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# Fiscal Policy and Recovery from the COVID-19 Recession

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SUMMARY

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# Fiscal Policy and Recovery from the COVID-19 Recession

The economic contraction that began in February 2020 differs from previous contractions, including the Great Depression of the 1930s and the Great Recession of 2007-2009. It was caused in large part by concerns about the spread of the Coronavirus Disease 2019 (COVID-19) and government policies aimed at limiting person-to-person contact. The health concerns of the public and the stay-at-home and shutdown orders designed to limit contact reduced cash flow to businesses and increased the number of unemployed workers.

Fiscal policy during the current contraction, recovery, and beyond may take two forms: (1) fiscal policy designed to prevent business failures and sustain the unemployed during the initial pronounced contraction; and (2) fiscal policy used during a traditional recession and recovery aimed at stimulating aggregate demand in general and restoring full employment. Some data, such as rises in reported case numbers in certain areas, suggest that parts of the economy are still in the grip of the pandemic.

Economic theory and empirical evidence suggest that stimulative measures tend to move the economy toward full employment as the economy recovers from the contraction, but that measures to reduce the debt (which would require the opposite types of policies, reducing the deficit) are better put in place when the economy returns to full employment. Some views hold that one of the "most significant policy mistakes" in recent times was a premature shift to this policy (termed *fiscal consolidation*, or *austerity*) that removed fiscal support from the economy following the Great Recession when the economy was still well below full employment and inhibited economic growth in most advanced economies.

The effectiveness of fiscal policy in stimulating demand depends on the type of policy and how much immediate spending it produces. Government spending, grants to the states, or transfers (such as expanded and augmented unemployment benefits or transfers to lower-income individuals) are considered by most economists to be more effective than tax cuts to higher-income individuals or businesses in certain circumstances because such individuals and businesses are less likely to spend the tax cuts. Spending on infrastructure is effective, but may occur with a delay. Given the outlook for a prolonged underemployed economy, this delay may not be a serious limit, and investment in infrastructure would increase the public capital stock and future output.

Some measures already undertaken to address the economic contraction were similar to those employed as general demand stimulus in the Great Recession, such as direct payments (often referred to as "stimulus checks"), whereas others were designed to sustain businesses during the shutdown and make it easier for individuals to comply with stay-at-home orders, such as the Paycheck Protection Program (PPP) that provided forgivable loans to small businesses who retained workers. Expanded and augmented unemployment benefits aim to fulfill both purposes of sustaining unemployed workers and preventing a further decline in spending due to lost wages.

Preliminary studies that examined some of the major features of recently enacted measures suggest the expanded and augmented benefits during the initial decline in output were effective at increasing spending, with stimulus checks being effective to the extent they were received by lower-income individuals. Stimulus checks received by higher-income individuals appeared to be largely saved and not effective as stimulus. The studies on the PPP are mixed. Two studies indicated that the loans went to firms that already intended to retain employees or did not go to areas most affected by the virus, while one study found that states with more PPP loans had milder declines and faster recoveries.

The current recession's economic effects, including discretionary spending and the automatic revenue declines and spending increases that accompany a recession, are projected to increase the debt significantly. Although there is a general consensus among economists that it is premature to address the debt given the severity of the current contraction, mainstream economic theory points to the importance of addressing an unsustainable debt as soon as economic conditions permit. Hence, eventually, after the economy recovers, a substantially increased debt may lead policymakers to consider deficit reduction policies, which may include raising taxes and/or reducing spending.

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# Introduction

The economic contraction that began in February 2020[1] differs from previous contractions, including the Great Depression of the 1930s and the Great Recession of 2007-2009.[2] It was caused in large part by concerns about the spread of the Coronavirus Disease 2019 (COVID-19) and government policies aimed at limiting person-to-person contact. The health concerns of the public and the stay-at-home and shutdown orders designed to limit contact reduced cash flow to businesses and increased the number of unemployed workers.[3] Consistent with this cause, studies found that spending declined across all income groups,[4] reductions in spending were largely in sectors requiring in-person contact (such as accommodations and restaurants),[5] and job losses and wage reductions appear to have been concentrated in low-wage workers.[6] Some of that contraction could be short-lived if the virus is contained. However, the growing number of reported cases in certain areas in June and July 2020 indicates that the virus is continuing to spread in some parts of the country.[7]

During an economic downturn, such as the current COVID-19 recession, the focus of fiscal policy responses—that is, tax and spending measures—often takes one of two forms:

1. **Relief that sustains businesses and individuals:** Fiscal policy designed to help prevent business failures and sustain the unemployed directly affected by an

[1] As dated in National Bureau of Economic Research, "Determination of the February 2020 Peak in US Economic Activity," June 8, 2020, https://www.nber.org/cycles/june2020.html.

[2] Note that although the decline in output ended in 2009, output remained below potential for some time after that year.

[3] Preliminary studies indicate that the major reason for the economic contraction was concerns about health (fear of contracting the virus), rather than government restrictions. See Raj Chetty et al., "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data," Opportunity Insights, June 17, 2020, https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf, also published as National Bureau of Economic Research Working Paper no. 27431, June 2020, https://www.nber.org/papers/w27431; Diane Alexander and Ezra Karger, *Do Stay-at-Home Orders Cause People to Stay at Home? Effects of Stay-at-Home Orders on Consumer Behavior*, Federal Reserve Bank of Chicago, Working Paper no. 2020-12, June 2020, https://www.chicagofed.org/publications/working-papers/2020/2020-12; Hunt Allcott et al., *Economic and Health Impacts of Social Distancing Policies during the Coronavirus Pandemic*, Working Paper, May 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3610422; Alexander W. Bartik et al., *Measuring the Labor Market at the Onset of the COVID-19 Crisis*, Brookings Institution, Brookings Papers on Economic Activity, BPEA Conference Draft, June 25, 2020, https://www.brookings.edu/wp-content/uploads/2020/06/Bartik-et-al-conference-draft.pdf; and Austan Goolsbee and Chad Syverson, *Fear, Lockdown, and Diversion: Comparing Drivers of Pandemic Economic Decline 2020*, Becker Friedman Institutes for Economics at UChicago, Working Paper no. 2020-80, June 17, 2020, https://bfi.uchicago.edu/wp-content/uploads/BFI_WP_202080v2.pdf.

[4] Natalie Cox et al., *Initial Impacts of the Pandemic on Consumer Behavior: Evidence from Linked Income, Spending, and Savings Data*, Brookings Institution, Brookings Papers on Economic Activity, BPEA Conference Draft, June 25, 2020, https://www.brookings.edu/wp-content/uploads/2020/06/Cox-et-al-conference-draft.pdf.

[5] See Abe C. Dunn, Kyle K. Hood, and Alexander Driessen, *Measuring the Effects of the COVID-19 Pandemic on Consumer Spending Using Card Transaction Data*, Bureau of Economic Analysis (BEA), BEA Working Paper Series, WP2020-5, April 24, 2020, https://www.bea.gov/research/papers/2020/measuring-effects-covid-19-pandemic-consumer-spending-using-card-transaction.

[6] See CRS Insight IN11457, *COVID-19 Pandemic's Impact on Household Employment and Income*, by Gene Falk; and Tomaz Cajner et al., *The U.S. Labor Market during the Beginning of the Pandemic Recession*, Becker Freidman Institutes for Economics at UChicago, Working Paper no. 2020-58, June 2020, https://bfi.uchicago.edu/wp-content/uploads/HurstBFI_WP_202058_Revision.pdf.

[7] See Centers for Disease Control and Prevention, "Coronavirus Disease 2019 (COVID-19), Cases in the U.S.," https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html.

adverse event, like the COVID-19 pandemic. Similar fiscal responses may occur with respect to a natural disasters.

2. **"Traditional" Stimulus:** Fiscal policy used during a traditional recession aimed at stimulating aggregate demand in general and restoring full employment. Unlike fiscal policy designed to provide relief, more "traditional" stimulus is not specifically directed to certain businesses, sectors, or individuals.

Once an economy has recovered, fiscal policy's purpose may shift to addressing the increasing national debt.

Some initial measures undertaken to address this economic contraction were consistent with traditional stimulus measures used to increase demand in the Great Recession, such as stimulus checks.[8] Others were designed to sustain businesses during the shutdown and make it easier for individuals to comply with stay-at-home orders. Some benefits, such as expanded and augmented unemployment insurance benefits, fulfill both purposes of sustaining the unemployed and preventing a further decline in aggregate demand due to lost wages.[9] As downturns continue, fiscal policy may shift from policy focused on relief to more traditional stimulus.

