



## What could additional fiscal policy do for the economy in the next three years?

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## Methodology

Calculating the effect of fiscal policy on GDP requires an assessment of how each policy increases spending by the recipient or otherwise directly affects GDP and an assessment of the fiscal multiplier. Unique to the COVID-19 pandemic, social distancing affects MPCs and fiscal multipliers. In this section, we describe the inputs in the analysis presented in, "What could additional fiscal policy do for the economy in the next three years?"

**Social Distancing:** In our assessment, MPCs and fiscal multipliers are affected by social distancing. For example, during periods of social distancing, households are more likely to postpone spending their rebate checks. Relatedly, fiscal multipliers are also expected to be attenuated during periods of social distancing. We follow CBO's projection that social distancing abates over the coming three quarters (Q4 2020 to Q3 2021).

**Fiscal Multipliers:** Estimates of the fiscal multiplier from the literature vary widely. We follow <u>CBO</u> in examining the economic effects of a range of multipliers and presenting the average of those paths. At the upper end of the range the fiscal multiplier is 2.5, affecting the level of GDP over four quarters when there is no social distancing. At the lower end of the range the multiplier is 0.5, affecting the level of GDP in one quarter when there is no social distancing. That range produces an average multiplier of 1.5. Those multipliers are higher than they would otherwise be because the economy is projected to be weak enough over the next several years that the Federal Reserve would not raise interest rates in response to stronger economic growth. The effect of social distancing through the middle of 2021 is estimated to attenuate the effects of the fiscal multiplier over three quarters. (In other words, the modest amount of social distancing that we project for the second quarter of 2021 implies that the fiscal multiplier from spending in the second quarter affects GDP through the end of the year.)

**Rebates to Households:** The MPCs used for rebates come out of a nascent literature expanding rebates authorized by the CARES Act. Speaking broadly, that literature found for each dollar of rebate received an increase in spending of roughly 30 cents to 50 cents over the following two weeks or so. In our assessment, households likely continued to spend out of their rebate payments over the following months. For the illustrative example here, we use an MPC of 0.7. This is in the middle of the 50 cents to 90 cents range found by <a href="Parker et al (2013)">Parker et al (2013)</a> for the MPCs out of the 2001 and 2008 tax rebates. Under normal conditions, half of that effect comes within two quarters and the remainder comes over the following six quarters. Social distancing slows down the near-term increase in spending for the MPCs out of the 2001 and 2008 tax rebates. Under normal conditions, half of that effect comes within two quarters and the remainder comes over the following six quarters. Social distancing slows down the near-term increase in spending.

Additional Unemployment Insurance Payments: We draw our estimated MPC out of additional unemployment insurance benefits from JPMorgan Chase Institute research. That research examined spending after unemployed workers received the additional \$600 unemployment insurance payment authorized by the CARES act. The subsequent increase in consumer spending was consistent with an MPC of approximately 0.7, moderately below the estimates from pre-pandemic literature that suggested an MPC out of UI benefits of closer to 0.9. Spending out of the additional \$600 may have been muted for three reasons. First, for many unemployed workers, the benefits constituted more than 100% of their previous wages, meaning that spending the entire benefit would require adjusting consumption patterns. Second, workers understood the extra \$600 was temporary. And, third, spending was muted in general because of heightened social distancing in the spring and early summer.

Given that the illustrative policy considered here incorporates a smaller additional UI payment, that it is assumed to last longer, and that social distancing is projected to diminish, we use an MPC more in line with pre-pandemic estimates of 0.9. Under normal conditions, two-thirds of that effect is estimated to occur within two quarters, with the remainder over the following year. Social distancing slows down the near-term increase in spending.

Aid to State and Local Governments: To date, states have <u>already</u> received almost \$250 billion in aid. Recent <u>estimates</u> suggest that, in 2020, this increase in aid is likely to be larger than the reduction in revenues associated with the recession, suggesting that states are likely to use some of the aid that has already been provided to avoid drawing down rainy day funds. Thus, we expect aid to state and local governments to have only modest effects on spending in the near term. However, with the economy expected to operate below potential for a number of years, state and local governments will face additional budget pressure in 2021 and 2022. In addition, to the degree that aid to state and local governments results in lower taxes instead of greater spending, households facing lower taxes would, in turn, be expected to increase their spending. Our estimate is that all the aid to state and local governments would be spent, albeit slowly over more than three years.

