	7.00% to <7.25%	Rises by 5/8 of the gap between base FSEM and 100%	91%	94%	85%
13.0% to <14.0%	7.25% to <7.50%	Rises by 3/4 of the gap between base FSEM and 100%	94%	96%	90%
14.0% to <15.0%	7.50% <7.75%	Rises by 7/8 of the gap between base FSEM and 100%	97%	98%	95%
15.0% and up	7.75% and up	Full federal funding: Mandatory state participation	100%	100%	100%

Note: "FSEM" refers to the federal subsidized employment match, which varies by state. For all scenarios above base FSEM, states must increase participation and spending to qualify for increased federal funding. States qualify for the more generous trigger if more than one trigger is hit. In the full federal funding scenario, federal spending is set at 110 percent of state per participant spending when most recent trigger was hit.

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assistance in part because the administrative costs will be rather modest when compared to subsidized jobs.

The Stabilization Program will offer sufficient funding to offset the vast majority of the cost of each job, subject to state policy and implementation decisions.

PROPOSED PROGRAM ADMINISTRATION

TANF's serious flaws notwithstanding, it is the most-appropriate home for a countercyclical basic assistance or a quickly implemented national subsidized jobs investment. Most importantly, there is already administrative capacity to implement the proposal. Policies, especially those requiring as sophisticated a delivery system as is needed for subsidized jobs, ultimately must be well implemented by real people and institutions in a wide variety of settings. Potential alternative host programs are less well equipped (see Questions and Concerns for a detailed discussion) or, in the case of UI, risk being undermined by being shifted away from its insurance and earnings replacement role through a robust, new subsidized jobs component.[8]

TANF is already a major part of our workforce development system, which would make it easier for the Stabilization Program to integrate into already-existing systems. In fiscal year 2017 states spent $3.3 billion of state and federal TANF dollars on work activities, supports, and services (Schott, Floyd, and Burnside 2019). To put this figure in perspective, state spending under the Adult, Youth, and Dislocated Worker titles of the Workforce Innovation and Opportunity Act of 2014 (WIOA)—the U.S. Department of Labor (DOL)-administered law governing and funding our nation's primary public workforce development system—summed to $3.0 billion in program year 2016 (DOL 2016; author's calculations).

Federal law already allows TANF funds to be used for wage subsidies for public and private employers' allowable expenses (Falk 2017). Similarly, wraparound support services, ranging from work-related transportation and child-care assistance to education and training (e.g., including on-the-job training) are valid uses of TANF dollars and would be important components of the proposed Stabilization Program. Though it is unclear how much TANF funding is used for subsidized jobs currently, the TANF Emergency Fund gave the vast majority of state TANF programs experience in designing and administering such a program (e.g., the necessary relationship development with service providers and employers) and in programming (e.g., preplacement skills development, job search and development assistance, and mentorship and counseling).

In addition, TANF stands alone in its direct provision of and potential connections to wraparound support services. These often begin before a job placement and continue throughout and following job placement and may be particularly important for subsidized jobs programs to engage disadvantaged workers.[9] Finally, initial guidance for the TANF Emergency Fund took months to develop. Should economic conditions deteriorate soon, TANF administrators at HHS would be best able to quickly stand up a national program. (See the Questions and Concerns section for a broader discussion of alternative program homes.)

One disadvantage is that, in general, federal law limits TANF to low-income families with dependent children and foster youths (Falk 2014; HHS 2014a). Further, state programs often include far-more-restrictive eligibility provisions, including extreme income targeting that limits access to families in deep and very deep poverty (Falk 2014). These are serious limitations because subsidized jobs may be a constructive strategy for helping many other workers and their families, including people leaving prisons who do not have custodial children, refugees without dependent children, and the millions of families with very low incomes and children under age 18 who are excluded by state TANF laws. These considerations argue strongly for a stand-alone subsidized jobs program eventually, rather than one that is attached to any current program. Until then, TANF is likely the most-appropriate home for a robust subsidized jobs program, especially given the little notice that may precede the next recession.

Similar to TANF and the expired Emergency Fund, HHS would administer the Stabilization Program. Program administration would be funded through annual appropriations for HHS (as is the case with the current administration of the TANF program). The DOL's pieces of the program also would be funded through appropriations and the agency would be mandated to work with HHS and states in providing technical assistance and support, especially with regard to job development and placements. Similarly, HHS would be mandated to work with DOL. DOL and HHS would issue joint guidance to states and other entities describing how relevant DOL and HHS programs can work together to ensure the success of subsidized jobs. Evaluations of program effectiveness would similarly require involvement of both agencies. The two agencies have experience with subsidized jobs programs, including a recent partnership testing out several subsidized jobs strategies through the Enhanced Transitional Jobs Demonstration and the Subsidized and Transitional Employment Demonstration programs.

This proposal would likely interact with several programs beyond TANF, including WIOA, SNAP, and UI. First, like other similar proposals, this

one would prohibit employer receipt of the Work Opportunity Tax Credit for workers participating in a subsidized jobs program funded by this new fund. Second, by increasing earnings of participating families, this proposal could reduce SNAP expenditures, and, to a lesser extent, UI participation. This proposal also could trigger increased receipt of the EITC and the Child Tax Credit—neither of which are included in the cost estimates in this paper. It could expand overall funding for child care to enable job search, job placement, and employment until child-care assistance is funded adequately to meet need (at which point child-care assistance could be removed as an allowable expense). Currently, child-care assistance is dramatically underfunded—with far fewer people receiving assistance than are eligible—and long waiting lists (Brumfield et al. 2019). This proposal also could help offset any reduction in employment from minimum wage increases that are achieved faster than those known to have no such effects.

PROPOSED ELIGIBILITY AND FUNDING PROCESS

As an uncapped, permanent, and countercyclical program, the Stabilization Program's size would vary depending on need and economic conditions (see the Expected Costs section for additional details). While I outline potential guidance of the Stabilization Program's eligibility and funding process below—much of it drawn from the TANF Emergency Fund experience—HHS would ultimately make many of the more-detailed decisions.

As in the case of the TANF Emergency Fund, states would use the Stabilization Program funds to defray their costs related to basic assistance, emergency short-term assistance, and subsidized jobs. For the basic assistance component, to ensure countercyclicality, the states must demonstrate an increase in enrollment and costs relative to baseline periods. These costs could include one-time cash assistance for rent, food, or utilities; domestic violence services; short-term education and training; or other activities (HHS n.d.b). For the subsidized jobs components, states may include expenditures up to 125 percent of wages to account for employer supervision and training costs, thereby subsidizing worker advancement (HHS 2012). The Stabilization Program would allow third-party (primarily employers) spending toward state match requirements for subsidized jobs or basic assistance (likely community foundations), though such costs would not count toward state MOE spending requirements.

Similar to the TANF Emergency Fund experience, I propose that HHS adopt expansive eligibility definitions for basic assistance and subsidized jobs,[10] allowing states to provide these benefits to current TANF participants, including teenage parents,[11] as well as to noncustodial parents and other family members, who often are excluded from TANF but whose successes

very directly affect the well-being of their children.[12] Because this proposal does not attempt to restructure the base TANF program and it assumes integration with that program, states would continue to be responsible for determining income levels for eligibility; the generous match should encourage expanded individual eligibility for the Stabilization Program.

A key question is what kinds of jobs should be subsidized. I propose that states demonstrate that their programs prioritize funding subsidized jobs that: (1) target employment and partnerships with industries that are likely to expand in the future, with the goal of creating long-term job opportunities so that participants gain experience in sectors where there are more likely to be future employment opportunities; (2) meet specific unmet community and national priorities, for example addressing the climate crisis or helping meet our growing caregiving needs; and (3) reduce racial and gender inequities, especially in labor market outcomes. Further, the Stabilization Program will encourage states to focus on small employers because practitioners and evaluators indicate that they have a stronger track record of providing more-valuable opportunities.

Under the TANF Emergency Fund, states were reimbursed for 80 percent of increased spending for basic assistance, including emergency assistance, and subsidized employment (HHS 2012). For the Stabilization Program, I recommend the federal government match state spending through a proposed federal subsidized employment match (FSEM) that would rise (never above 100 percent) and fall (never below 75 percent) with economic conditions. The FSEM would vary by state and be based on the most-recent Federal Medical Assistance Percentage (FMAP) for Medicaid funding, which is based on the relative per capita income of a state compared with national per capita income. The FMAP currently varies from 50 to 82 percent and is limited by a statutory maximum of 83 percent (HHS 2015b). Each state would receive a minimum (regardless of macroeconomic conditions) FSEM equal to its FMAP plus half the gap between the state's FMAP and 100 percent. FSEMs would thus range from 75.0 percent in the wealthiest states to 91.5 percent in the poorest (See also Dutta-Gupta et al. 2018).

For example, a state with a minimum FMAP under the Medicaid program of 50 percent—California, for example—would have a minimum FSEM of 75 percent. In this example, California's FSEM could rise to 100 percent during a recession. When the FSEM reaches 100 percent, the program would become mandatory. (The Supreme Court has indicated that anything short of that level of federal funding would make the program optional for states. Should that jurisprudence change, this program should be compulsory for all TANF-participating states, territories, and tribal entities at all times.)

Though it will expand or contract based on need, the Stabilization Program should not be set up as a temporary program. First, as noted earlier, some need for basic assistance and subsidized jobs exists even during relatively strong labor markets. Second, subsidized jobs programs in particular will more quickly and effectively address labor market weakness during a recession if they are already in place when it begins. Having experience and an infrastructure in place—including relationships with employers and service providers—likely will be highly consequential.[13] This proposal does not call for an increase in federal support for basic assistance during relatively strong economies. Because basic assistance is a consistent and ongoing—if under-resourced—activity in all states under the current block grant and the delivery infrastructure is relatively easily expanded as needed, there is less *countercyclical* rationale for increasing federal subsidies for basic assistance when the economy is not as weak. To be sure, as argued elsewhere in this chapter, there are other compelling reasons for increasing basic assistance that are beyond the scope of this proposal.

PROPOSED ACCOUNTABILITY MEASURES

A major shortcoming of TANF is that the federal government does not hold itself or the states accountable for access to benefits and effects on families. The Stabilization Program should attempt to avoid these errors, and the clearest way to do so is to avoid the block grant structure. Other accountability measures for each stakeholder are described next:

Federal government: The Stabilization Program will incorporate independent evaluations by the Government Accountability Office, experimental and nonexperimental evaluations of state programs by independent evaluation entities, and the production of annual public reports and shareable data that provide detailed information about access, participation, outcomes, and impacts to the extent possible.

States: This program would limit supplantation of state and local spending through new state MOE requirements on basic assistance and subsidized jobs programs during recessionary periods. In the case of subsidized jobs, states would have to prove that their programs targeted jobs that would have otherwise not existed, ensuring that employers are not displacing existing workers and are in fact creating new jobs. States should prioritize employers or worksites smaller than a certain size that they determine. In addition, the number of placements per employer or worksite should be limited, and employers should be turned away if they abuse the program. Placement durations should be limited in part to prevent employer use of the program as a long-term substitute for unsubsidized employment.

Wraparound support services must also be tied to a specific participant and a specific job, though services can begin and follow job placements, within a reasonable timeframe. State MOE requirements would be harmonized with existing TANF state MOE mandates.

Federal technical assistance from HHS, in partnership with DOL, will include funding for continuous national and state learning, including through data collection as well as experimental and nonexperimental evaluations that consider impacts on workers and their families, local communities, employers, and the greater economy. State data collection and participation in learning and evaluation would be mandatory.