This report provides an overview of the state of the economy and summarizes the fiscal measures already taken in response to the current downturn. Many of these responses have largely been aimed at providing economic relief. In the future, policymakers may consider more traditional fiscal policies designed to boost aggregate demand. This report then discusses fiscal policy used during more traditional recessions and recovery, both the theory and empirical evidence, and reviews what types of fiscal policy are likely to be most effective during recovery from a recession. The report concludes with a brief discussion of the pandemic's effect on the debt.

The government can also use expansionary monetary policy to stimulate the economy, and the Federal Reserve has already undertaken policies to lower interest rates and provide liquidity.[10] Although monetary and fiscal policy are related (in that monetary policy can enhance or offset fiscal stimulus), this report focuses on fiscal policy.

# State of the Economy and the Fiscal Response to Date

As of June 2020, the unemployment rate stood at 11.1%, down from the 13.3% rate in May and the 14.7% rate in April but significantly above the 4.4% rate in March; 18 million workers were unemployed in June, compared to 20 million in May, 23 million in April, and 7 million in

[8] See CRS Report R46415, *CARES Act (P.L. 116-136) Direct Payments: Resources and Experts*, coordinated by Margot L. Crandall-Hollick for information on CARES Act direct payment provisions.

[9] See CRS In Focus IF11475, *Unemployment Insurance Provisions in the CARES Act*, by Katelin P. Isaacs and Julie M. Whittaker for information on additional, temporary UI provisions enacted in response to the current recession; CRS Report R45478, *Unemployment Insurance: Legislative Issues in the 116th Congress*, by Julie M. Whittaker and Katelin P. Isaacs for additional proposals; and CRS Report RL34340, *Extending Unemployment Compensation Benefits During Recessions*, by Julie M. Whittaker and Katelin P. Isaacs for UI legislative responses to previous recessions.

[10] See CRS Report R46411, *The Federal Reserve's Response to COVID-19: Policy Issues*, by Marc Labonte for a discussion.

March.[11] (These numbers may be an undercount.)[12] These unemployment levels followed a sustained period with unemployment rates generally less than 4%. Cumulatively, the service industry accounted for 16 million unemployed workers, of whom 7 million were in the leisure and hospitality industry.

In response to the COVID-19 pandemic, the federal government has enacted four laws that may have reduced the impact of the pandemic-related reductions on unemployment, at a total fiscal cost of $2.7 trillion through FY2021 (and $2.4 trillion for FY2020-FY2030).[13] The third law, the Coronavirus Aid, Relief, and Economic Security (CARES) Act (P.L. 116-136),[14] provided $1.7 trillion in fiscal policy initiatives and lending authorities for FY2020-FY2030, including $349 billion for the Paycheck Protection Program (PPP); $268 billion in expanded and augmented unemployment benefits; $293 billion in direct payments for individuals; and a variety of authorizations for additional small business lending (making the total of PPP and other Small Business Administration loans $377 billion), direct spending, additional tax benefits, payments to state, local, and tribal governments, and credit authority for businesses (including lending support for the Federal Reserve) harmed by the shutdown.[15] Most of the spending and tax cuts in the CARES Act occurs in FY2020 and FY2021. The PPP provided loans to small businesses that could be forgiven (effectively converting them into grants) if employers retained workers.[16] Initial CARES Act funding for the PPP was quickly exhausted, leading to an additional $310 billion in supplementary funding in the Paycheck Protection Program and Health Care Enhancement Act (P.L. 116-139), enacted at the end of April. To date, some PPP loan authority remains available.[17]

The CARES Act expanded and augmented UI benefits by providing a federally funded $600 per week supplement to UI benefits, by effectively extending UI eligibility to those not otherwise eligible (e.g., self-employed workers, independent contractors, and gig economy workers), and by extending the duration of benefits by up to 39 weeks.[18] One estimate found that the total

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[11] U.S. Department of Labor, Bureau of Labor Statistics, *The Employment Situation—May 2020*, June 5, 2020, https://www.bls.gov/news.release/pdf/empsit.pdf; and U.S. Department of Labor, Bureau of Labor Statistics, *Employment Situation Summary—June 2020*, July 2, 2020, https://www.bls.gov/news.release/empsit.nr0.htm.

[12] For more information, see CRS Insight IN11456, *COVID-19: Measuring Unemployment*, by Lida R. Weinstock.

[13] Congressional Budget Office, *The Budgetary Effects of Laws Enacted in Response to the 2020 Coronavirus Pandemic, March and April 2020*, June 16, 2020, https://www.cbo.gov/publication/56403. The two laws not mentioned in the text were the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123) and the Families First Coronavirus Response Act (P.L. 116-127). A subsequent law, the Paycheck Protection Program Flexibility Act (P.L. 116-142), provided for more generous terms for PPP loans.

[14] Congressional Budget Office, *H.R. 748, CARES Act*, P.L. 116-136, April 16, 2020, https://www.cbo.gov/publication/56334.

[15] For appropriations from all legislation, see Government Accountability Office (GAO), *COVID-19: Opportunities to Improve Federal Response and Recovery Efforts, Report to the Congress*, GAO-20-625, June 25, 2020, https://www.gao.gov/reports/GAO-20-625/.

[16] See CRS Report R46284, *COVID-19 Relief Assistance to Small Businesses: Issues and Policy Options*, by Robert Jay Dilger, Bruce R. Lindsay, and Sean Lowry for more information on the PPP and other COVID-19 assistance for small businesses.

[17] As of July 10, 2020, $518 billion in PPP loans had been approved. For ongoing totals, see U.S. Small Business Administration, *Paycheck Protection Program*, https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program.

[18] The CARES Act also extended the number of weeks UI could be claimed. For more information on the CARES Act changes to unemployment insurance (UI), see CRS In Focus IF11475, *Unemployment Insurance Provisions in the CARES Act*, by Katelin P. Isaacs and Julie M. Whittaker. See also CRS Report R45478, *Unemployment Insurance: Legislative Issues in the 116th Congress*, by Julie M. Whittaker and Katelin P. Isaacs for additional UI information and legislative responses to previous recessions.

unemployment benefits rate exceeded prior wages for two-thirds of workers.[19] Absent any legislative activity, the $600 per week supplement to unemployment benefits will expire at the end of July 2020.

## Estimated Effect of Recently Enacted Policies

Estimating the current effects of these fiscal policies is difficult, in part due to the lags in data. However, studies using private data have examined the policies' consequences and the causes of the contraction. A recent study by Chetty et al., which used a wide variety of real-time data, found that the economic collapse was largely due to the effect of reduced spending by high-income individuals on services requiring in-person interactions out of concerns about health risks.[20] This reduction in turn caused revenue losses in businesses such as restaurants and accommodations and job losses for workers. Chetty et al. found that the direct payments (often referred to as "stimulus checks") increased spending by lower-income individuals, but that spending was not directed at the sectors most affected by the collapse in demand. They also did not find evidence that the PPP reduced unemployment in small businesses and suggested that most of these forgivable loans went to firms that did not intend to lay off employees absent the program's assistance. Further, they found that reopening of the economy had a limited ability to affect spending in these areas because it is largely constrained by individuals' health concerns. The researchers suggest that Congress continue measures to mitigate the hardship experienced by lower-income workers through social insurance (such as expanded unemployment benefits). They also suggest place-based measures for low-income individuals in urban areas especially affected by the virus. The study also concludes that the path to economic recovery in the short run requires addressing the virus itself and restoring consumer confidence with respect to health concerns. It acknowledges that the recession may, over time, turn into a more traditional economic shock requiring traditional fiscal stimulus measures that affect a broad range of sectors.

A study focused on the effect of stimulus checks found results consistent with the Chetty et al. study.[21] These direct payments generated a rapid response, with 25 cents to 35 cents of each dollar spent within the first 10 days of receiving payments. The spending was greatest among those with low income, those who had lost income, and those with the least liquidity, consistent with prior studies of direct payments. In this case, however, in contrast to prior payments in 2001 and 2008,[22] relatively little of the spending was on durable goods and more of the spending was on food. Another study found that 48% of the direct payments were spent within two weeks, with 68% spent by those who live from paycheck to paycheck (i.e., those with little savings) and 23%

[19] Peter Ganong, Pascal Noel, and Joseph Vavra, *US Unemployment Insurance Replacement Rates During the Pandemic*, Becker Freidman Institutes for Economics at UChicago, Working Paper no. 2020-62, May 14, 2020, https://bfi.uchicago.edu/working-paper/2020-62/; and Zachary Parolin, Megan A. Curra, and Christopher Wimer, *The CARES ACT and POVERTY in the COVID-19 CRISIS*, Center on Poverty and Social Policy at Columbia University, vol. 4, no. 8, June 21, 2020, https://heavy.com/wp-content/uploads/2020/07/Forecasting-Poverty-Estimates-COVID19-CARES-Act-CPSP-2020.pdf.