Fiscal Support to Small Businesses: Assessing the economic effects of grants to small businesses by examining the experience with the Paycheck Protection Program is complicated, because it is too soon to assess the success of the program at keeping businesses viable in the medium term. Research to date suggests that the grant money was not well targeted to struggling firms, and that it did not cause most of the businesses that received it to increase hiring. In that case, the PPP funds primarily increased business profit, which could have effects on GDP in the near term if it encouraged firms to increase their investment. Greater profits could also improve businesses' probability of survival in the medium term. For our analysis of the illustrative policy, we use an estimate of the direct effect on GDP – before taking into account the fiscal multiplier – that is similar to CBO's estimate of economic effects of the Paycheck Protection Program, which includes the effects described above. That approach results in a direct cumulative increase in GDP of roughly 25 cents over the course of 3 years for every dollar of grants to small businesses.

**Other policies:** Congress is considering aid to particularly hard-hit sectors of the economy. State and local governments need to maintain or increase already strained public health budgets to address the continued spreading of the virus, institutions of higher education are struggling with lower enrollment and lower tuition revenues, and airlines are suffering greatly reduced revenues as travel remains depressed. While it is difficult to know what the MPCs out of such aid might be, we assume the MPCs are half-way between the MPCs for general aid to state and local governments and the MPCs for grants to small businesses.

## References

- Auerbach, Alan J., William G. Gale, Byron Lutz, and Louise Sheiner. 2020. "Fiscal Effects of COVID-19." Brookings Papers on Economic Activity, Brookings Institution, Washington, DC.
- Baker, Scott R., R. A. Farrokhnia, Steffen Meyer, Michaela Pagel, and Constantine Yannelis. 2020.

  "Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payments."

  Working Paper 27097, National Bureau of Economic Research, Cambridge, MA.
- Barnow, Burt S., and Jeffrey Smith. 2015. "Employment and Training Programs." Working Paper 21659, National Bureau of Economic Research, Cambridge, MA.
- Center on Budget and Policy Priorities. 2019. "Policy Basics: The Earned Income Tax Credit." Last modified December 10, 2019. https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit.
- Center on Budget and Policy Priorities. 2020. "How Much Would Each State Receive Through the Coronavirus State Fiscal Relief Fund in the Heroes Act?" Last modified May 28, 2020. <a href="https://www.cbpp.org/research/state-budget-and-tax/how-much-would-each-state-receive-through-the-coronavirus-state-fiscal">https://www.cbpp.org/research/state-budget-and-tax/how-much-would-each-state-receive-through-the-coronavirus-state-fiscal</a>.
- Coibion, Olivier, Yuriy Gorodnichenko, and Michael Weber. 2020. "How Did U.S. Consumers Use Their Stimulus Payments?" Working Paper 27693, National Bureau of Economic Research, Cambridge, MA.
- Congressional Budget Office (CBO). 2014. "How CBO Analyzes the Effects of Changes in Federal Fiscal Policies on the Economy." Congressional Budget Office, Washington, DC.
- ---. 2020a. "The Budget and Economic Outlook: 2020 to 2030." Congressional Budget Office, Washington, DC.
- ---. 2020b. "An Update to the Economic Outlook: 2020 to 2030." Congressional Budget Office, Washington, DC.
- ---. 2020c. "The Effects of Pandemic-Related Legislation on Output." Congressional Budget Office, Washington, DC.
- J. P. Morgan. 2020. "A Breakdown of the CARES Act." Last modified April 14, 2020. https://www.jpmorgan.com/insights/research/cares-act.
- J.P. Morgan Chase Institute. 2020. "Consumption Effects of Unemployment Insurance during the COVID-19 Pandemic." Last modified July 2020. https://institute.jpmorganchase.com/institute/research/labor-markets/unemploymentinsurance-covid19-pandemic.
- Karger, Ezra and Aastha Rajan. 2020. "Heterogeneity in the Marginal Propensity to Consume: Evidence from Covid-19 Stimulus Payments (REVISED October 2020)." Working Paper 2020-15, Federal Reserve Bank of Chicago, Chicago, IL.
- National Public Radio (NPR). 2020. "What's Inside the Senate's \$2 Trillion Coronavirus Aid Package." Last modified March 26, 2020. <a href="https://www.npr.org/2020/03/26/821457551/whats-inside-the-senate-s-2-trillion-coronavirus-aid-package">https://www.npr.org/2020/03/26/821457551/whats-inside-the-senate-s-2-trillion-coronavirus-aid-package</a>.
- Parker, J.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): 2530-2553.

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