Employers: Eligible employers could come from all sectors—public, private non-profit, and private for-profit. As noted earlier, private for-profit employment placements appear to be more likely to lead to durable labor market gains for workers. Realistically, experiences with dozens of subsidized jobs programs over the past half century suggest that private for-profit employers would most likely participate during a recession, and nonprofit and public employers would represent the bulk of placements during an expansion. For-profit employers' participation at any time risks providing windfall profits and substituting subsidized placements in place of unsubsidized placements. This risk cannot be eliminated but can be minimized. The Stabilization Program would limit private for-profit placements to smaller employers, encourage subsidy designs and placements that promote rollover into unsubsidized placements at the same employer,[14] limit placement durations, restrict the number of placements at a firm or worksite, require union approval for placements where union representation exists, and require sworn attestation that no worker is displaced and that the position would not exist as such without the subsidy.

EXPECTED COSTS

TANF's 2017 $7.1 billion in basic assistance spending (23 percent of total TANF spending) constitutes a baseline from which to project additional countercyclical basic assistance spending.[15] Assuming the highest recorded AFDC or TANF participation rate of 85.7 percent, basic assistance could approach $44 billion annually (in projected 2020 dollars) in the nadir of a deep recession (HHS 2018c; author's calculations).[16]

Estimating spending and likely participation for subsidized jobs programs is challenging and involves substantial uncertainty due to limited comparable national experiences, the complexity of developing job openings, and the potential for substantial behavioral responses by states to new federal incentives. Some prior research indicates that the participation rate for disadvantaged workers might fall between 10 and 50 percent, assuming

that the availability of subsidized job placements were not a limiting factor (programs that are more limited typically have waitlists) (Collyer et al. 2019; Dutta-Gupta et al. 2016). Analysis of a major subsidized jobs proposal introduced by U.S. Representative Khanna, and with some programmatic similarities to this proposal, indicates an annual per-participant cost of $9,000 to $9,300 in 2016 dollars (likely around $10,000 by 2020, based on projected inflation; CBO 2018, author's calculations). If just 20 percent (higher than 10 percent, due to incentives states will face with the federal match) of the 1.6 million families receiving cash assistance in 2015 (HHS 2018c) participated, subsidized jobs spending would equal approximately $4.4 billion in projected 2020 dollars. Applying a 50 percent participation rate to TANF's 2009–10 recessionary peak cash assistance participation of 1.85 million families suggests that costs could rise to more than $10.8 billion (in projected 2020 dollars), though the generous federal match could lead to still higher participation, since states likely would expand eligibility in response.

Questions and Concerns

I. Why not just rehaul the TANF Contingency Fund?

The TANF Contingency Fund relies on ineffective and outdated measures that do not help refocus TANF funding on its core purposes, particularly since the Contingency Fund is a capped fund like the broader TANF program. Legislatively, it would be simpler to eliminate the Contingency Fund entirely, and then use its budgetary allocation to help pay for this new, uncapped Stabilization Program.

2. Why should the public sector subsidize private sector jobs?

As noted earlier, allowing private placements can improve outcomes for workers and allow for more rapid scaling up for jobs programs. Still, subsidized jobs directly increase the financial well-being of for-profit firms. This outcome may be unacceptable to some; however, many different public policies have this effect—and even direct public hiring indirectly contributes to private profits. For-profit placements can be limited to smaller and less-profitable firms and run through intermediaries to ensure that these placements are hires that otherwise would not have been made. The number of placements per firm and worksite can also be limited to ensure that these positions would not have otherwise existed. These restrictions likely will constrain the potential number and speed of placements. That said, a separate public employment option without time limits on worker participation (which is beyond the scope of this proposal), but with strong features to limit worker displacement and supplantation

of local and state funding, would help workers who are not in a position to pursue or maintain stable, unsubsidized employment in the long run and would serve as a final backstop against involuntary unemployment.

3. Why should subsidized jobs be funded throughout the business cycle?

As I have written elsewhere with other experts, "The U.S. economy does not produce enough employment opportunities for all those who are able and want to work and who could contribute to the economy" through formal employment (Dutta-Gupta et al. 2018, 64). Alongside a 4.0 percent unemployment rate as of January 2019, 8.1 percent of the civilian labor force plus marginally attached workers (or 13.3 million people) were either unemployed, employed part time for economic reasons, or were marginally attached to the labor force (BLS 2019; author's calculations). This broader alternative measure of underemployment indicates a strong desire among workers for employment beyond what is available even in what otherwise may seem to be a full-employment labor market to some.

Furthermore, many communities of color continue to face recession-like circumstances despite a lengthy period of economic growth. For example, the January 2019 unemployment rate for black workers was 6.8 percent, a figure that for some states could be high enough to trigger Extended Benefits under the federal-state UI program (BLS 2019; CRS 2018). This high unemployment rate for black workers comes more than 115 months into an economic expansion, the second longest in U.S. recorded economic history (National Bureau of Economic Research n.d.). Subsidized jobs do not address root causes of these inequities, including historical and current racial discrimination, but historically they have helped and can continue to help people most harmed by these systemic and structural injustices.

4. Are other programs better suited to housing the Stabilization Program?

Other plausible candidates to host the Stabilization Program—such as the UI program, SNAP, and WIOA—have weaker experience, infrastructure, and/or targeting relative to TANF. The federal-state UI program has been used to fund subsidized jobs programs in a limited fashion (Prah 2012), allowing employers to pay workers through funds that otherwise would have been used to pay UI benefits to those workers. This approach risks undermining rather than improving the UI system—a system that has established its usefulness and effectiveness over 80 years and especially during the Great Recession (West et al. 2016). Though UI programs engage in employment and other services extending beyond the payment of benefits, state programs often exclude the most-disadvantaged workers and have relatively little experience helping workers with serious or multiple barriers to employment.

Just one state, Oregon, uses SNAP for a small subsidized jobs program—JOBS Plus (Oregon Department of Human Services n.d.)—and even that program is actually incorporated into the state TANF program. Similar to the UI scenario, SNAP benefits can be paid out in the form of wages for participating workers and employers (Dutta-Gupta et al. 2016). Notably, no other state has taken up this option, likely because of the administrative challenges in doing so through the SNAP program and the relative ease with which such a program can instead be integrated into the state TANF program. Like UI, SNAP has delivered powerfully on its main purpose: providing food assistance through near-cash direct subsidies to households. SNAP does have a meaningful Employment and Training program and connects workers with other services. It also has a dramatically wider reach than TANF, though it still targets struggling individuals and families, including many workers between and during employment. The SNAP program easily could connect eligible workers to an external subsidized jobs program.

A final potential home for a countercyclical subsidized jobs program is the WIOA system, including American Job Centers. Subsidized jobs are an allowable use of funds under WIOA (Hall 2015a), though spending on these initiatives is unclear. WIOA historically has failed to serve large shares of disadvantaged populations (Greenstein 2015), though that may be improving under the latest reauthorization. Still, the WIOA-funded workforce system has relatively less capacity and experience in addressing barriers unrelated to skills and training.

5. Is expanding the Work Opportunity Tax Credit a more-effective approach to subsidized jobs?

The government could expand the Work Opportunity Tax Credit (WOTC)—a tax credit to employers for hiring individuals from targeted groups that face employment barriers (Internal Revenue Service n.d.)—or otherwise create a similar entitlement for employers who hire workers with serious or multiple barriers to employment. One concern with that approach is that it could provide substantial windfall profits to firms for hires they already would have made and for positions that already would have existed. In addition, such an approach would do little to address the other barriers such workers may face in the short and long run. The wraparound support services that are often integrated into subsidized jobs programs can help address those barriers. In other words, subsidized jobs programs typically combine a labor demand strategy (subsidy) with a labor supply strategy (wraparound support services), while WOTC offers only a demand-side strategy.

6. Are there any economy-wide benefits to supporting incomes above and beyond the automatic stabilization benefits?

A growing body of evidence suggests that boosting resources to children, especially young children, in families with very low incomes has positive effects in the short, medium, and long term, including into adulthood (Grant et al. 2019; Sherman and Mitchell 2017). These remarkable effects appear regardless of the source of the increase—employment, additional resources associated with membership in a particular community, or transfers like SNAP benefits—with particular evidence of positive effects on educational, health, and labor market outcomes (Duncan and Magnuson 2011). As a result, increasing cash assistance and well-designed vouchers can reasonably be expected to have positive benefits including and extending beyond reductions in immediate hardship for some of our most-disadvantaged children.

The benefits of additional resources occur against a backdrop of clear deficits created by poverty. Children who experience poverty in early childhood are more likely to have lower school achievement, to work and earn less during their lifetimes, to rely more on SNAP, to be incarcerated (males, specifically), to report poor health, and to have reduced life expectancy (Duncan and Magnuson 2011; Hoynes and Schanzenbach 2018). Research also shows that the conversion of AFDC (as well as Job Opportunities and Basic Skills Training Program [JOBS] and Emergency Assistance) to TANF, including the gradual reduction in cash benefit outlays, has had negative outcomes on maternal employment, family income, and health (Heilman 2017). Beyond these measurable outcomes, increased assistance may have positive impacts on the interactions between children and their caregivers (Duncan and Magnuson 2011).

Despite the importance of basic assistance in meeting children and families' needs, CBPP finds that, on average, states spent $7.1 billion (less than a quarter of federal and state TANF funds) on basic assistance; nine states spent *less than 10 percent* of their funds on basic cash assistance in 2017 (Schott, Floyd, and Burnside 2019). CBPP also found that black children are particularly at risk because black families are more likely than white families to live in states with less basic assistance.

Conclusion

Limited by its block grant structure and other policy design features, TANF is not currently an effective automatic stabilizer because it cannot respond to increases in need that occur during recessions. Policymakers should substantially strengthen TANF's ability to provide basic assistance and

create subsidized jobs, especially during recessions. In fact, establishing a permanent, robust TANF Stabilization Program that responds appropriately to recessions could serve as an important stepping-stone to eventually establishing an impactful and wider subsidized jobs program as well as much-needed broader TANF reform.

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Endnotes

1. Using a different measure of the number of families participating in TANF cash assistance, CBPP data indicate an increase of 214,203 from 2007 through 2010 (Floyd, Burnside, and Schott 2018b).
2. In addition to its inadequacy as an automatic stabilizer, TANF is also ill equipped to respond to growing needs due to demographic and environmental causes. Increased need from migration or population growth are not matched with increased funding. A Center on Budget and Policy Priorities analysis finds that states with the greatest rises in child poverty generally had the largest drops in inflation-adjusted TANF grants per child in poverty (Floyd, Pavetti, and Schott 2017). For example, Nevada saw a 68 percent drop in the inflation-adjusted block grant amount per child, twice the national average, while the state's child poverty rates more than doubled.
3. The Congressional Budget Office (CBO) baseline assumes a fixed nominal (unadjusted for inflation) $608 million level of annual funding in perpetuity (CBO 2016), though TANF and its Contingency Fund require periodic reauthorization.
4. As I have written previously, "Barriers to employment are broadly defined as limitations—real or perceived—that significantly reduce the likelihood of attaining competitive (unsubsidized) employment. These personal and institutional barriers reflect a complex mix of socioeconomic dynamics, which can manifest as skill limitations; physical and behavioral health issues, including disabilities; criminal justice system involvement; family obligations; limited resources; and discrimination based on characteristics such as race, gender, and age, among others" (Dutta-Gupta et al. 2016, ix).
5. Most state programs did not limit eligibility to participate in subsidized jobs programs to TANF recipients.
6. This evidence was collected by the Center on Budget and Policy Priorities through interviews of recipients, administrators, and partners.
7. This basic structure has been developed previously (Dutta-Gupta et al. 2018).
8. UI plays an unmatched role in providing involuntarily unemployed workers with income security. If UI programs were encouraged to focus too heavily on subsidized jobs, some state programs could discourage constructive job search and improved matching among workers who would benefit more from income support than immediate reemployment.
9. For the limited suggestive evidence on the effectiveness of wraparound services, see examples and program impact summaries in Dutta-Gupta et al. (2016). Though no experimental evidence is available on the impacts of specific services as part of a subsidized jobs program, substantial literature indicates that some services, such as child care, improve outcomes on their own.
10. TANF has no explicit definitions nor requirement related to which families may participate in it. States have thus adopted varying definitions when determining eligibility. In the case of the TANF Emergency Fund, HHS allowed states to use relatively expansive definitions to determine eligibility, including youths and noncustodial parents as potential participants (HHS 2012).
11. For a discussion of how TANF can serve minor parents, see Lower-Basch (2016).
12. For a discussion of how and why states should serve noncustodial parents through TANF, see HHS (2018a).