[20] Raj Chetty et al., *How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data*, Opportunity Insights, June 17, 2020, https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf, also published as National Bureau of Economic Research Working Paper no. 27431, June 2020, https://www.nber.org/papers/w27431.

[21] Scott R. Baker et al., *Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payments*, National Bureau of Economic Research, Working Paper no. 27097, May 2020, https://www.nber.org/papers/w27097.pdf.

[22] For more information on these 2001 and 2008 payments, see CRS Insight IN11256, *COVID-19 and Direct Payments to Individuals: Historical Precedents*, by Gene Falk.

spent by others, suggesting stimulus checks targeted at those with lower incomes would be more effective per dollar of cost.[23]

The studies on PPP loans are mixed. Chetty et al. found PPP loans to be poorly targeted, as did a study that found the loans did not go to areas most affected by the virus.[24] Another study found geographical distribution of PPP loans was not associated with impact of the virus but was associated with the existence of prior lending relationships with banks and the prevalence of community banks.[25] In contrast, another study of employment by Bartik et al. found that states with more PPP loans had milder declines and faster recoveries.[26] A study by Autor et al. using firm-level data from a major payroll processer provided preliminary estimates that the program increased employment in affected firms by 7.5% and added 7.3 million workers to the payroll.[27]

The Bartik et al. study also found these milder declines and faster recoveries were associated with higher unemployment benefits, perhaps because these benefits sustained spending. The authors found no evidence that the high unemployment benefit replacement rates affected job losses or slowed rehiring. A study by Altonji et al. also found no evidence that the benefits affected job loss or a return to working.[28] A JPMorgan Chase & Company study found that spending by the unemployed overall fell by 10%, but spending by those receiving unemployment benefits increased by 10%, indicating the expanded UI benefits helped to stabilize aggregate demand. Spending by those waiting to receive UI benefits fell by 20%.[29] A Marinescu et al. study, using data from a national job recruiting platform, found that job applications declined in early March, prior to the CARES Act, and then remained stable. The study found some evidence of an effect on applications among workers with higher replacement rates, but these effects may be associated with other factors (such as health and childcare concerns). It also found that job vacancies fell significantly more than job applications, leading to an increase in applicants per job. The study did not measure, but noted, that the income support from the expanded UI sustained spending and led to job creation.[30] Another study suggested that an extension of expanded and augmented unemployment benefits might, however, be replaced by a proportional benefit to avoid potential

[23] Ezra Karger and Aastha Rajan, *Heterogeneity in the Marginal Propensity to Consume: Evidence from Covid-19 Stimulus Payments*, Federal Reserve Bank of Chicago, Working Paper no. 2020-15, May 28, 2020, https://www.chicagofed.org/publications/working-papers/2020/2020-15.

[24] João Granja et al., *Did the Paycheck Protection Program Hit the Target?* National Bureau of Economic Research, Working Paper no. 27095, May 2020, https://www.nber.org/papers/w27095.pdf.

[25] Haoyang Liu and Desi Volker, *Where Have the Paycheck Protection Loans Gone So Far?* Liberty Street Economics, Federal Reserve Bank of New York, May 6, 2020, https://libertystreeteconomics.newyorkfed.org/2020/05/where-have-the-paycheck-protection-loans-gone-so-far.html.

[26] Alexander W. Bartik et al., *Measuring the Labor Market at the Onset of the COVID-19 Crisis*, Brookings Papers on Economic Activity, BPEA Conference Draft, June 25, 2020, https://www.brookings.edu/wp-content/uploads/2020/06/Bartik-et-al-conference-draft.pdf.

[27] David Autor et al., *An Evaluation of the Paycheck Protection Program Using Administrative Payroll Microdata, Preliminary*, July 22, 2020, http://economics.mit.edu/files/20094?te=1&nl=the-morning&emc=edit_nn_20200722.

[28] Joseph Altonji et al., *Employment Effects of Unemployment Insurance Generosity During the Pandemic.* July 14, 2020, https://tobin.yale.edu/sites/default/files/files/C-19%20Articles/CARES-UI_identification_vF(1).pdf.

[29] JPMorgan Chase & Company, *Consumption Effects of Unemployment Insurance during the COVID-19 Pandemic*, July 2020, https://institute.jpmorganchase.com/institute/research/labor-markets/unemployment-insurance-covid19-pandemic.

[30] Iona Marinescu et al., *Job Search, Job Posting and Uunemployment Insurance During the COVID-19 Crisis*, July 30, 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3664265,

work disincentives in the future, although such a proposal could be difficult for states to administer in the short term.[31]

## Considerations for Policies Going Forward

To date, fiscal policy actions have been focused in large part on relief—sustaining businesses and individuals through a short-term crisis imposed by health concerns and government (and business self-imposed) restrictions—although some of these policies have also stimulated demand. The Chetty et al. study suggested the need for continuing expanded unemployment benefits as long as these government constraints and health concerns remain.

Some economists suggest a move to traditional fiscal policy that augments demand without being specifically directed to certain businesses or sectors once these restrictions are safely lifted and individuals feel comfortable engaging in more activities.[32] It is not clear when this phase will arrive (especially as some states have reversed the loosening of restrictions in the face of a rising number of reported cases),[33] or how long it will last, although some research suggests it could begin this year and last for several years. The Congressional Budget Office (CBO) projected recovery beginning in the third quarter of 2020, with pre-recession output achieved by the middle of 2022, and unemployment rates that exceed pre-recession levels for several years.[34] The Federal

[31] This suggestion was made in Peter Ganong, Pascal Noel, and Joseph Vavra, *US Unemployment Insurance Replacement Rates During the Pandemic*, Becker Friedman Institute for Economics at UChicago, Working Paper no. 2020-62, May 14, 2020, https://bfi.uchicago.edu/working-paper/2020-62/. Some experts caution that proportional benefits could be almost impossible for state UI administrators to program in the short term. For example, see the testimony of Michele Evermore, senior policy analyst at the National Employment Law Project, in U.S. Congress, Senate Committee on Finance, *Unemployment Insurance During COVID-19: The CARES Act and the Role of Unemployment Insurance During the Pandemic*, 116th Cong., 2nd sess., June 9, 2020. Treasury Secretary Mnuchin also alluded to the administrative difficulties in providing greater UI benefits proportional to a worker's salary when the $600 supplement was originally being considered, stating, according to media reports, that "the flat $600 per week 'was the only way we could ensure the states could get money quickly and in a fair way,' since it would take too long to tailor benefits to a person's most recent salary." Steven T. Dennis, Erik Wasson, and Colin Wilhelm, "Senate Plans Virus Bill Vote After Dispute Over Unemployment Aid," Bloomberg, March 25, 2020, https://www.bloomberg.com/news/articles/2020-03-25/some-in-gop-revolt-over-stimulus-unemployment-benefit.

[32] For a discussion of the need to provide policies that do not prop up businesses that will fail, see testimony of Douglas Holtz-Eakin, in U.S. Congress, House Budget Committee, *Addressing the Economic Impacts of COVID-19: Views from Two Former CBO Directors*, 116th Cong., 2nd sess., June 3, 2020, https://budget.house.gov/legislation/hearings/addressing-economic-impacts-covid-19-views-two-former-cbo-directors. Holtz-Eakin stated, "Over the next few months, the emphasis should shift from speedy, indiscriminate lending and grants to targeted lending programs where needed. Policy should also shift its emphasis away from keeping workers attached to their firms and toward supporting shifts in the demand for workers as some industries shrink and others expand." See also Jose Maria Barrero, Nick Bloom, and Steven J. Davis, *COVID-19 Is Also a Reallocation Shock*, Becker-Friedman Institute for Economics at UChicago, Working Paper no. 2020-59, June, 2020, https://bfi.uchicago.edu/wp-content/uploads/BFI_WP_202059.pdf. The researchers say that "unemployment benefit levels that exceed worker earnings, policies that subsidize employee retention, land-use restrictions, occupational licensing restrictions, and regulatory barriers to business formation will impede reallocation responses to the COVID-19 shock."