13. MDRC Researchers Dan Bloom and Cindy Redcross observe that at least for one particular population, people exiting prison, some subsidized jobs programs appear to be more likely to produce "sustained decreases in recidivism" (Bloom and Redcross 2018).
14. One option is to exclude or add waiting periods for private employers who do not retain some share of workers in subsidized placements upon the end of the placement. See for example Neumark (2018). Because displacement may be less of a concern during recessions, recessions can be lengthy, and the number of available placements can limit the scale of subsidized jobs programs, this requirement should be carefully designed to avoid substantially limiting employer participation and slowing hiring and selection when they do initially participate.
15. The TANF cash assistance participation rate is likely 26.3 percent (a 2015 estimate) or less—since this trend has been in secular decline and there is no reason to think the decline has reversed (HHS 2018c).
16. I assume that average monthly TANF cash assistance benefits would equal $750 nationally, as a sizeable share of current recipients live in states with maximum benefits that are already markedly higher and likely would be higher still at the time of the next recession. I also assume that the number of eligible families equals that of the peak of the Great Recession, 5.7 million. In addition, I assume that states would shift basic assistance from their unmatched block grant to matched funding under the Stabilization Program when a match is available. All projected 2020 dollars rely upon the latest Congressional Budget Office Budget and Economic Outlook baseline.

References

Bernstein, Jared. 2018. "The Importance of Strong Labor Demand." In *Revitalizing Wage Growth: Policies to Get American Workers a Raise,* edited by Ryan Nunn and Jay Shambaugh, 93–116. Washington, DC: The Hamilton Project.

Bitler, Marianne P., and Hilary W. Hoynes. 2010. "The State of the Social Safety Net in the Post-Welfare Reform." *Brookings Papers on Economic Activity* (2): 71–147.

———. 2016. "Strengthening Temporary Assistance for Needy Families." Policy Proposal 2016–04, The Hamilton Project, Washington, DC.

Bivens, Josh. 2018. *Recommendations for Creating Jobs and Economic Security in the U.S.* Washington, DC: Economic Policy Institute.

Bloom, Dan, and Cindy Redcross. 2018, December. "Demonstrated Results: Successful Collaborations That Improve Outcomes in Prisoner Reentry and Child Support." *Policy & Practice.*

Brumfield, Cara, Funke Aderonmu, Kali Grant, Aileen Carr, Indivar Dutta-Gupta, Isabella Camacho-Craft, Douglas Steiger, and Peter Edelman. 2019. *Structurally Unsound: The Impact of Using Block Grants to Fund Economic Security Programs.* Washington, DC: Georgetown Center on Poverty and Inequality, Georgetown University.

Bureau of Labor Statistics (BLS). 2001–03. "Unemployment Level (Seas)." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 2005–17. "Current Population Survey." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

———. 2019. "The Employment Situation: January 2019." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC.

Card, David, Jochen Kluve, and Andrea Weber. 2015. "What Works? A Meta Analysis of Recent Active Labor Market Program Evaluations." Discussion Paper 9236, Institute for the Study of Labor (IZA), Bonn, Germany.

Center on Budget and Policy Priorities (CBPP). 2018a. *Policy Basics: An Introduction to TANF.* Washington, DC: Center on Budget and Policy Priorities.

———. 2018b. *Chart Book: Temporary Assistance for Needy Families.* Washington, DC: Center on Budget and Policy Priorities.

Chodorow-Reich, Gabriel and John Coglianese. 2019. "Unemployment Insurance and Macroeconomic Stabilization." In *Recession Ready: Fiscal Policies to Stabilize the American Economy,* edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

Collyer, Sophie et al. 2019. *Fighting Poverty with Jobs*. Washington, DC: Columbia University Center on Poverty and Social Policy and Georgetown University Center on Poverty and Inequality.

Congressional Budget Office (CBO). 2016. *Temporary Assistance for Needy Families (TANF): March 2016 Baseline.* Washington, DC: Congressional Budget Office.

———. 2018. *The Budget and Economic Outlook: 2018 to 2028*. Washington, DC: Congressional Budget Office.

Congressional Research Service (CRS). 2017. *Temporary Assistance for Needy Families (TANF): The Work Participation Standard and Engagement in Welfare-to-Work Activities.* Washington, DC: Congressional Research Service.

———. 2018. *Unemployment Insurance: Programs and Benefits.* Washington, DC: Congressional Research Service.

———. 2019. *The Temporary Assistance for Needy Families (TANF) Block Grant: Responses to Frequently Asked Questions.* Washington, DC: Congressional Research Service.

Dastur, Nina, Invidar Dutta-Gupta, Laura Tatum, Peter Edelman, Kali Grant, and Casey Goldvale. 2017. *Building the Caring Economy: Workforce Investments to Expand Access to Affordable, High-Quality Early and Long-Term Care.* Washington, DC: Georgetown Center on Poverty and Inequality, Georgetown University.

Duncan, Greg J., and Katherine Magnuson. 2011, Winter. "Early Childhood Poverty." *Pathways*.

Dutta-Gupta, Indivar, Kali Grant, Matthew Eckel, and Peter Edelman. 2016. *Lessons Learned from 40 Years of Subsidized Jobs Programs.* Washington, DC: Georgetown Center on Poverty and Inequality, Georgetown University.

Dutta-Gupta, Indivar, Kali Grant, Julie Kerksick, Dan Bloom, and Ajay Chaudry. 2018. "Working to Reduce Poverty: A National Subsidized Employment Proposal." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 4 (3): 64–83.

Edelman, Peter, Indivar Dutta-Gupta, and Kali Grant. 2015. *Comments on Discussion Draft of TANF Reauthorization*. Washington, DC: Georgetown Center on Poverty and Inequality, Georgetown University.

Falk, Gene. 2014. *Temporary Assistance for Needy Families (TANF): Eligibility and Benefit Amounts in State TANF Cash Assistance Programs.* Washington, DC: Congressional Research Service.

———. 2017. *The Temporary Assistance for Needy Families (TANF) Block Grant: A Primer on TANF Financing and Federal Requirements.* Washington, DC: Congressional Research Service.

Farrell, Mary, Sam Elkin, Joseph Broadus, and Dan Bloom. 2011. "Subsidizing Employment Opportunities for Low-Income Families." Report 2011-38, Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, Washington, DC.

First Focus. 2018. *Fact Sheet: Impact of the President's 2019 Budget on Children.* Washington, DC: First Focus.

Floyd, Ife, Ashley Burnside, and Liz Schott. 2018a. *Report: TANF Reaching Few Poor Families.* Washington, DC: Center on Budget and Policy Priorities.

———. 2018b. "National and State TANF to Poverty Data: 1979 to 2017." Database, Center on Budget and Policy Priorities, Washington, DC.

Floyd, Ife, LaDonna Pavetti, and Liz Schott. 2017. *Lessons from TANF: Initial Unequal State Block-Grant Funding Formula Grew More Unequal Over Time.* Washington, DC: Center on Budget and Policy Priorities.

Germanis, Peter. 2015, October 22. "TANF Has Been a Massive Policy Failure. Let's Start Over. A Response to Robert Doar." (blog) *MLWiseman.com.*

———. 2016, January 17. "Which Safety-Net Programs Responded to the Recession? A Brief Response to Scott Winship." (blog) *MLWiseman.com.*

———. 2018, May 12. "The Best Way Forward on TANF Is to Start Over: A Response to Angela Rachidi." (blog) *MLWiseman.com*.

Grant, Kali, Funke Aderonmu, Sophie Khan, Kaustubh Chahande, Casey Goldvale, Indivar Dutta-Gupta, Aileen Carr, and Doug Steiger. 2019. "Unworkable & Unwise: Conditioning Access to Programs that Ensure a Basic Foundation for Families on Work Requirements." Working Paper, Georgetown Center on Poverty and Inequality, Georgetown University, Washington, DC.

Greenstein, Robert. 2015. "Examining the Safety Net." Testimony of Robert Greenstein, President, Center on Budget and Policy Priorities, Before the Human Resources Subcommittee of the House Committee on Ways and Means, 114th Con., November 3. Center on Budget and Policy Priorities.

Greenstein, Robert, Brynne Keith-Jennings, and Dottie Rosenbaum. 2018. *Factors Affecting SNAP Caseloads*. Washington, DC: Center on Budget and Policy Priorities.

Hahn, Heather, David Kassabian, and Sheila Zedlewski. 2012. *TANF Work requirements and State Strategies to Fulfill Them*. Washington, DC: Urban Institute.

Hall, Randi. 2015a. *Subsidized Employment: Serving Disadvantaged Workers.* Washington, DC: Center for Law and Social Policy.

———. 2015b. *TANF 101: TANF in the Great Recession*. Washington, DC: Center for Law and Social Policy.

Heilman, Brianna. 2017. "Welfare Reform and Quality of Life: A Systematic Review." MSW Clinical Research Paper, School of Social Work, St. Catherine University and the University of St. Thomas, Twin Cities, Minnesota.

Hoynes, Hilary W., and Diane Whitmore Schanzenbach. 2018. "Safety Net Investments in Children." *Brookings Papers on Economic Activity* (1): 89–150.

Internal Revenue Service (IRS). n.d. "Work Opportunity Tax Credit." Internal Revenue Service, Washington, DC.

Lower-Basch, Elizabeth. 2010. *TANF Emergency Fund: Creating Summer Jobs for Youth*. Washington, DC: Center for Law and Social Policy.

———. 2011. *Rethinking Work Opportunity: From Tax Credits to Subsidized Job Placements*. Washington, DC: Center for Law and Social Policy.

———. 2016 *Young Adults and TANF: Rethinking Work Activities*. Washington, DC: Center for Law and Social Policy.

Mathur, Aparna. 2015, September 14. "TANF Is Failing the Non-Working Poor." *Forbes*.

Melillo, Jerry M., Terese Richmond, and Gary W. Yohe, eds. 2014. *Climate Change Impacts in the United States*. Washington, DC: U.S. Global Change Research Program.

Mitchell, Tazra. 2017. "TANF Ill-Equipped to Respond to Recent Hurricanes." (blog) Center on Budget and Policy Priorities.

———. 2018. *Designed to Fit the Times: Flexible Design Elements for Subsidized Jobs Programs*. Washington, DC: Center on Budget and Policy Priorities.

Moffitt, Robert. 2015. "Introduction to Volume I." In *Economics of Means-Tested Transfer Programs in the United States,* edited by Robert Moffitt, 1–19. Cambridge, MA: National Bureau of Economic Research.

National Bureau of Economic Research (NBER). n.d. "U.S. Business Cycle Expansions and Contractions." National Bureau of Economic Research, Cambridge, MA.

Neumark, David. 2018. "Rebuilding Communities Job Subsidies." In *Place-Based Policies for Shared Economic Growth,* edited by Ryan Nunn and Jay Shambaugh, 71–122. Washington, DC: The Hamilton Project.

Office of Senator Tammy Baldwin. 2016. "U.S. Senators Tammy Baldwin and Cory Booker Introduce Bold Legislation to Fight Poverty with Real Solutions." Office of Senator Tammy Baldwin, Madison, WI.

Oregon Department of Human Services n.d. "Staff Tools Self-Sufficiency: TANF JOBS Plus." TANF Policy Unit, Oregon Department of Humans Services, Salem, OR.