[33] Jasmine C. Lee et al., "See How All 50 States Are Reopening (and Closing Again)," *New York Times*, updated regularly, last updated July 10, 2020, https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html.

[34] Congressional Budget Office, *An Update to the Economic Outlook: 2020 to 2030*, July 2, 2020, https://www.cbo.gov/publication/56442. See also CRS Insight IN11388, *COVID-19: U.S. Economic Effects*, by Rena S. Miller and Marc Labonte. See also testimony of Douglas Elmendorf and Douglas Holtz-Eakin, in U.S. Congress, House Budget Committee, *Addressing the Economic Impacts of COVID-19: Views from Two Former CBO Directors*, 116th Cong., 2nd sess., June 3, 2020, https://budget.house.gov/legislation/hearings/addressing-economic-impacts-covid-19-views-two-former-cbo-directors.

Reserve projects unemployment at higher rates through 2022.[35] A potential need for up to $3 trillion in additional fiscal measures has been suggested, in the form of support for the unemployed, support for business, and aid to state and local governments.[36] The former chairman of the Federal Reserve during the Great Recession has stressed the need for additional fiscal measures, especially aid to state and local governments, whose budget cuts slowed the recovery from that recession.[37] The current chairman of the Federal Reserve has also supported fiscal measures.[38] He noted again, in a press conference on July 29, 2020, a need for further fiscal stimulus, noting that preliminary data showed a slowing of the recovery.[39] To date it is not clear whether and to what extent subsequent fiscal support may be focused on relief versus more traditional stimulus designed to increase aggregate demand. Aid to state and local governments and extensions of enhanced unemployment benefits would serve the dual purposes of providing both relief (particularly in light of the surge in cases) and a traditional stimulus.

The current recession is a novel situation with many uncertainties that may affect whether fiscal policy is designed primarily to provide economic relief or as more traditional stimulus. One uncertainty is when social distancing measures can be relaxed without risking increased infections. This issue may dictate how quickly the economy can return to normal. Rising infections could trigger a second round of shutdowns, which would make the economic recovery more difficult. The increases in reported cases in June and July 2020 in states that lifted restrictions earlier have raised questions about how quickly the economy will reopen. As noted above, several states have reversed their reopenings in response to growing caseloads.[40]

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[35] Chair's Federal Open Market Committee Press Conference Projections Materials, June 10, 2020, https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20200610.pdf.

[36] See Testimony of Douglas Elmendorf, in U.S. Congress, House Budget Committee, *Addressing the Economic Impacts of COVID-19: Views from Two Former CBO Directors*, 116th Cong., 2nd sess., June 3, 2020, https://budget.house.gov/legislation/hearings/addressing-economic-impacts-covid-19-views-two-former-cbo-directors. Elmendorf suggests a need for $3 trillion. See also Glenn Hubbard et al., *Taskforce Report: Promoting Economic Recovery After COVID-19*, The Aspen Institute, June 16, 2020, https://economicstrategygroup.org/resource/promoting-economic-recovery-after-covid-19/, which suggests a need for $1 trillion with a rapid, V-shaped recovery and $2 trillion with a slower, U-shaped recovery. On July 30, the *Washington Post* reported a survey of 25 economists, with 20 proposing a stimulus of $2 trillion or more, and the remainder favoring a stimulus of around $1 trillion. See Heather Long, "This Recession is Already Deep. If Congress Fails to Act, a Lot of Damage Could be Permanent," *The Washington Post*, https://www.washingtonpost.com/business/2020/07/30/economists-favor-big-stimulus/?wpisrc=nl_powerup&wpmm=1&utm_campaign=wp_power_up&utm_medium=email&utm_source=newsletter.

[37] Ben S. Bernanke, "Ben Bernanke: I Was Chairman of the Federal Reserve. Save the States," *New York Times*, July 15, 2020, https://www.nytimes.com/2020/07/15/opinion/ben-bernanke-coronavirus-federal-aid.html?action=click&module=Opinion&pgtype=Homepage. See also Ben S. Bernanke and Janet Yellen, "Former Fed Chairs Bernanke and Yellen Testified on COVID-19 and Response to Economic Crisis," July 17, 2020, The Brookings Institution, https://www.brookings.edu/blog/up-front/2020/07/17/former-fed-chairs-bernanke-and-yellen-testified-on-covid-19-and-response-to-economic-crisis/?utm_campaign=Economic%20Studies&utm_medium=email&utm_content=91760963&utm_source=hs_email.

[38] See U.S. Congress, House Committee on Financial Services, *Monetary Policy and the State of the Economy*, hearings, 116th Cong., 2nd sess., June 17, 2020, https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=406614. For a summary of the Q&A, see Matthew Boesler, "Powell Urges Congress Not to Remove Fiscal Support Too Fast," Bloomberg, June 17, 2020, https://www.bloomberg.com/news/articles/2020-06-17/powell-urges-congress-not-to-remove-fiscal-support-too-quickly.

[39] Rachael Siefel, "Fed Chief: New Surge in Cases is Beginning to Weigh on the Economy," *The Washington Post*, July 29, 2020, https://www.washingtonpost.com/business/2020/07/29/powell-fed-economy/.

[40] Jasmine C. Lee et al., "See How All 50 States Are Reopening (and Closing Again)," *New York Times*, updated regularly, last updated July 10, 2020, https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html.

A second uncertainty is the extent to which consumer demand is dampened. The outbreak of the virus has been uneven across the United States, and in many places there are expectations of the outbreak worsening.[41] Consumers who feel uncertain about the future tend to save more and delay big-ticket purchases, and consumer fears of contracting the virus may also dampen demand. The uncertainty by consumers may have resulted in a surge in the savings rate to an unprecedented 33% in April and may reflect pent-up demand that could be translated into more spending as restrictions ease, but much depends on how cautious consumers are.[42]

A third uncertainty may be how the economic fallout from COVID-19 changes the composition of demand. A particularly long period may be required before consumption of travel and leisure returns to its former levels (if it returns to those levels at all), which would have consequences for the restaurant, hotel, airline, and oil industries, among others. Social distancing rules that may persist for many months or longer would also require cost-increasing changes in the provisions of services that involve close contact, such as restaurants, airlines, and mass transportation.

These uncertainties make it difficult to determine when the focus of fiscal policy shifts from primarily sustaining adversely affected businesses and individuals in the short term to fiscal policy measures traditionally used in a recession and aimed at increasing demand in general while allowing the composition of output to adjust in response to pandemic-related changes in the economy's structure.

The optimal timing of a shift from focused policies to support impacted businesses and individuals to the type of demand stimulus used in traditional recessions is not clear, and both needs may occur simultaneously. The efficiency of alternative types of stimulus in increasing demand should be considered, although in some cases (such as fiscal assistance to the states and localities and expanded and augmented unemployment benefits), the same policies would likely be appropriate regardless of the principal objective. Insofar as policymakers seek to design fiscal policies to increase aggregate demand, it may be helpful to understand how fiscal policy in response to traditional economic downturns works, both theoretically and empirically.

# How Fiscal Policy Works to Increase Demand

This section explains the basic theory underlining the use of fiscal policy in a traditional economic downturn, followed by a discussion of empirical research on the effects of these policies. This discussion is focused on fiscal policy to address the lack of sufficient demand and will generally be more applicable when virus transmission is reduced, the public is more confident in engaging in normal activities, and stay-at-home orders and business closures can be safely lifted or limited.

## Review of Theoretical Effects of Fiscal Policy

Current fiscal policy theories began with a work published during the Great Depression by British economist John Maynard Keynes.[43] As a result, this type of policy is often referred to as

[41] Lauren Fedor and Christine Zhang, "US Voters More Pessimistic on Chances of Economic Rebound," *Financial Times*, July 7, 2020, https://www.ft.com/content/808653be-b651-41aa-81b7-5f8ec3831e25?emailId=5f045541d7a228000485f2f7&segmentId=13b7e341-ed02-2b53-e8c0-d9cb59be8b3b.

[42] Bureau of Economic Analysis, "Personal Saving Rate," https://www.bea.gov/data/income-saving/personal-saving-rate.

[43] John Maynard Keynes, *The General Theory of Employment, Interest and Money*, published in 1936, https://www.files.ethz.ch/isn/125515/1366_KeynesTheoryofEmployment.pdf.