Page, Stephen B., and Mary B. Larner. 1997. "Introduction to the AFDC Program." *The Future of Children* 7 (1): 20–27.

Pavetti, LaDonna. 2011. "The Legacy of the TANF Emergency Fund." (blog) Center on Budget and Policy Priorities, Washington, DC.

———. 2014., September 10 "Data Show TANF Didn't Respond Adequately to Need During Recession, Contrary to New Study's Claims." (blog) Center on Budget and Policy Priorities, Washington, DC.

———. 2015, November 15. "TANF Work Requirements Don't Bring Stable Jobs, Higher Earnings." (blog) Center on Budget and Policy Priorities., Washington, DC.

Pavetti, LaDonna, Liz Schott, and Elizabeth Lower-Basch. 2011. *Creating Subsidized Employment Opportunities for Low-Income Parents: The Legacy of the TANF Emergency Fund*. Washington, DC: Center on Budget and Policy Priorities.

Prah, Pamela. 2012, May 29. "Is Federal Red Tape Tying Up Innovative Job Programs?" *Pew Trusts.*

Roder, A., and M. Elliott. 2013. *Stimulating Opportunity: An Evaluation of ARRA-Funded Subsidized Employment Programs*. New York, NY: Economic Mobility Corporation.

Schott, Liz, LaDonna Pavetti, and Ife Finch. 2012. *How States Have Spent Federal and State Funds Under the TANF Block Grant.* Washington, DC: Center on Budget and Policy Priorities.

Schott, Liz, Ife Floyd, and Ashley Burnside. 2019. *How States Use Funds Under the TANF Block Grant.* Washington, DC: Center on Budget and Policy Priorities.

Schott, Liz, and LaDonna Pavetti. 2010a. *Extending the TANF Emergency Fund Would Create and Preserve Jobs Quickly and Efficiently.* Washington, DC: Center on Budget and Policy Priorities.

———. 2010b. *Walking Away from a Win-Win-Win.* Washington, DC: Center on Budget and Policy Priorities.

———. 2011. *Redesigning the TANF Contingency Fund to Make it More Effective*. Washington, DC: Center on Budget and Policy Priorities.

———. 2013. *Changes in TANF Work Requirements Could Make Them More Effective in Promoting Employment.* Washington, DC: Center on Budget and Policy Priorities.

Sherman, A., and T. Mitchell. 2017. *Economic Security Programs Help Low-Income Children Succeed Over Long Term, Many Studies Find.* Washington, DC: Center on Budget and Policy Priorities.

Statista. 2019. "Total Medicaid Enrollment from 1966 to 2018 (in millions)." Database, Statista, Hamburg, Germany.

U.S. Census Bureau (Census). 2018. "Table 4. Poverty Status of Families, by Type of Family, Presence of Related Children, Race, and Hispanic Origin: 1959 to 2017." U.S. Census Bureau, Suitland, MD.

U.S. Department of Agriculture. 2018. "Trends in Supplemental Nutrition Assistance Program Participation Rates: Fiscal Year 2010 to 2016." Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

———. 2019. "Participation and Costs, 1969–2018." Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

U.S. Department of Health and Human Services (HHS). 1997. "Funding Guidance to Territories for TANF and Other Programs Subject to the Funding Ceiling in Section 1108 of the Social Security Act, as Amended by the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA)." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 1998. "A Brief History of the AFDC Program." In *Aid to Families with Dependent Children: The Baseline,* 3–11. Washington, DC: U.S. Department of Health and Human Services.

———. 2005–17. "Justification of Estimates for Appropriations Committees." Administration of Children and Families, U.S. Department of Health and Human Services, Washington, DC.

———. 2009. "Aid to Families with Dependent Children (AFDC) and Temporary Assistance for Needy Families (TANF): Overview." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, Washington, DC.

———. 2010. "Q&A on the TANF Contingency Fund for Fiscal Years 2011 and 2012." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2011. "December 2010: TANF Caseload." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2012. "Background Information about the TANF Emergency Fund." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2014a. "Q&A: Subsidized Employment." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2014b. "TANF Contingency Fund Awards, 2014." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2015a. "TANF Contingency Fund Awards, 2015." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2015b. "ASPE FMAP 2017 Report." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, Washington, DC.

———. 2016. "TANF Contingency Fund Awards, 2016." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2017. "TANF Contingency Fund Awards, 2017." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2018a. "The Use of TANF Funds to Promote Employment Programs for Noncustodial Parents." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2018b. "TANF Contingency Fund Awards, 2018." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. 2018c. "Welfare Indicators and Risk Factors, Seventeenth Report to Congress." Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, Washington, DC.

———. 2018d. "TANF Caseload Data, 1996–2012." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. n.d.a. "Categories and Definitions for TANF and MOE Funds." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

———. n.d.b. "Questions & Answers on the American Recovery and Reinvestment Act of 2009 (Recovery Act): Temporary Assistance for Needy Families (TANF) Program Emergency Fund." Office of Family Assistance, U.S. Department of Health and Human Services, Washington, DC.

U.S. Department of Labor (DOL). 2005–17. "Seasonally Adjusted Regular State UI Program Initial Claims (Monthly Data)." Employment and Training Administration, U.S. Department of Labor, Washington, DC.

———. 2016. "Department of Labor Budget in Brief: FY 2016." U.S. Department of Labor, Washington, DC.

U.S. Senate Committee on Finance. 2019. "The Economic Ladders to End Volatility and Advance Training to Employment (ELEVATE) Act." U.S. Senate Committee on Finance, Washington, DC.

West, Rachel, Indivar Dutta-Gupta, Kali Grant, Melissa Boteach, Claire McKenna, and Judy Conti. 2016. *Strengthening Unemployment Protections in America Modernizing Unemployment Insurance and Establishing a Jobseeker's Allowance*. Washington, DC: Center for American Progress.

West, Rachel, Rebecca Vallas, and Melissa Boteach. 2015. *A Subsidized Jobs Program for the 21st Century: Unlocking Labor-Market Opportunities for All Who Seek Work*. Washington, DC: Center for American Progress.

Zedlewski, Sheila. 2008, December. "The Role of Welfare during a Recession." *Recession and Recovery.*

Ziliak, James P. 2016. "Temporary Assistance for Needy Families" In *Economics of Means-Tested Transfer Programs in the United States, Volume 1,* edited by Robert A. Moffitt, 303–93. Chicago, IL: University of Chicago Press.

Strengthening SNAP as an Automatic Stabilizer

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Abstract

The Supplemental Nutrition Assistance Program (SNAP) is among the most efficient and effective spending programs. It plays a crucial role in alleviating families' temporary economic hardships and enabling them to purchase food. In addition, it also rapidly responds to economic downturns by quickly enrolling those who become eligible for benefits due to temporary income losses. Consequently, SNAP funds are spent rapidly in local communities, contributing to their effectiveness as a fiscal stimulus. In this chapter, we propose two reforms that build on the basic structure of eligibility expansions and benefit-level increases that made SNAP an effective automatic stabilizer during the Great Recession. First, we propose limiting or eliminating SNAP work requirements. Second, we propose a 15 percent increase in SNAP benefits during recessions. We also caution against policy options including expanded work requirements and a SNAP block grant, both of which would diminish program efficacy and utility as a stimulus.

Introduction

The Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program, is the nation's most important food support program. Because it is universally available to eligible participants, SNAP reaches a broad range of poor and near-poor individuals, including the elderly, disabled, families with children, caregivers, workers, and the unemployed. During a typical month in 2018, SNAP helped 40 million people—about one out of every eight Americans—afford the food they need. At the depths of the Great Recession, the reach of the program was even greater, providing 15 percent of Americans with the resources to purchase food. Beyond the important role for individuals, SNAP is also an important automatic stabilizer in the budget, expanding when the

economy is weak and contracting when it is strong, thus providing a fiscal boost when needed.

SNAP is an effective program: it increases resources available to purchase food and household spending on food, reduces recipients' likelihood of experiencing food insecurity, and improves economic and health outcomes (see Currie 2003; Gregory, Rabbitt, and Ribar 2015; and Hoynes and Schanzenbach 2016 for reviews). New evidence adds to this list several positive long-run impacts on children exposed to SNAP (Hoynes, Schanzenbach, and Almond 2016).

In addition to relieving family hardship and improving individual outcomes, SNAP boosts the economy, especially during economic downturns. SNAP is an effective automatic stabilizer that responds relatively quickly at times, in places, and for individuals experiencing the effects of recessions (Blinder and Zandi 2015; Keith-Jennings and Rosenbaum 2015). Data indicate that families quickly spend SNAP benefits, with 80 percent of benefits redeemed within two weeks of receipt, and 97 percent redeemed within a month (Bernstein and Spielberg 2016). According to the Congressional Budget Office (CBO), SNAP is one of three programs (along with unemployment insurance [UI] and Medicaid) that provide the majority of federal spending automatic stabilization (Russek and Kowalewski 2015).

SNAP serves as insurance during economic recessions, helping families by subsidizing food consumption levels during periods of unemployment or underemployment. Recipients quickly spend their SNAP benefits, which provides a rapid fiscal stimulus to the local economy, including the retail, wholesale, and transportation systems that deliver the food purchased.

While SNAP already functions in many respects as an effective stabilizer, existing and proposed rules limit its usefulness in this regard. For example, we show in this chapter how SNAP work requirements can limit its role as an automatic stabilizer, and then discuss how such rules should be designed to maximize SNAP effectiveness. Moreover, federal policymakers could make more use of SNAP as a stabilizer by establishing an automatic procedure for temporarily increasing benefits during economic downturns. Accordingly, we propose that SNAP benefits be temporarily increased by 15 percent during recessions. SNAP's effectiveness in the Great Recession was augmented by policy choices made at the time. Making these adjustments automatic would remove uncertainty and speed up the use of SNAP as both insurance to individuals and as an automatic stabilizer.

The Challenge

As documented in a chapter by Boushey et al. (2019), recessions lead to a wide range of significant harms for workers, households, and the broader economy. Finding ways to quickly and reliably counteract recessions is therefore an important priority for policymakers.

This section explores the role of SNAP as an automatic stabilizer and describes the evidence on SNAP's effects as well as the ways in which its rules can impair or strengthen its stabilization role.

PROGRAM EXPANSION DURING RECESSIONS

SNAP is meant to fill the gap between the cash resources that are available to a family to purchase food and the cost of a minimum food budget. Families are eligible for benefits if their income is sufficiently low that, according to the benefits formula, there is a gap between their resources available for food purchase and the cost of a thrifty diet.

A family with no net income receives the maximum benefit amount, which was $505 per month for a family of three in fiscal year 2019. As a family's income increases, the family members are expected to be able to spend more of their own funds on food purchases. At the same time, SNAP benefits are reduced accordingly, with a benefit reduction rate of 0.3—that is, for every additional $1.00 in net income, SNAP benefits are reduced by $0.30.[1] Average monthly benefits in 2018 were substantially below the maximum benefit amount, amounting to $252 per household, or $125 per person ($4.12 per person, per day).

Because SNAP is a universal program with eligibility criteria based on household income, it is designed to expand automatically when the economy contracts. During a recession, as unemployment rises, families' incomes fall and poverty increases. Some households that were not previously eligible for SNAP become newly eligible for benefits. Because SNAP targets very low-income families, the benefits are especially likely to be spent, making it a more-effective fiscal stimulus (Parker et al. 2013; Whalen and Reichling 2015).

If a family's monthly income falls below the income cutoff (generally 130 percent of the federal poverty guidelines), members can apply for benefits and, if approved, can receive benefits within 30 days, or within 7 days in emergency situations. SNAP is not only an effective vehicle for stimulus among the newly eligible but also among already-eligible households. SNAP benefits increase for already-eligible households as a function of the benefit formula if they experience an income decline, so households that are already participating in SNAP receive higher levels

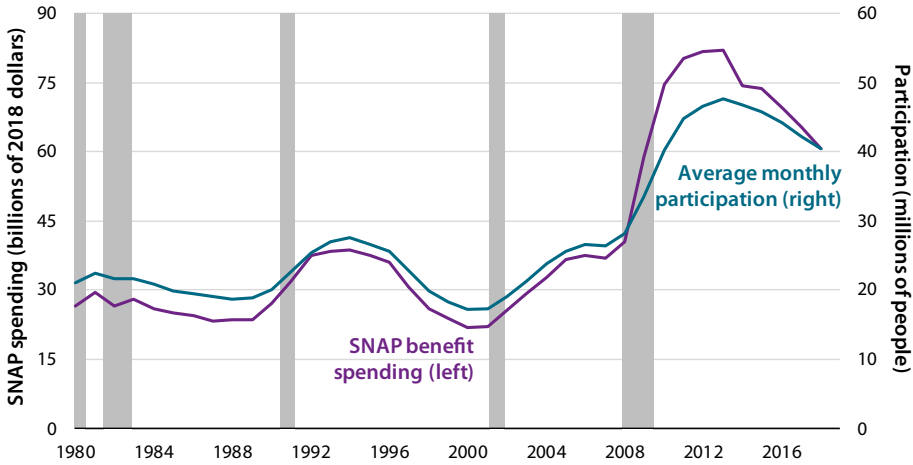
of benefits than they did before as household income declines. Others may become newly eligible for benefits if work requirements are waived in response to poor economic conditions, but obtaining a waiver is not automatic and requires policymakers to take action.

The speed at which SNAP benefits become available to households is critical, not only to alleviate financial pressures on families experiencing an income shock, but also to provide effective stimulus. Benefits are typically paid once per month on an electronic benefit transfer card that participants can use in a checkout line like a debit card. SNAP benefits can be used at authorized grocery stores and farmers' markets to purchase foods to prepare at home. This system makes it possible for families to spend their benefits quickly.

Figure 1 shows that SNAP participation and expenditures increase in times of economic recessions and decline in good economic times. Despite a growing population and economy, there was broadly no increase from 1980 to 2000, and some increase through 2006. These small structural movements contrast with sizable cyclical movements both in the 1990 and 2007 recessions. (These cyclical patterns occur with a lag: the CBO models SNAP rolls as continuing to increase for about two years after the unemployment

FIGURE I.

SNAP Participation and Spending, 1980–2018



Source: Bureau of Labor Statistics (BLS) 1980–2018a, 1980–2018b; U.S. Department of Agriculture (USDA) 1980–2018b.

Note: Shaded areas denote recessions. Values are inflation-adjusted using the CPI-U.

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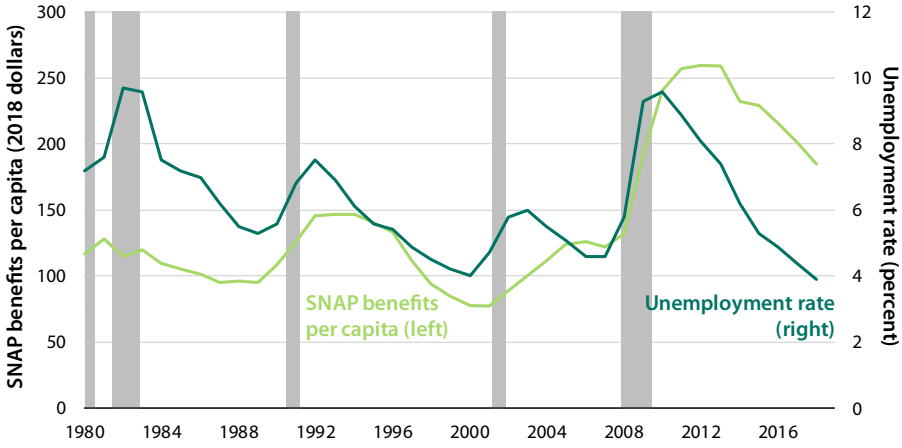
rate hits its peak.) Total benefit expenditures (in inflation-adjusted 2018 dollars) increased from $37.6 billion in 2006 to a peak of $82.0 billion in 2013 ($76.1 billion in nominal dollars), falling to $60.6 billion in 2018. Over the same period, average monthly participation grew from 26.5 million persons in 2006 to a peak of 47.6 million in 2013, declining to 40.3 million in 2018. As a share of the total U.S. population, SNAP participation has grown from 8.9 percent in 2006 to a high of 15.0 percent in 2013, falling back to 12.3 percent in 2018. The CBO predicts that it will fall farther in the coming years in response to a strengthening economy (Rosenbaum 2017).

Figure 2 plots annual per capita SNAP benefit expenditures from 1980 to 2018—that is, inflation-adjusted total annual benefits divided by the total U.S. population in each year, along with the annual unemployment rate. The series tend to move together, indicating that SNAP benefits per capita have a countercyclical pattern, increasing when unemployment is higher. Benefits per capita spiked with the unemployment rate in 2009 and reached a per capita peak in 2012. Between 2012 and 2018, real spending per capita came down nearly 30 percent as the unemployment rate in the U.S. economy declined from more than 8 percent to less than 4 percent.

FIGURE 2.

Per Capita SNAP Benefits and the Unemployment Rate, 1980–2018



Source: BLS 1980–2018a, 1980–2018b; U.S. Census Bureau 1980–2018; USDA 1980–2018b.

Note: Shaded areas denote recessions. Values are inflation-adjusted using the CPI-U.

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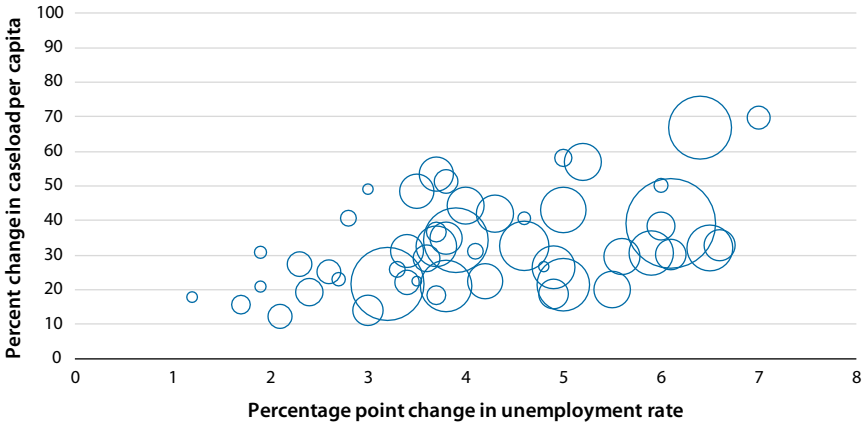
SNAP caseloads in an area increase when the unemployment rate increases, rising by 15 percent when the unemployment rate rises by 1 percentage point (Ganong and Liebman 2018). Moreover, the countercyclical responsiveness of the program has increased since the early 1980s (Bitler and Hoynes 2010). The increase in the unemployment rate during the Great Recession explains most of the increase in caseloads during that period (Ganong and Liebman 2018).[2] Falling unemployment explained the caseload decline in the 1990s, while state policies expanding eligibility or simplifying the application process explain much of the increase in the early 2000s (Ganong and Liebman 2018; Ziliak 2015).

The cyclical responsiveness of SNAP is evident at the state level as well as in the national time series. Figure 3 plots the change in the state-level unemployment rate from 2007 to 2009, at the onset of the Great Recession, against changes in the state's SNAP caseload per capita. Note that there was considerable variation across states in the magnitude of the recession, as shown on the horizontal axis, with increases in the state-level unemployment rates ranging from 1 to 7 percentage points. As shown on the vertical axis, all states experienced an increase in SNAP caseloads, with states that experienced larger increases in unemployment also experiencing larger increases in SNAP caseload.

FIGURE 3.

Increase in Unemployment Rate and SNAP Caseload by State, 2007–9



Source: Bitler and Hoynes 2010.

Note: The size of each state's population is proportional to the area of the circle representing the data point.

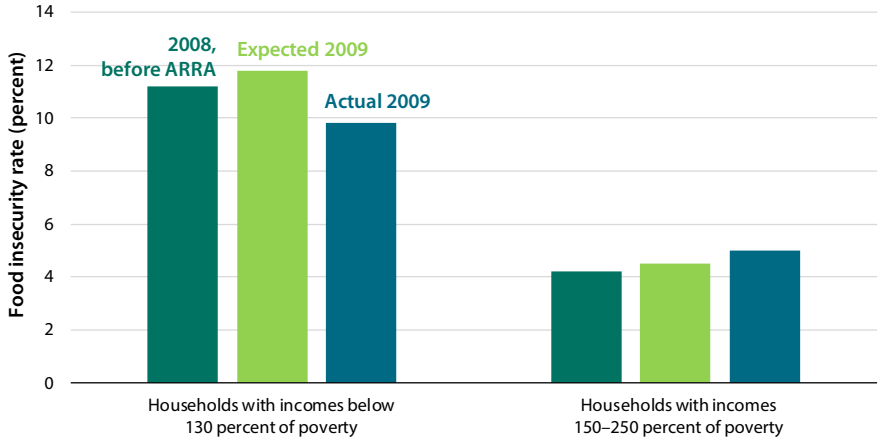
ADDITIONAL SNAP FUNDS BOOST THE ECONOMY

As part of the American Recovery and Reinvestment Act of 2009 (ARRA) economic stimulus bill, Congress increased spending on SNAP by more than the increase that would have occurred automatically in the recession. ARRA provided resources to program administrators to support eligibility expansion, increased SNAP benefit levels, and immediately waived work requirements that had caused some potential recipients to be ineligible.[3] The change in benefit levels raised the value of the maximum benefit to an amount higher than one based on the Thrifty Food Plan (TFP). For example, a family of four saw a 13.6 percent increase in maximum benefits, from $588 under the TFP to $668 under the ARRA. In total, this ARRA increase added $43 billion in additional SNAP funds over a 10-year period, with nearly all the additional spending occurring in the first five years (CBO 2018).

The ARRA increase in benefit levels was designed to be temporary. Originally, Congress planned to keep nominal SNAP benefits levels fixed at the higher ARRA level, with the expectation that normal food price inflation would increase the TFP benefit levels so that inflation-adjusted TFP benefits would exceed the ARRA benefits by 2014. Actual food price inflation was lower than expected, however, which delayed the expected

FIGURE 4.

Food Insecurity among Low-Income Households, 2008 and 2009



Source: Keith-Jennings and Rosenbaum 2015.

Note: The USDA defines food insecurity as a lack of consistent access to enough food for an active, healthy lifestyle. It is measured using a series of survey questions developed by USDA.

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date by which TFP benefits would exceed ARRA benefits. Congress decided to accelerate the sunset provision, cutting SNAP benefits in nominal terms in November 2013. A household of four saw a $36 drop in their monthly benefits at that time (Keith-Jennings and Rosenbaum 2015).

The additional ARRA funds alleviated hardship. The ARRA increase kept a million people out of poverty in 2010, above and beyond the millions that SNAP's regular funds kept out of poverty (Sherman 2011). As illustrated in figure 4, households with incomes below 130 percent of the federal poverty threshold saw their food insecurity rates decline by 2.0 percentage points relative to what was expected, while households with incomes generally out of reach of SNAP saw their food insecurity rates increase relative to expectations.

As expected, SNAP benefits during the recession were spent quickly and boosted food spending. Beatty and Tuttle (2015) estimate that every $1.00 in increased SNAP benefits during ARRA increased food-at-home spending by $0.48. This was effective fiscal stimulus: Blinder and Zandi (2015) find that every $1.00 of spending on the temporary increase in SNAP benefits generated more than $1.00 in total economic activity. As discussed in Boushey et al. (2019), the economic impact of spending is larger during times of slack or when the Federal Reserve has lowered interest rates to zero. Blinder and Zandi estimate that every $1.00 in new SNAP benefits spurred $1.74 in economic activity in the first quarter of 2009, and spurred $1.22 in the first quarter of 2015. They find that additional SNAP benefits was the category of spending that had the highest multiplier of any of the policies adopted during the Great Recession (Schanzenbach et al. 2016).