Keynesian, although there have been numerous refinements and developments in the theory.[44] Since World War II, government policy to address business cycles has generally been guided by some form of Keynesian theory. The fundamental concept behind this view of macroeconomics and fiscal policy is that prices in an economy do not immediately adjust to shocks, which can lead to underutilization of resources. Workers may become unemployed and capital may sit idle, due to a lack of sufficient demand. To reduce unemployment, expansionary fiscal policy (an increase in spending or a reduction in taxes to expand aggregate demand) can be employed.

The magnitude of fiscal policy's effect is measured not only by the size of fiscal policy intervention relative to the slack in the economy but also by its effectiveness, measured by a multiplier. If the government spends a dollar, aggregate demand is initially increased by a dollar. The person who sold a dollar worth of goods or services to the government also receives a dollar, part of which might be saved and part of which might be spent. To the extent that it is spent, it increases aggregate demand further. The recipients of this additional spending will in turn spend part of their receipts. This process continues with each amount of additional spending diminishing a bit over time due to saving. The sum of all these rounds effectively equals the multiplier.[45] As demand increases, businesses hire additional workers and purchase more capital goods to satisfy demand. Thus, successful fiscal policy depends on having a stimulus that is not only large enough, but also effective enough.

The strength of the multiplier depends not only on the share that is spent in the initial and subsequent rounds but also on the effect on interest rates and prices, as increases in these measures can reduce the multiplier.[46] The fiscal multiplier's estimated size also depends on

[44] These developments include, among others, the standard model (referred to as IS-LM), which includes both monetary and fiscal policy and refines the trade-off between inflation and unemployment, leading to the notion of a natural rate of unemployment (where policies tend to affect price rather than output), the incorporation of expectations, and modifications for an open economy (where goods and capital flow across borders). The IS equation traces out the equilibrium between output and interest rates in the economy based on the relationship between investment and savings; the lower the interest rate, the larger the amount of output. The LM curve traces out a relationship between output and interest rates based on the demand and supply of money and is upward sloping, with output rising as interest rates rise (because higher interest rates cause smaller holdings of money and free up money to support transactions). The IS curve is shifted with fiscal policy and the LM curve with monetary policy. Where they intersect determines the level of aggregate demand at any given price level, and where that curve intersects with the supply curve determines prices and output in the economy.

[45] Saving rates in the economy rose during the Great Recession from around 2% to 6% (personal savings rate), presumably in part due to the loss in asset values. The rate then declined to about 5%, but these rates are similar to the levels in the early and mid-1990s and lower than in most periods since 1960. Thus, although savings rates increased, they did not indicate fiscal multipliers were small by historical standards. Private savings rates (which include business saving) rose from around 4% to 8% (according to the National Income and Product Accounts), but this rate was also not high by historical standards. Savings rates have been increasing as the share of the population that is elderly has increased, but the personal savings rate surged to 33% in April 2020 (Bureau of Economic Analysis, "Personal Saving Rate," https://www.bea.gov/data/income-saving/personal-saving-rate). This surge may be transitory because it reflects pent-up demand due to closures.

[46] As demand increases, it places upward pressure on interest rates, reducing private-sector spending on investment and consumer durables, and also, in an open economy, attracting capital flows into the United States, appreciating currency, and reducing net exports. When the economy is at full employment or close to full employment, the effects of a stimulus are more likely to lead to price increases rather than real output growth. In this case, the deficit spending crowds out investment and net exports. Thus, even for a particular type of spending or tax cut, its short-run effects are likely smaller at higher interest rates, smaller for small open economies with a large trade sector and flexible exchange rates, and smaller for economies at or close to full employment. One can think of the supply curve (output rises with prices) as being relatively horizontal in an underemployed economy (a shift in the demand curve can increase output without affecting prices very much) and curving and becoming relatively vertical in a fully employed economy (a shift in the demand curve largely increases prices without affecting output). These effects could reduce the stimulus (theoretically to zero), but would not cause a stimulus to be contractionary.

assumptions about monetary policy and its response to a fiscal stimulus.[47] Currently, monetary policy is also aimed at stimulating the economy.

Some economists have come to believe that political lags make fiscal policy ill-timed, whereas monetary policy can be enacted quickly.[48] Others have become less enamored of fiscal policy because it becomes somewhat less effective in an open economy. At the same time, there are circumstances where traditional monetary policy does not work well (at very low interest rates, for example) or where a contraction appears to be serious enough to warrant both monetary and fiscal measures. During the 2007-2009 Great Recession, fiscal stimulus was enacted under both the George W. Bush and Obama Administrations.[49]

The textbook consensus is that spending increases are more effective than tax cuts, because the full amount of the initial spending increase is actually spent, whereas some of a tax cut is initially saved.[50] Spending in the form of transfers could also be partially saved, although it is believed that some types of transfers benefit lower-income recipients who are likely to spend all or most of the transfer. Different types of tax or spending policies may also have different effects depending on the portion initially saved.[51] At the same time, much federal government spending is funneled through the states, and a portion of spending in the form of grants to states could also be saved (although this outcome may be unlikely given the current fiscal pressures on the states). The spending funneled through the states could include both transfers and government purchases of goods and services.

## Review of Empirical Effects of Fiscal Policy

Numerous econometric studies have examined the short-run effects of fiscal policy adjustments (i.e., increases or decreases in spending and/or taxes) on the economy.[52] These models generally fall into three types—macroeconometric forecasting models, aggregate country-level time series models, and dynamic stochastic general equilibrium (DSGE) models—each with its own

[47] One might think of a neutral monetary response as one that permits the fiscal stimulus to increase interest rates, output, and prices (this policy can be thought of as a fixed money supply). The monetary authorities may also, at one extreme, keep the interest rate fixed, which will enhance the fiscal stimulus, or, at the other, keep prices fixed, which will offset the fiscal stimulus. In a fully employed economy, fiscal stimulus will not affect output, but rather the composition of output. Without an offsetting change in the nominal money supply, prices will rise to reduce the real value of money. Alternatively, the money supply can be contracted to be consistent with total output without a price increase.

[48] Monetary policy lags are commonly thought to be six to eight quarters and monetary policy is generally considered the blunter tool.

[49] The Economic Stimulus Act of 2008 (P.L. 110-185) and the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

[50] See Charles R. Nelson, *Macroeconomics: An Introduction*, Chapter 11, Keynesian Fiscal Policy and Multipliers, 2006, http://faculty.washington.edu/cnelson/Chap11.pdf.

[51] See CRS Report RS21126, *Tax Cuts and Economic Stimulus: How Effective Are the Alternatives?*, by Jane G. Gravelle.

[52] Surveys of the fiscal multiplier literature include Charles J. Whalen and Felix Reichling, *The Fiscal Multiplier and Economic Policy Analysis in the United States*, Congressional Budget Office, CBO Working Paper no. 2015-02, February 2015; Valerie A. Ramey, "Can Government Purchases Stimulate the Economy," *Journal of Economic Literature*, vol. 49, no. 3 (September 2011), pp. 673-685; Valerie A. Ramey, "Ten Years After the Financial Crisis: What Have We Learned from the Renaissance in Fiscal Research?" *Journal of Economic Perspectives*, vol. 33, no. 2 (Spring 2019), pp. 89-114; and Menzie Chinn, "Fiscal Multipliers," in *New Palgrave Dictionary of Economics*, ed. Steven N. Durlauf and Lawrence E. Blume (Palgrave Macmillan, 2013).

strengths and limitations.[53] These models attempt to quantify the "bang for the buck" of government intervention or, in economics jargon, the size of the fiscal multipliers.

How effective a fiscal stimulus is depends on the share of the spending or tax cut that is initially spent, which can be summarized in a multiplier. As noted earlier, a multiplier estimates how much additional output is produced for an additional dollar of spending or tax cuts. For example, a multiplier of 1.5 indicates that $1 dollar of fiscal stimulus leads to $1.50 in output. Many factors affect the size of the multiplier (e.g., how close the economy is to full employment, the reaction of monetary policy, and the period of time over which it is measured), but given those factors, some policies are more effective in increasing demand and output than others.

Estimates of the fiscal multipliers of government policy choices span a broad range. Fiscal multiplier estimates, as discussed in the studies below, range from 0.3 to 3.5.[54] (A multiplier of 0.3 can be interpreted as a dollar of spending or tax cut increasing output by 30 cents, and a multiplier of 3.5 can be interpreted as a dollar of spending or tax cut increasing output by $3.50.) The range of estimates does not appear to be driven by the model chosen,[55] but results from the combination of several factors:

- Modeling and data assumptions: A portion of the variation in fiscal multiplier estimates results from how different modeling challenges are addressed and the assumptions built into the models.[56] Additional variation occurs because analyses can differ with respect to the period over which the multiplier is measured

[53] Macroeconometric forecasting models, which generally form the underpinnings of the forecasts from economic consulting firms, are based largely on historical relationships among aggregate economic variables and informed by theories of how those variables are determined. The reliability of macroeconometric projections depends heavily on the validity of the economic assumptions used.