WORK REQUIREMENTS

SNAP serves a wide range of participants, including the elderly, disabled, families with children, caregivers, workers, and the unemployed. In theory, providing unearned income such as SNAP benefits—particularly when those benefits are phased out as earnings rise—should reduce work effort, but in practice these effects tend to be modest (East 2018; Hoynes and Schanzenbach 2012). The SNAP benefit formula already attempts to reduce the disincentive to work by providing a 20 percent earned income deduction, meaning that the typical benefit reduction applies to only 80 percent of a household's income from earnings. One way to provide further incentives to work is to increase this earned income deduction rate, for example to 30 percent (Schanzenbach 2013).

Beyond incentives, there are also rules that mandate work as a condition of receiving SNAP for certain individuals. Since 1996, able-bodied adults without dependents (ABAWDs) who are between age 18 and 49, who have

no dependents, and who are not receiving disability benefits may receive SNAP for only three months in a three-year period if they do not meet work requirements. To retain program eligibility, an ABAWD must work at least 80 hours per month or participate in a state-approved workfare program. However, at certain times, based on economic circumstances, these work requirements have been temporarily waived in particular places, as described in box 1.

The current system of work requirements limits the impact of SNAP even in good economic times. The harm done by work requirements during economic downturns is even stronger: they punish participants during their time of economic need for circumstances that are out of their control, and they dampen the countercyclical impact of SNAP. Proposals to limit the waivers of work requirements, or to subject more SNAP participants to them, will harm not only the participants but also the macroeconomy.

The Proposal

SNAP is already among the most efficient and effective spending programs. In addition to its crucial role in alleviating families' temporary economic hardships and enabling them to purchase necessary food, it can also rapidly respond to economic downturns by quickly enrolling those who become eligible due to temporary income losses. Consequently, SNAP funds are spent rapidly in local communities, contributing to their effectiveness as a fiscal stimulus.

We propose two reforms that would enhance the automatic stabilizer role of SNAP. First, we propose limiting or eliminating SNAP work requirements. Second, we propose a 15 percent increase in SNAP benefits during national economic downturns, as determined by criteria described below.

The goal of the two proposals is to build on the basic structure of eligibility expansions and benefit-level increases that made SNAP an effective automatic stabilizer during the Great Recession. To preserve and strengthen SNAP as an automatic stabilizer, it is vital to retain the current program structure while making limited changes that would allow the program to expand more quickly at the onset of an economic downturn and better stimulate the economy throughout a recession. In addition to these proposed improvements, we will also caution against policy options including expanded work requirements and a SNAP block grant, both of which would diminish program efficacy and utility as a stimulus.

BOX I.

State Waivers from SNAP Work Requirements

States have had the ability to request waivers to the time limits in areas with high unemployment since the policy was adopted in 1996. Box figure 1 shows the share of counties that were eligible under such rules from 2007 to 2017.

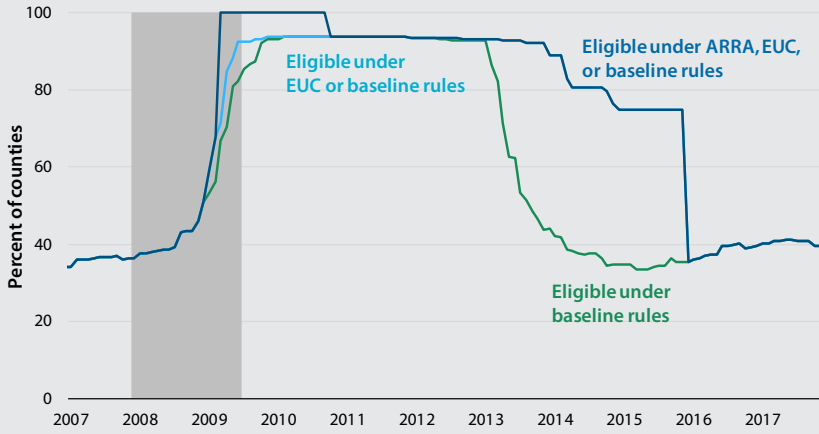
To obtain a waiver, the state must demonstrate it meets the eligibility criteria and request a waiver from the U.S. Department of Agriculture (USDA). To qualify for a waiver, a state must be able to provide evidence that the state or a state-determined sub-state area: (1) has a recent twelve-month average unemployment rate over 10 percent; (2) has a recent three-month average unemployment rate over 10 percent; (3) has a historical seasonal unemployment rate over 10 percent; (4) is designated as a Labor Surplus Area (LSA); (5) qualifies for Extended Benefits to Unemployment Insurance (EB); (6) has a low and declining employment-to-population ratio; (7) has a lack of jobs in declining occupations or industries; (8) is described in an academic study or other publications as an area where there is a lack of jobs; or (9) has a 24-month average unemployment rate 20 percent above the national average for the same period, starting no earlier than the start of the LSA designation period for the current fiscal year.

Work requirements waivers can strengthen and expand the safety net during economic downturns, but existing waiver rules in 2008 were insufficient to meet program needs during the Great Recession, leading federal and state policymakers to take action. Several steps were taken to ensure that work requirements and the resulting time limit on benefit receipt were limited in operation during the Great Recession, though states had the option to retain the time limit if they offered work opportunities to those subject to the rule. In January 2009, the Bush administration announced that states eligible for second-tier Emergency Unemployment Compensation (EUC) would be eligible for a statewide work requirement waiver. ARRA suspended SNAP's time limit for out-of-work ABAWDs for the remainder of fiscal year 2009 through September 2010. (Box figure 1 shows the percent of counties affected by various work requirements waiver conditions during the Great Recession and recovery.)[4]

Congress's act to suspend the SNAP time limit meant that states did not have to submit a request—which would require detailed economic information and analysis—to the federal government, simplifying administrative procedures. Waiver requests based on links to the UI system triggers continued into and supported the recovery. It seems clear that policymakers' preference was to allow more access to waivers than current rules would have provided. At the start of the recession around one-third of counties were eligible and eligibility would have tapered substantially in 2013. The decisions to base waivers on EUC eligibility and the waiver expansions within ARRA dramatically expanded that eligibility and allowed waivers to be implemented more quickly than under prior rules.

BOX FIGURE I.

Counties Eligible for ABAWD Work Requirement Waivers, 2007–17



Source: Bauer, Parsons, and Shambaugh 2019.

Note: "Eligible under baseline rules" shows the share of counties that would qualify for a work requirement waiver on their own, as part of a labor market area, or because the county is in a state that qualifies for a waiver. A location is eligible if its unemployment rate was higher than 10 percent by either a 12-month or 3-month lookback period, its unemployment rate was 20 percent more than the national unemployment rate over a 24-month period no earlier than the start of the LSA designation period for that fiscal year, or the state was eligible for Extended Benefits. "Eligible under EUC or baseline rules" additionally shows the counties eligible for a statewide waiver based on qualifying for the EUC tier linked to work requirement waivers during that period. "Eligible under ARRA, EUC, or baseline rules" additionally shows the counties covered by the provision of the ARRA, which provided blanket eligibility for a work requirement waiver from enactment through fiscal year 2010.

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ADDRESSING WORK REQUIREMENTS

During normal economic times, ABAWDs are subject to SNAP work requirements. In particular, they may receive SNAP in only 3 months in a 36-month period if they are not employed or in a work training program at least 20 hours per week. About 7.8 percent of the SNAP participants in fiscal year 2017 fall into this category (USDA 2019a).

We propose three reforms to SNAP work requirements, listed in descending order of ambition.

- Eliminate SNAP work requirements.
- Establish a new national trigger to remove work requirements during downturns.
- Avoid work requirement expansions.

Eliminate SNAP Work Requirements

Work requirements diminish SNAP's role as a safety net that helps ensure that all Americans have adequate resources to purchase food. Those work requirements also diminish SNAP's role as an automatic stabilizer.

We question the efficacy of SNAP work requirements even during strong economic times. Evidence shows most ABAWDs are in fact in the labor force, though when they do not work it is usually due to challenges in obtaining a job for those temporarily not working or due to health limitations for those persistently out of the labor force (Bauer 2018). Others do not have consistent employment with sufficient hours to meet work requirements (Butcher and Schanzenbach 2018). Recent research on the effects of waivers from work requirements has found that work requirements have little or no impact on employment, but a very large impact on the number of SNAP participants (Han 2019; Harris 2018). There are better ways to encourage work such as an expanded Earned Income Tax Credit (EITC) (Hoynes, Rothstein and Ruffini 2017) and an increased earnings deduction in the SNAP benefits formula (Schanzenbach 2013).

Establish a New National Trigger to Remove SNAP Work Requirements during Downturns

Current rules do not allow SNAP work requirements to be waived rapidly in all the macroeconomic circumstances that would call for such a waiver. USDA, Congress, and states had to take action throughout the Great Recession to ensure more-rapid and appropriately expansive waivers to work requirements during bad economic times. The necessity for these discretionary actions introduced delays that impaired SNAP's functioning as a stabilizer.

If SNAP work requirements are not eliminated, waivers should be made more automatic in two ways to address this problem. First, we propose eliminating the need to request waivers for eligibility areas; instead, USDA should automatically grant waivers. Second, the process that allows suspension of work requirements should also be changed. In addition to existing conditions that allow for waivers, we propose a national trigger that would automatically suspend work requirements once the 3-month moving average national unemployment rate rises at least 0.5 percentage points above its low in the prior 12 months.[5] The trigger would turn off a year after the trigger start date or the year in which the 3-month moving average national unemployment rate falls to within 2 percentage points of the prerecession level, whichever comes later.

Once the national unemployment rate peaks and begins to decline—and with sufficient documentation to prove to the USDA that jobs were available to affected populations—states would retain the right to refuse the work requirement waiver for all or part of the state.

Eligibility for waivers to work requirements should also be effective when Congress authorizes EUC, a temporary program that extends the amount of time during which an eligible UI participant can retain benefits. During the Great Recession, Congress enacted EUC on June 30, 2008, but it took until January 8, 2009 for the Bush administration to clarify that eligibility for EUC also qualified states for SNAP work requirement waivers. Due to the depth of the recession, EUC was repeatedly extended until January 1, 2014; along with EUC, work requirement waivers were maintained. Eligibility for work requirement waivers based on EUC eligibility allows waivers to continue for as long as Congress determines there is a need for expanding eligibility for additional weeks of UI. Linking work requirement waivers to this system is compatible with the goals of both programs.

Avoid Work Requirement Expansions

In the spring of 2018, President Trump issued an executive order requiring each means-tested program to review whether work requirements for eligibility could be increased (White House 2018). During the 2018 reauthorization of the Agricultural Act of 2014 (or Farm Bill), a proposal to expand the population of those subject to work requirements to maintain SNAP eligibility to those between the ages of 18 and 59 with dependent children 6 to 18 as well as to those between the ages of 50 and 59 passed the House but was not ultimately signed into law (Bolen et al. 2018). President Trump's fiscal year 2020 budget request has proposed expanding the age range of ABAWDs subject to work requirements from the current 18-to-49 range to 18 to 65 and to parents of school-age children (USDA 2019).

Strict work requirements are unlikely to motivate recipients to work, since many of those who would fail to meet new work requirements (i.e., the groups that would be exposed under the proposed expansions) either suffer from health limitations or work in jobs that are not sufficiently stable to allow them to meet the work requirements (Bauer, Schanzenbach, and Shambaugh 2018). Limiting these individuals' access to SNAP would limit the program's ability to help them in their time of need and would dampen its automatic stabilizer role.