Time series models, in their most basic form, summarize the correlation between economic variables over time. As a result of their reliance on correlation and a general lack of theoretical grounding, it can be difficult to use time series models to assess the direction of causation between policies and the economy.

DSGE models are built on a structure of individuals maximizing well-being by choosing consumption and leisure over time (hence dynamic). As a result, estimated multipliers are constrained by the basic structure of the model. Individuals and firms in the model are rational and forward-looking. The original dynamic model on which DSGE models are built (the real business cycle model) did not allow for involuntary unemployment. Current DSGE models have been modified in a variety of ways to permit fiscal and monetary policy to have effects, but they are often criticized for assumptions that seem at odds with evidence (such as an expectation that decreased taxes today will lead to increases in the future that the individual takes into account) or reflect priors. See Paul Romer, "The Trouble with Macroeconomics," delivered January 5, 2016, as the Commons Memorial Lecture of the Omicron Delta Epsilon Society. Forthcoming in *The American Economist*. Available at https://paulromer.net/the-trouble-with-macro/WP-Trouble.pdf.

A detailed description of these model types (and others) can be found in Menzie Chinn, "Fiscal Multipliers," in *New Palgrave Dictionary of Economics*, ed. Steven N. Durlauf and Lawrence E. Blume (Palgrave Macmillan, 2013).

[54] See footnote 52 for surveys of the fiscal multiplier literature.

[55] Charles J. Whalen and Felix Reichling, *Assessing the Short-Term Effects on Output of Changes in Federal Fiscal Policies*, Congressional Budget Office, CBO Working Paper no. 2012-08, May 2012, finds estimates for the United States, as measured (on a cumulative basis) after eight quarters, ranging from 0.75 to 2.25 for macroeconometric forecasting models, from 0.3 to 3.5 for time series models, and from 0.5 to 2.25 for DSGE models. See footnote 52 for surveys of the fiscal multiplier literature.

[56] A common challenge for these models is what economists refer to as "identification." Identification, in this context, refers to the model's ability to differentiate the economic results of the specific policy under study from other unrelated policy changes. See Daniel Riera-Crichton, Carlos A. Vegh, and Guillermo Vuletin, "Tax Multipliers: Pitfalls in Measurement and Identification," *Journal of Monetary Economics*, vol. 79 (May 2016), pp. 30-48, for a discussion of methods used to help address issues with identification.

(cumulative effects versus peak effects) or the years in which the multiplier forms its basis.[57]

- Economic conditions: A portion of the variation in fiscal multiplier estimates results from the estimates' economic starting points—with fiscal multipliers being larger during recessions than during expansions.[58] The size of fiscal multipliers is also affected by the "room" that monetary policy has to intervene—with fiscal multipliers growing larger as the duration of constrained interest rates increases.[59]
- Fiscal policy details: Further variation is derived from the nature of the fiscal policy—the fiscal policy tools used (e.g., taxes or government spending),[60] the policy area to be affected (e.g., infrastructure versus general government spending),[61] and the characteristics of those affected (e.g., high-income households versus low-income households).[62]

Much of the relatively recent interest in fiscal multipliers has been driven by an examination of the Great Recession, which began in late 2007.[63] Initially, policymakers responded with conventional stimulus—the Economic Stimulus Act of 2008 (P.L. 110-185) and the American Recovery and Reinvestment Act of 2009 (P.L. 111-5, ARRA)—which provided a substantial expansionary boost to the U.S. economy.[64] Concerns about growing budget deficits, driven in part

[57] Valerie A. Ramey, "Identifying Government Spending Shocks: It's All in the Timing," *The Quarterly Journal of Economics*, vol. 126, no. 1 (February 2011), pp. 1-50, finds fiscal multipliers differ when WWII is included in the time period versus when it is excluded.

[58] Alan J. Auerbach and Yuriy Gorodnichenko, "Measuring the Output Responses to Fiscal Policy," *American Economic Journal: Economic Policy*, vol. 4, no. 2 (May 2012), pp. 1-27, found general multipliers between 0.0 and 0.5 during economic expansions and between 1.0 and 1.5 during economic recessions. The authors also found that unexpected fiscal policy yields a larger fiscal multiplier than expected actions. These results are consistent with other similar studies, including Robert J. Barro and Charles J. Redlick, "Macroeconomic Effects From Government Purchases and Taxes," *The Quarterly Journal of Economics*, vol. 126, no. 1 (February 2011), pp. 55-102; and Steven M. Fazzari, James Morley, and Irina Panovska, "State-Dependent Effects of Fiscal Policy," *Studies in Nonlinear Dynamics & Econometrics*, vol. 19, no. 3 (2015), pp. 285-315. In contrast, Valerie A. Ramey and Sarah Zubairy, "Government Spending Multipliers in Good Times and in Bad: Evidence from U.S. Historical Data," *Journal of Political Economy*, vol. 126, no. 2 (April 2018), pp. 850-901, presents an alternative view—that fiscal multipliers are not larger during recessions—using military spending shocks to identify their model.

[59] Lawrence Christiano, Martin Eichenbaum, and Sergio Rebelo, "When Is the Government Spending Multiplier Large?" *Journal of Political Economy*, vol. 119, no. 1 (February 2011), pp. 78-121, finds that the size of this effect increases as the duration of a binding zero bound on interest rates grows. Specifically, the authors find a fiscal multiplier of 0.7 when interest rates are not constrained, versus 1.2 when interest rates are constrained for 8 periods and 1.6 when interest rates are constrained for 12 periods. Günter Coenen et al., "Effects of Fiscal Stimulus in Structural Models," *American Economic Journal: Macroeconomics*, vol. 4, no. 1 (January 2012), pp. 52-68, and Robert E. Hall, "By How Much Does GDP Rise if the Government Buys More Output?" Brookings Institution, *Brookings Papers on Economic Activity* vol. 40, no. 2 (Fall 2009), pp.182-331, find similar results.

[60] U.S. Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output from January 2011 through March 2011*, May 2011.

[61] Alan J. Auerbach and Yuriy Gorodnichenko, "Measuring the Output Responses to Fiscal Policy," *American Economic Journal: Economic Policy*, vol. 4, no. 2 (May 2012), pp. 1-27.

[62] Mark Zandi, "At Last, the U.S. Begins a Serious Fiscal Debate," Moody's Analytics, April 14, 2011, https://www.economy.com/economicview/analysis/198972.

[63] Lawrence J. Christiano, *The Great Recession: A Macroeconomic Earthquake*, Federal Reserve Bank of Minneapolis, Economic Policy Papers, February 7, 2017, https://www.minneapolisfed.org/article/2017/the-great-recession-a-macroeconomic-earthquake.

[64] U.S. Congressional Budget Office, *Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output in 2014*, February 20, 2015, https://www.cbo.gov/publication/49958; and Brian I.

by an alternative view on fiscal policy, resulted in a policy shift toward fiscal consolidation (increases in taxes and/or decreases in government spending or transfers).[65] This view was referred to popularly as "austerity," and, as noted earlier, has been viewed by some as a major policy misstep.[66] The following section discusses the empirical research on austerity.

## Review of Empirical Research on Austerity Measures During the Great Recession

Given the prescription for austerity measures (which are generally seen as contractionary in an economy below full employment) during the Great Recession, several studies examining the short-run effects of fiscal consolidation or adjustments (i.e., spending reductions and/or tax increases) on government debt and the economy were circulated and subsequently published during the early stages of recovery from the Great Recession.[67] A critical piece of these analyses was the identification of the discretionary fiscal policy.[68] In general, the fiscal policy variables are identified using (1) cyclically adjusted variables or (2) a narrative approach.[69]

- A study by Alesina and Ardagna identified the discretionary fiscal change by cyclically adjusting the fiscal variables and found fiscal consolidation improved economic growth.[70] In addition, the authors concluded that spending reductions

Baker, *Fiscal impetus and the Great Recession*, U.S. Bureau of Labor Statistics, Monthly Labor Review, January 2015, https://www.bls.gov/opub/mlr/2015/beyond-bls/fiscal_impetus_and_the_great_recession.htm.