Similarly, making work requirement waiver eligibility more restrictive would limit the ability of the program to expand rapidly and maintain a high level of coverage during deep recessions and weak recoveries. In late 2018, the USDA secretary proposed new rules that would both limit a state's ability to apply for a statewide work requirement waiver and change the criteria for substate areas to apply and qualify for waivers. The proposed rules remove the 3-month lookback period for areas with 10 percent unemployment, which weakens the speed of waiver expansion at the onset of a recession or acute downturn. The proposed rules would limit waiver eligibility to areas where unemployment is 20 percent higher than the national average and where the local unemployment rate is at least 7 percent. Given that the natural rate of unemployment is estimated to be between 4.0 and 5.0 percent (CBO 2019; Crump et al. 2019), meaning that being 20 percent elevated above that rate falls between 4.8 and 6.0 percent, a 7 percent threshold would exclude many areas with substantially elevated unemployment rates.[6] In such weak labor markets, many people seeking a job would be unable to find one.

RAISING BENEFITS DURING DOWNTURNS

SNAP improves health outcomes. It provides vital nutrition support and improves children's outcomes (see Hoynes and Schanzenbach 2018). SNAP improves health among infants and children (Almond, Hoynes, and Schanzenbach 2011; East 2018) and SNAP participants are less likely than nonparticipants to experience a medical hardship (Shaefer and Gutierrez 2013).

SNAP also decreases risks associated with financial hardship, both at the time of receipt and into the future. Receiving SNAP reduces the risk of falling behind on rent or mortgage payments and on utility bills (Shaefer and Gutierrez 2013). SNAP also directly lifts households out of poverty: in 2017, SNAP lifted 3.4 million people out of poverty (Fox 2018).[7] Furthermore, a recent study found that childhood access to SNAP has lifelong implications—it increases the likelihood of graduating from high

school and improves a wide range of adult health and economic outcomes (Hoynes, Schanzenbach, and Almond 2016).

To these advantages can be added the stimulus effects of a well-timed SNAP benefits increase. As described above, additional SNAP benefits provided through ARRA were among the most effective forms of fiscal stimulus used during that time (Schanzenbach et al. 2016).

Building on evidence of SNAP effects, particularly including effects of the ARRA benefits increase, we propose that Congress amend the SNAP benefits formula to include automatic benefits increases during economic downturns. In particular, SNAP benefits would be automatically increased by an increment equal to 15 percent of the benefit to which each household would otherwise have been entitled. In the ARRA benefits increase, the minimum benefit (available to eligible households that otherwise qualify for a small benefit) increased from $14 to $16 per month. Following similar logic, the minimum benefit would be increased to the nearest whole dollar amount that represents a 15 percent increase in payment levels. As was the case for the ARRA benefits increase, this bonus increment should be paid to all participants.

This automatic benefits increase would be governed by the same trigger described above, which requires that the 3-month average national unemployment rate rise at least 0.5 percentage points above its low over the previous 12 months. Making these changes ahead of time would be administratively easier than trying to reprogram benefits rapidly during the middle of a downturn.

The bonus payments should be uniform across all states. But, because the number of SNAP participants will vary by state, and be higher in places with more economic distress, there is also an effective targeting aspect of this proposal. As under the ARRA increase, the expectation would be to hold SNAP benefits at these nominal levels until inflation erodes away the benefits increase. Under ARRA, food inflation was unexpectedly low, and as a result the benefits increase persisted longer than was originally predicted. Were lower-than-expected food inflation to occur again, Congress could adopt a schedule for more quickly returning to the prerecession inflation-indexed benefits levels. As under ARRA, additional administrative funds should also be allocated to states to help them handle increased caseload.

Questions and Concerns

1. Should we have geographic targeting, providing extra resources to places more deeply impacted by the recession?

Historically, SNAP benefits have not included geographic variability in the contiguous United States, even though prices vary across regions. This proposal does not propose changing that norm. As long as work requirements are not excessively strict, SNAP already provides more assistance to regions hurt more by a downturn, as these are the places with many households that lose income and become eligible for SNAP. While it would be potentially beneficial to provide additional resources to places more deeply impacted by recessions, such a policy goal could be better achieved through other programs, such as UI.

2. Would increasing SNAP participation rates improve the countercyclical impact of SNAP?

The overall SNAP participation rate has been climbing in recent years, increasing from 53 percent in 2001 to 83 percent of the eligible population in 2015. Take-up rates are high among participants who are in poverty, and among children, but lower among the elderly and those with incomes above the poverty threshold (Cunnyngham 2018). Improving take-up among groups with low participation rates and maintaining high take-up among all groups is important to ensuring that SNAP is an effective stabilizer.

3. Are there alternative programs that offer a better model for SNAP benefits provision?

Other federal programs that serve similar populations do not function as efficiently as an automatic stabilizer as does SNAP. For example, while the EITC is an important benefits program, by design it provides benefits only when a household has an employed worker. As a result, its effectiveness is reduced in times of high unemployment (Bitler and Hoynes 2010; Bitler, Hoynes, and Kuka 2017). The Temporary Assistance for Needy Families Program (TANF), which provides cash assistance to eligible families, failed to expand based on the severity of the Great Recession in states (Bitler and Hoynes 2016). In fact, about half of states saw a decline in their TANF caseload during the Great Recession. TANF's lack of responsiveness stems from the fact that it was block granted to states starting in 1996; there are no additional funds that are automatically available during economic downturns.

Proposals to block grant SNAP, as was done with TANF, would mean that the program could no longer expand quickly to meet additional economic need. (See Indivar Dutta-Gupta's chapter [2019] in this volume. He proposes

reforms to TANF that would enhance its utility as an automatic stabilizer.) These reforms would break the link between aggregate program spending and the economic situation, and would fundamentally undermine its role as an economic stimulus.

4. What are the likely impacts of SNAP work requirements on labor force participation?

The effectiveness of work requirements and incentives to work are subject to local labor market conditions. If individuals can increase their employment through exerting more effort—such as by searching for a job with more intensity, accepting a lower-paying job, or working more hours—then incentives and/or requirements can potentially be quite effective. For example, in the mid-1990s the increase in the EITC substantially increased earnings among the targeted group of unmarried mothers. On the other hand, the EITC likely had more-limited incentive value during the Great Recession, when jobs were unavailable and individual efforts were less likely to result in employment.[8]

The impact of work requirements in SNAP will similarly vary by factors that influence whether participants can obtain a job, including the local labor market conditions and the individual's work readiness. Bauer, Schanzenbach, and Shambaugh (2018) investigate labor market patterns that inform the likely impact of expanded SNAP work requirements, including the share of SNAP participants stably employed at more than 20 hours per week and reasons for nonemployment. Proposals under debate in the 2018 Farm Bill included adding two new groups to work requirements: those age 18 to 49 with a dependent between ages 6 and 17, and those age 50 to 59 with no dependents under age 6, in addition to those who are currently exposed (age 18 to 49 with no dependents).

Fewer than one-third of current ABAWDs are stably employed for 20 or more hours per week, while just over one-quarter are stably nonemployed. Another one-quarter worked 20 or more hours per month at some time but had some months with nonemployment or fewer than 20 hours per month. These individuals would be sanctioned in the months they work fewer than 20 hours under current SNAP rules, despite working this amount in other months. To the extent that these temporary reductions in hours worked reflect involuntary reductions in hours or unemployment, the work requirements reduce SNAP's effectiveness at helping families during their times of need.

Among groups proposed to be added to SNAP work requirements, the patterns are somewhat different. For those age 18 to 49 with dependents between ages 6 and 17 (but no dependents under age 6), 46 percent are

stably employed for 20 or more hours per week. Among the remainder, more than half transitioned during the period between 20-plus hours and another status. Again, to the extent that these transitions represent labor market shocks that are out of the direct control of the worker, this suggests that more than half of those who would be sanctioned under SNAP work requirements are already workers. When questioned about the reasons for their nonemployment (if they were ever not employed), more than half reported that they were unable to obtain employment despite their efforts.

Among older SNAP participants, only 23 percent are stably employed for 20 or more hours per week. Another 18 percent transitioned between 20 or more hours and another status over the period. Nearly half, however, were stably not employed (either unemployed or not in the labor market). When asked the reason for their nonemployment, half reported that a health problem or disability kept them from working. (This is limited to those who do not receive disability payments, meaning that respondents either have not taken up Social Security Disability or have health barriers to work that fall below the disability threshold.)

The data suggest that a large share of those who would be sanctioned under SNAP work requirements themselves have substantial work histories and may be falling below the required number of hours due to fluctuations on the low-wage labor market that are out of their direct control (Butcher and Schanzenbach 2018). As a result, SNAP work requirements can harm workers for experiencing bad luck in the labor market. The share of those sanctioned due to economic forces out of their control increases as the local unemployment rate climbs. To ameliorate this, current policy allows states to temporarily waive SNAP work requirements either statewide or in certain areas during bad economic conditions.

Conclusion

SNAP is an efficient and effective program that alleviates temporary economic hardships faced by families, and also provides an automatic fiscal stabilizer to the economy during economic downturns. It provides needed resources quickly to families experiencing economic distress. Those families in turn spend those resources in their local communities, providing a boost to the economy. To preserve and strengthen SNAP as an automatic stabilizer, the following steps should be taken:

1. Retain the current program structure that allows the program to expand quickly during economic downturns. Resist major reforms that would fundamentally undermine this role, such as expanded work requirements or block grants.

2. To better stimulate the economy during economic downturns, automatically boost SNAP benefit levels and administrative funds for a temporary period. These additional funds would be spent quickly in local economies and could be enacted without congressional delays.
3. Work requirements are ineffective and dampen the antipoverty and countercyclical impacts of SNAP. To the extent that they are retained, it is vital to quickly waive work requirements during economic downturns.

SNAP is one of our most effective countercyclical stimulus tools. Preserving its strengths is important to alleviating hardship and stimulating the economy in times of recession.

Acknowledgments

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Endnotes

1. The actual SNAP benefit formula is somewhat more complicated than what is described in this simplified discussion, because benefits are based on net income—that is, total income less deductions as specified by Congress. Net income is calculated as total earned income plus unearned income minus the following deductions: a standard deduction, a deduction of 20 percent of earned income, an excess shelter cost deduction, a deduction for child-care costs associated with working/training, and a medical cost deduction that is available only to the elderly and the disabled. In practice, because of the mechanics of these deductions, the benefit reduction rate out of gross income is somewhat lower than 0.3. Important policy decisions for Congress include whether the maximum benefit, benefit reduction rate, and net income calculations are set appropriately.
2. Ganong and Liebman (2018) find that 18 percent of the 2007–11 increase was due to policy changes.
3. Effective through the end of fiscal year 2010, Congress authorized a nationwide waiver of work requirements for program participation so that those subject to the waiver would gain and maintain access to SNAP when avenues to meet the work requirements closed.
4. See Bauer, Parsons, and Shambaugh (2019) for a discussion of how different waiver rules operated during the Great Recession.
5. This trigger is borrowed from a companion chapter written by Claudia Sahm (2019). As described in that paper, this trigger has accurately identified—with no false positives—every recession since 1970.
6. There is also evidence that the natural rate of unemployment varies over time based on demographics and other factors (Crump et al. 2019). The rate has fallen over the past decade; tying waiver eligibility to a floor that is too high seems to be a mistake.
7. This does not account for the well-documented undercount of benefits in the Current Population Survey. A study using 2015 data showed that correcting for the under-count increases the antipoverty impact of SNAP by 83.5 percent (Center on Budget and Policy Priorities 2018).
8. One important point of difference between the EITC and SNAP work requirements is the way that employment is defined. The EITC provides incentives for earnings over the course of a year, without regard to the timing of earnings. For example, a worker earning $12 per hour working 20 hours per week for 50 weeks per year earns the same $12,000—and is eligible for the same EITC—as a worker earning $12 per hour 40 hours per week for 25 weeks of the year and experiencing unemployment for the rest of the year, or one earning $20 per hour for 20 hours per weeks over 30 weeks. On the

other hand, among groups subject to the work requirements only workers employed 80 hours per month (approximately 20 hours per week) are eligible for SNAP, and they lose eligibility if they drop below this threshold in any month due to unemployment or hours variability. This matters to the extent that workers may have limited control over month-to-month variation in hours, but greater control over annual earnings.

References

Agricultural Act of 2014 (aka Farm Bill), Pub.L. 113-79 (2014).

Agricultural Act of 2018 (aka Farm Bill), Pub.L. 115-334 (2018).

Almond, Douglas, Hilary W. Hoynes, and Diane Whitmore Schanzenbach. 2011. "Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes." *Review of Economics and Statistics* 92 (2): 387–403.

American Recovery and Reinvestment Act of 2009 (ARRA) Pub. L. 111-5 (2009).

Bauer, Lauren. 2018, December 20. "Workers Could Lose SNAP Benefits under Trump's Proposed Rule." Blog. The Hamilton Project, Brookings Institution, Washington, DC.

Bauer, Lauren, Diane Whitmore Schanzenbach, and Jay Shambaugh. 2018. "Work Requirements and Safety Net Programs." Economic Analysis, The Hamilton Project, Brookings Institution, Washington, DC.

Bauer, Lauren, Jana Parsons, and Jay Shambaugh. 2019. "How Do Work Requirement Waivers Help SNAP Respond to a Recession?" Economic Analysis, The Hamilton Project, Brookings Institution, Washington DC.

Beatty, Timothy K. M., and Charlotte J. Tuttle. 2015. "Expenditure Response to Increases in In-Kind Transfers: Evidence from the Supplemental Nutrition Assistance Program." *American Journal of Agricultural Economics* 97 (2): 390–404.

Bernstein, Jared, and Ben Spielberg. 2016. "Preparing for the Next Recession: Lessons from the American Recovery and Reinvestment Act." *Policy Futures,* Center on Budget and Policy Priorities, Washington, DC.

Bitler, Marianne, and Hilary Hoynes. 2010. "The State of the Social Safety Net in the Post-Welfare Reform Era." *Brookings Papers on Economic Activity* (2): 71–127.

———. 2016. "The More Things Change, the More they Stay the Same? The Safety Net and Poverty in the Great Recession." *Journal of Labor Economics* 34 (S1): S403–S444.

Bitler, Marianne, Hilary Hoynes and Elira Kuka. 2017. "Do In-Work Tax Credits Serve as a Safety Net?" *Journal of Human Resources* 52 (2): 319–50.

Blinder, Alan S., and Mark Zandi. 2015. "The Financial Crisis: Lessons for the Next One." Policy Futures, Center on Budget and Policy Priorities, Washington, DC.

Bolen, Ed, Lexin Cai, Stacy Dean, Bynne Keith-Jennings, Catlin Nchako, Dottie Rosenbaum, and Elizabeth Wolkomir. 2018. "House Farm Bill Would Increase Food Insecurity and Hardship." Center on Budget and Policy Priorities, Washington, DC.

Boushey, Heather, Ryan Nunn, Jimmy O'Donnell, and Jay Shambaugh. 2019. "The Damage Done by Recessions and How to Respond." In *Recession Ready: Fiscal Policies to Stabilize the American Economy*, edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington DC: The Hamilton Project and the Washington Center for Equitable Growth.

Bureau of Labor Statistics (BLS). 1980–2018a. "Civilian Unemployment Rate." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC. Retrieved from Haver Analytics, New York, NY.

———. 1980–2018b. "Consumer Price Index-U: All Items." Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC. Retrieved from Haver Analytics, New York, NY.

Butcher, Kristin F., and Diane Whitmore Schanzenbach. 2018. "Most Workers in Low-Wage Labor Market Work Substantial Hours, in Volatile Jobs." Policy Futures, Center on Budget and Policy Priorities, Washington, DC.

Center on Budget and Policy Priorities. 2018. "Chart Book: Economic Security and Health Insurance Programs Reduce Poverty and Provide Access to Needed Care." Policy Futures, Center on Budget and Policy Priorities, Washington, DC.

Congressional Budget Office (CBO). 2018. *A Review of CBO's Estimate of the Effects of the Recovery Act on SNAP*. Washington, DC: Congressional Budget Office, U.S. Congress.

———. 2019. *The Budget and Economic Outlook: 2019 to 2029*. Washington, DC: Congressional Budget Office, U.S. Congress.

Crump, Richard K., Stefano Eusepi, Marc Giannoni, and Ayşegül Şahin. 2019. "A Unified Approach to Measuring u*." *Brookings Papers on Economic Activity* (1): 1–69. Conference draft.

Cunnyngham, Karen. 2018. "Trends in Supplemental Nutrition Assistance Program Participation Rates: Fiscal Year 2010 to Fiscal Year 2016." Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

Currie, Janet. 2003. "U.S. Food and Nutrition Programs." In *Economics of Means-Tested Transfer Programs in the United States*, edited by Robert A. Moffitt, 199–289. Chicago, IL: University of Chicago Press.

Dutta-Gupta, Indivar. 2019. "Improving TANF's Countercyclicality through Increased Basic Assistance and Subsidized Jobs." In *Recession Ready: Fiscal Policies to Stabilize the American Economy*, edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

East, Chloe N. 2018. "The Effect of Food Stamps on Children's Health: Evidence from Immigrants' Changing Eligibility." *Journal of Human Resources*: 0916–8197R2.

Fox, Liana. 2018. "The Supplemental Poverty Measure: 2017." Report P60–265, U.S. Census Bureau, U.S. Department of Commerce, Suitland, MD.

Ganong, Peter, and Jeffrey B. Liebman. 2018. "The Decline, Rebound, and Further Rise in SNAP Enrollment: Disentangling Business Cycle Fluctuation and Policy Changes." *American Economic Journal: Economic Policy* 10 (4): 153–76.

Gregory, Christion, Matthew P. Rabbitt, and David C. Ribar. 2015. "The Supplemental Nutrition Assistance Program and Food Insecurity." In *SNAP Matters: How Foods Stamps Affect Health and Well-Being,* edited by Judith Bartfield, Craig Gunderson, Timothy Smeeding, and James P. Ziliak, 74–108. Stanford, CA: Stanford University Press.

Han, Jeehoon. 2019. "The Impact of SNAP Work Requirements on Labor Supply." Working Paper, Harris School of Public Policy Studies, University of Chicago, Chicago, IL.

Harris, Timothy F. 2018. "Do SNAP Work Requirements Work?" Upjohn Institute Working Paper 19-297, W.E. Upjohn Institute for Employment Research, Kalamazoo, MI.

Hoynes, Hilary W., Jesse Rothstein, and Krista Ruffini. 2017. "Making Work Pay Better through an Expanded Earned Income Tax Credit." The Hamilton Project, Brookings Institution, Washington, DC.

Hoynes, Hilary Williamson, and Diane Whitmore Schanzenbach. 2012. "Work Incentives and the Food Stamp Program." *Journal of Public Economics* 96 (1): 151–62.

———. 2016. "US Food and Nutrition Programs." In *Economics of Means-Tested Transfer Programs in the United States, Volume 1*, edited by Robert A. Moffitt, 219–301. Chicago, IL: University of Chicago Press.

———. 2018. "Safety Net Investments in Children." *Brookings Papers on Economic Activity* (1): 89–150.

Hoynes, Hilary, Diane Whitmore Schanzenbach, and Douglas Almond. 2016. "Long-Run Impacts of Childhood Access to the Safety Net." *American Economic Review* 106 (4): 903–34.

Keith-Jennings, Brynne, and Dottie Rosenbaum. 2015. "SNAP Benefit Boost in 2009 Recovery Act Provided Economic Stimulus and Reduced Hardship." Center on Budget and Policy Priorities, Washington, DC.

Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson, and Robert McClelland. 2013. "Consumer Spending and the Economic Stimulus Payments of 2008." *American Economic Review* 103 (6): 2530–53.

Rosenbaum, Dottie. 2017. "CBO: SNAP Spending Will Continue Falling." Center on Budget and Policy Priorities, Washington, DC.

Russek, Frank, and Kim Kowalewski. 2015. "How CBO Estimates Automatic Stabilizers." Working Paper 2015-07, Working Paper Series, Congressional Budget Office, U.S. Congress, Washington, DC.

Sahm, Claudia. 2019. "Direct Stimulus Payments to Individuals." In *Recession Ready: Fiscal Policies to Stabilize the American Economy*, edited by Heather Boushey, Ryan Nunn, and Jay Shambaugh. Washington, DC: The Hamilton Project and the Washington Center for Equitable Growth.

Schanzenbach, Diane Whitmore. 2013. "Strengthening SNAP for a More Food-Secure, Healthy America." Discussion Paper 2013-06, The Hamilton Project, Brookings Institution, Washington, DC.

Schanzenbach, Diane Whitmore, Ryan Nunn, Lauren Bauer, David Boddy, and Greg Nantz. 2016. "Nine Facts about the Great Recession and Tools for Fighting the Next Downturn." The Hamilton Project, Brookings Institution, Washington, DC.

Shaefer, H. Luke, and Italo A. Gutierrez. 2013. "The Supplemental Nutrition Assistance Program and Material Hardships among Low-Income Households with Children." *Social Service Review* 87 (4): 753–79.

Sherman, Arloc. 2011. "Poverty and Financial Distress Would Have Been Substantially Worse in 2010 Without Government Action, New Census Data Show." Center on Budget and Policy Priorities, Washington, DC.

U.S. Census Bureau. 1980–2018. "U.S. Population Estimates by Age, Sex, Race, and Hispanic Origin: Resident Population—Total, All Ages." U.S. Census Bureau, U.S. Department of Commerce, Washington, DC.

U.S. Department of Agriculture (USDA). 1980–2018a. *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2017.* Report SNAP-18-CHAR. Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

———. 1980–2018b. "National Level Annual Summary: Supplemental Nutrition Assistance Program Participation and Costs, 1969–2018." Last updated April 5, 2019. Food and Nutrition Service, U.S. Department of Agriculture, Washington, DC.

———. 2019. "FY 2020 Budget Summary." U.S. Department of Agriculture, Washington, DC.

Whalen, Charles J., and Felix Reichling. 2015. "The Fiscal Multiplier and Economic Policy Analysis in the United States." Working Paper 2015-02, Working Paper Series, Congressional Budget Office, U.S. Congress, Washington, DC.

White House. 2018. "Executive Order Reducing Poverty in America by Promoting Opportunity and Economic Mobility." White House, Washington, DC.

Ziliak, James P. 2015. "Why Are So Many Americans on Food Stamps? The Role of the Economy, Policy, and Demographics." In *SNAP Matters: How Food Stamps Affect Health and Well Being*, edited by Judith Bartfield, Craig Gunderson, Timothy Smeeding, and James P. Ziliak. Stanford, CA: Stanford University Press.

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Advancing Opportunity, Prosperity, and Growth

The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that "prudent aids and encouragements on the part of government" are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.

BROOKINGS

Washington Center for Equitable Growth

The Washington Center for Equitable Growth is a non-profit research and grantmaking organization dedicated to advancing evidence-backed ideas and policies that promote strong, stable, and broad-based economic growth.

Steering Committee

Research Advisory Board

SLOWDOWNS IN THE ECONOMY ARE INEVITABLE.

While it may be tempting to rely on Federal Reserve policy as a lone response to recessions, this would be a mistake; we know that fiscal stimulus is effective. Rather than wait for a crisis to strike before designing discretionary fiscal policy, we would be better served by preparing in advance. Enacting evidence-based automatic stabilizer proposals before the next recession will help the next recovery start faster, make job creation stronger, and restore confidence to businesses and households.

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