[65] The Budget Control Act of 2011 (P.L. 112-25, BCA) was designed to limit the growth in discretionary spending. See CRS Report R44874, *The Budget Control Act: Frequently Asked Questions*, by Grant A. Driessen and Megan S. Lynch for further information on the BCA.

[66] See Testimony of Douglas Elmendorf, in U.S. Congress, House Budget Committee, *Addressing the Economic Impacts of COVID-19: Views from Two Former CBO Directors*, 116th Cong., 2nd sess., June 3, 2020, https://budget.house.gov/legislation/hearings/addressing-economic-impacts-covid-19-views-two-former-cbo-directors. See also William G. Gale, "We Can Afford More Stimulus," Brookings Institution, April 30, 2020, https://www.brookings.edu/blog/up-front/2020/04/30/we-can-afford-more-stimulus/, noting that the premature move away from stimulus was even more damaging to the UK and continental Europe. See also Christopher L. House, Christian Proebsting, and Linda L. Tesara, "Austerity in the aftermath of the great recession," *Journal of Monetary Economics*, June 13, 2019. See also Ben S. Bernanke, "Ben Bernanke: I Was Chairman of the Federal Reserve. Save the States," *New York Times*, July 15, 2020, https://www.nytimes.com/2020/07/15/opinion/ben-bernanke-coronavirus-federal-aid.html?action=click&module=Opinion&pgtype=Homepage.

[67] Alberto Alesina and Silvia Ardagna, "Large Changes in Fiscal Policy: Taxes versus Spending," in *Tax Policy and the Economy*, ed. Jeffrey R. Brown, vol. 24 (Chicago: University of Chicago Press, 2010), pp. 35-68; and International Monetary Fund, "Will It Hurt? Macroeconomic Effects of Fiscal Consolidation," in *World Economic Outlook* (Washington: International Monetary Fund, 2010), pp. 93-124, available at http://www.imf.org/external/pubs/ft/weo/2010/02/pdf/c3.pdf.

[68] As discussed above, a challenge to estimating fiscal multipliers is separating the effects of the discretionary fiscal policy from existing policies and general economic conditions. For these studies, the specific challenge was that government spending, tax revenue, and the budget deficit can change due to automatic stabilizers that react to economic changes or to discretionary (often legislated) changes. Typically, transfer payments (e.g., unemployment compensation) increase and tax revenue decreases automatically when the economy enters a recession and, consequently, budget deficits increase. The reverse is true when the economy recovers.

[69] A narrative or action-based approach attempts to identify the fiscal policy action through the use of contemporaneously reported fiscal policy actions. See Kristie M. Engemann, Michael T. Owyang, and Sarah Zubairy, "A Primer on the Empirical Identification of Government Spending Shocks," Federal Reserve Bank of St. Louis, *Federal Reserve Bank of St. Louis Review*, March/April 2008, https://files.stlouisfed.org/files/htdocs/publications/review/08/03/Engemann.pdf for further detail.

[70] Continued refinements to this methodology have been made. See Alberto Alesina, Carlo A. Favero, and Francesco Giavazzi, "What Do We Know about the Effects of Austerity?," *AEA Papers and Proceedings*, vol. 108 (May 2018), pp. 524-530, for a more recent example.

are less likely to create recessions than are tax increases which has been pointed to as evidence that cutting spending in the United States will be expansionary rather than contractionary.[71] These findings are generally inconsistent with the mainstream view of fiscal policy, where short-term multipliers for spending decreases are negative and also tend to be larger in absolute value than those for tax cuts. A key limitation in applying these findings to an economy in recession is that the successful fiscal consolidations occurred in economies at or near full employment.[72]

- An International Monetary Fund (IMF) study identified the fiscal change using a narrative approach and found that fiscal consolidation had a contractionary effect on output.[73] The IMF paper also found that spending cuts are less contractionary than tax increases, but attributed this effect in part to the greater offsetting monetary stimulus. These results are consistent with the mainstream view of fiscal policy.

Several post-Great Recession studies have assessed the effects of fiscal consolidation on economies operating below full employment and have generally found that fiscal consolidation reduced economic growth. A study by Blanchard and Leigh concluded that in advanced economies fiscal consolidation is associated with lower economic growth, with the relationship being especially strong early in a recession.[74] A study by House, Proebsting, and Tesar found a similar contractionary effect of fiscal consolidation across 29 advanced economies.[75] A study by Gechert, Horn, and Paetz found that fiscal consolidation in the EU shortly after the Great Recession was poorly timed and thus not only deepened the crisis but also persisted after fiscal consolidation measures were relaxed.[76]

In sum, the empirical studies of fiscal consolidation consistently found that traditional fiscal stimulus (increasing spending and/or decreasing taxes) in an economy below full employment would lead to increased output, whereas austerity measures would reduce output.

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[71] See discussions of these arguments in Paul Krugman, "Contraction is Contractionary," *New York Times*, March 29, 2011, http://krugman.blogs.nytimes.com/2011/03/29/contraction-is-contractionary/. See also Tim Fernholz and Jim Tankersley, "GOP Prescription: Spending Cuts and Lower Wages Equal More Jobs," *National Journal*, March 25, 2011, http://www.nationaljournal.com/economy/gop-prescription-spending-cuts-and-lower-wages-equal-more-jobs-20110325; Testimony of Andrew Biggs in U.S. Congress, Committee on Ways and Means, *Hearing on Impediments to Job Creation*, 112th Cong., 1st sess., March 30, 2011, https://gop-waysandmeans.house.gov/UploadedFiles/Biggs_—_Ways_and_Means_Testimony.pdf.

[72] CRS Report R41849, *Can Contractionary Fiscal Policy Be Expansionary?*, by Jane G. Gravelle and Thomas L. Hungerford.

[73] International Monetary Fund, "Will It Hurt? Macroeconomic Effects of Fiscal Consolidation," in *World Economic Outlook* (Washington: International Monetary Fund, 2010), pp. 93-124, https://www.elibrary.imf.org/view/IMF081/10685-9781589069473/10685-9781589069473/ch03.xml?redirect=true.

[74] Olivier J. Blanchard and Daniel Leigh, "Effects of Fiscal Policy in Deep Recessions: Simple and Hopefully Credible Empirical Evidence," *American Economic Review: Papers & Proceedings*, vol. 103, no. 3 (May 2013), pp. 117-120.

[75] Christopher L. House, Christian Proebsting, and Linda L. Tesar, *Austerity in the Aftermath of the Great Recession*, National Bureau of Economic Research, Working Paper no. 23147, February 2017, https://www.nber.org/papers/w23147.pdf.

[76] Sebastian Gechert, Gustav Horn, and Christoph Paetz, "Long-term Effects of Fiscal Stimulus and Austerity in Europe," *Oxford Bulletin of Economics and Statistics*, vol. 81, no. 3 (June 2019), pp. 647-666.

## Fiscal Policy Stimulus Alternatives and Multipliers

As previously discussed, the amount of stimulus that can be generated by a given policy proposal depends on the share of the spending or tax cut that is initially spent and can be summarized in a multiplier.[77] The multipliers discussed below refer to a variety of measures that were considered in the Great Recession or are being discussed in the context of the pandemic-related contraction. They include increased spending, transfers to states, direct payments to individuals (i.e., "stimulus checks"), payments to individuals that are proportional to earnings with a cap (such as the Making Work Pay credit enacted in 2009), payroll tax holidays, income tax cuts, and a variety of business tax cuts.

### Relative Sizes of Multipliers[78]

Much of the research suggests that the largest multipliers are associated with direct federal spending. Larger multipliers are also associated with transfers to state and local governments, which are likely to spend funds in a recession because they have lost part of their revenue base, as well as direct transfers to low-income individuals or those in reduced circumstances (such as the unemployed) because these individuals are likely to spend most of any additional income. For example, CBO estimated that, by the first quarter of 2012, the multipliers for provisions enacted in 2009 were 1.5 for federal purchases, 1.3 for spending on state and local infrastructure, 1.25 for transfers to individuals, 1.15 for unemployment benefits, and 1.1 for other state and local transfers.

Tax cuts for individuals tend to have smaller multipliers, depending on where individuals are in the income distribution. Economists have long been concerned that temporary tax cuts (compared to permanent ones) have smaller effects on spending because they are seen as one-time benefits to spread over a longer period. However, if individuals are generally liquidity constrained (would like to spend more than they earn but do not have access to borrowing), they will largely spend what they receive (and thus have no savings). Lower- and middle-income taxpayers are likely to be in these circumstances and for a variety of other reasons are likely to spend a larger share of any tax cut.[79] For example, for the same period of time, CBO found the refundable Making Work Pay tax credit (which was equal to a percentage of income up to a dollar limit rather than a flat dollar amount and was received per paycheck as reduced withholding), payroll tax reductions, and tax cuts for low- and middle-income taxpayers to have multipliers of 0.7 to 0.9, while tax cuts for high-income individuals had smaller multipliers of 0.35.

The lowest multipliers are generally associated with tax cuts for business. A business tax cut would increase demand if it leads to more investment. A corporate rate cut, which mostly benefits returns to investment already in place, has a relatively small effect on investment, and it may be difficult to stimulate investment given slack demand. CBO estimated corporate rate cuts to have a multiplier of 0.2. For a tax cut associated with investment, the multiplier should be larger, and CBO estimated the multiplier for an investment subsidy (expensing or bonus depreciation, which

[77] Lists of estimated multipliers for a variety of policies referred to in this section by the Congressional Budget Office and a private forecaster, Moody's Analytics, can be found in CRS Report R45780, *Fiscal Policy Considerations for the Next Recession*, by Mark P. Keightley; CRS Report R42700, *The "Fiscal Cliff": Macroeconomic Consequences of Tax Increases and Spending Cuts*, by Jane G. Gravelle; and CRS Report R41849, *Can Contractionary Fiscal Policy Be Expansionary?*, by Jane G. Gravelle and Thomas L. Hungerford.

[78] Ibid.

[79] See the discussion in CRS Report RS21126, *Tax Cuts and Economic Stimulus: How Effective Are the Alternatives?*, by Jane G. Gravelle.

allows part or all of an asset's cost to be deducted immediately rather than spread over the life of the asset) to be 0.6.

### Other Concerns About the Effectiveness of Alternative Policies

Several other issues with respect to tax cuts have been examined in some detail. During earlier recessions, economists were concerned with the possibility that one-time lump-sum payments would be less effective than tax cuts that show up in withholding and are spread out over paychecks because lump-sum payments would be perceived as a one-time windfall more likely to be saved. Extensive studies of these payments have suggested that their lump-sum nature is not a serious concern.[80]

There is, however, a concern that the direct payments during the recent COVID-19-related contraction might have been less effective because demand was constrained by concerns about health and the restrictions (stay-at-home orders and shutdowns), especially in light of the very high savings rate in April. However, studies cited above indicated that much of these payments were spent. The direct payments may also fund pent-up demand once consumers become more confident and restrictions ease.

Theory also suggests some circumstances where a temporary tax cut is more effective than a permanent one, such as a sales tax holiday or a temporary investment subsidy. Sales tax holidays, although discussed in the past, are probably too challenging for the federal government to adopt because sales taxes are imposed by the states (requiring an agreement for a reimbursement). Expensing for equipment as a stimulus is no longer possible because equipment is already expensed through 2025 under the 2017 tax cut, popularly known as the Tax Cuts and Jobs Act (P.L. 115-97). It would be possible, however, to devise additional subsidies, such as investment credits or more than 100% depreciation deductions, or to extend subsidies to investment in structures. Investment subsidies would also have the effect of increasing the capital stock at the same time as they increase demand. Studies of past bonus depreciation provisions have, however, found bonus depreciation to be relatively ineffective.[81]

Another issue with respect to federal spending is lags in infrastructure spending. Spending on infrastructure serves two goals: in addition to stimulating demand, it also the increases the stock of public capital and increases long-run productivity. Spending on infrastructure is subject to lags compared to some other types of spending,[82] although such lags may not be an issue in the current crisis, because there may be a delay in the time when traditional stimulus is needed. Thus, infrastructure spending might be appropriated now to provide planning time, with the actual spending delayed.

## Long-Term Issues: Addressing the Federal Debt

Fiscal policy measures to provide relief and stimulus often lead to an increased debt. Hence, eventually, after the economy recovers, a substantially increased debt may turn Congress's focus to deficit reduction, which may include raising taxes and/or reducing spending. During the previous recession, expansionary policy was ended while the economy was still below full

[80] Ibid.

[81] See CRS Report R43432, *Bonus Depreciation: Economic and Budgetary Issues*, by Jane G. Gravelle.

[82] See CRS Report R46343, *Transportation Infrastructure Investment as Economic Stimulus: Lessons from the American Recovery and Reinvestment Act of 2009*, by William J. Mallett.

employment, in part due to the influence of a theory referred to as "austerity." As noted earlier, some view this reversal as having been premature, characterizing it as one of the most significant fiscal policy missteps in many years.[83]

Although there is a general consensus among economists that it is premature to address the debt given the severity of the current contraction, it may be useful to consider the options available when the economy returns to full employment. Moreover, mainstream economic theory points to the importance of addressing an unsustainable debt as soon as economic conditions permit.[84]

## The Debt Outlook and the Pandemic's Effect

Even before the COVID-19 pandemic, the United States was experiencing an unsustainable growth in debt, which reflected, under current policies, a growth in mandatory programs, mainly Social Security and Medicare, without an accompanying growth in revenues. According to CBO, the debt held by the public at the end of FY2019 (the relevant measure for considering the debt burden) was $16.8 trillion, 79% of GDP, and projected to rise to 98% by 2030.[85] This debt level was the highest since World War II (debt as a percentage of GDP peaked at 106% in 1946). It declined, reaching 23% in 1974, then began rising in the 1980s, reaching 35% in 2007. The debt relative to GDP increased substantially during the Great Recession and its recovery, reaching 70% by 2012. Rather than declining as the economy returned to full employment, it continued to rise.

The current recession's economic effects, including discretionary spending and the automatic revenue declines and spending increases that accompany a recession, are projected to increase the debt to 108% of GDP by the end of 2021.[86] The Committee for a Responsible Federal Government (CRFG) projects the debt growing to 118% of GDP by 2030, 159% by 2040, and 220% by 2050.[87] The pandemic's economic effects bumped up the debt, and it is projected to continue on its upward (albeit higher) trajectory. In addition to exacerbating the debt, the economic contraction will mean a longer period, perhaps of years, before the debt can be addressed through increases in revenues and/or reductions in spending, requiring extensive changes to stabilize the debt.

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[83] See Testimony of Douglas Elmendorf, in U.S. Congress, House Budget Committee, *Addressing the Economic Impacts of COVID-19: Views from Two Former CBO Directors*, 116th Cong., 2nd sess., June 3, 2020, https://budget.house.gov/legislation/hearings/addressing-economic-impacts-covid-19-views-two-former-cbo-directors. See also William G. Gale, "We Can Afford More Stimulus," Brookings Institution, April 30, 2020, https://www.brookings.edu/blog/up-front/2020/04/30/we-can-afford-more-stimulus/, which notes that the premature move away from stimulus was even more damaging to the UK and continental Europe. See also the review of the empirical evidence in this report ("Review of Empirical Research on Austerity Measures During the Great Recession").

[84] The debt can grow without increasing the ratio of debt to GDP as long as it rises at a rate less than or equal to GDP growth. For example, if the debt is 80% of GDP and the economy is growing at 1.6%, a deficit of 1.28% of GDP (1.6% of 80%) will maintain the debt to GDP ratio. The FY2019 deficit was 4.6% of GDP. See CBO data at https://www.cbo.gov/data/budget-economic-data#1. This traditional prescription has been questioned by adherents of a non-mainstream theory called "Modern Monetary Theory." For a discussion, see CRS Report R45976, *Deficit Financing, the Debt, and "Modern Monetary Theory"*, by Grant A. Driessen and Jane G. Gravelle.

[85] U.S. Congressional Budget Office, *Federal Debt: A Primer*, March 2020, https://www.cbo.gov/publication/56309.

[86] U.S. Congressional Budget Office, *CBO's Current Economic Projections and a Preliminary Look at Federal Deficits and Debt for 2020 and 2021*, A Presentation to the House Budget Committee by Philip Swagel, Director, April 28, 2020, https://www.cbo.gov/system/files/2020-04/56344-CBO-presentation.pdf.

[87] Committee for a Responsible Federal Budget, *Updated Budget Projections Show Fiscal Toll COVID-19 Pandemic*, June 24, 2020, http://www.crfb.org/papers/updated-budget-projections-show-fiscal-toll-covid-19-pandemic.

Eventually this debt may be addressed by either a reduction in mandatory spending, an increase in revenues, or both.[88]

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[88] Options for addressing the deficit are addressed in CRS Report R45717, *Addressing the Long-Run Deficit: A Comparison of Approaches*, by Jane G. Gravelle and Donald J. Marples.