Abstract

This paper studies the impulse responses of output and private consumption to the COVID-19 stimulus checks in the U.S. I employ theoretical and empirical approaches to calculate the orthogonalized impulse response functions (OIRFs) of output and private consumption to a government consumption shock during the pandemic recession.

The results are consistent with government spending shock stylized facts: (1) output and private consumption increased on impact to a government consumption shock during the pandemic recession; (2) government consumption and private consumption were complementary during the COVID-19 pandemic.

The on-impact responses of output and private consumption to the stimulus packages were lower during the pandemic than those during past recessionary periods in the U.S. The low marginal propensity to consume during the COVID-19 pandemic induced less significant output and private consumption responses.

Why Is My Research Important?

A lack of consensus in analyzing the effects of the stimulus packages on the key macroeconomic variables during the COVID-19 pandemic

My research addresses these questions:
1. How do output and private consumption respond to the stimulus packages during the pandemic recession?
2. Is there any difference in output and private consumption's responses during the pandemic recession and those during other recessionary periods in the U.S. if so, what are the factors that induce such differences?

What Happened In The U.S. During The Pandemic Recession

Output dropped by 10.12% from Q4-2019 to Q2-2020 (Federal Reserve Bank of St. Louis (FRED)).

The U.S. experienced an extremely low marginal propensity to consume (MPC) during the pandemic.

Unlike previous demand-driven recessionary periods, the COVID-19 pandemic adversely affects the aggregate demand and the supply side in the U.S.

During the pandemic recession, the U.S. experienced the highest unemployment rate in the last decades.

Lockdowns imposed to prevent the spread of COVID-19 have long-lasting effects on the unemployment level in the U.S.

Labor demand decreased during the COVID-19 pandemic due to lockdown policies and an emerging trend toward teleworking.

Teleworking has adversely affected low-wage and young workers.

Auerbach et al. (2021) suggest that the effect of the COVID-19 stimulus packages on output and private consumption can be low.

Methodology

Theoretical Results

I employ a theoretical and an empirical approach to study the short-run dynamic effects of a government consumption shock on U.S. economic activities during the pandemic recession.

**Theoretical approach**: I use a dynamic stochastic general equilibrium (DSGE) model to run a quantitative simulation.

**Empirical approach**: I use a structural vector autoregressive (SVAR) model and U.S. macroaggregates data from Q1:1995 to Q4:2021 (retrieved from FRED).

Empirical Results

Output and private consumption increase on impact. Private investment decreases on impact.

Comparing My Theoretical and Empirical Responses

I find that:
**Theoretical results overstate empirical results.**

The empirical response of output and private consumption could be lower during the pandemic recession than those during pre-pandemic periods.

Estimated Results

Output and private consumption increased on impact to the COVID-19 stimulus packages.

The responses of output and private consumption are lower during the COVID-19 recession than those during other recessionary periods. Such lower responses are induced by a low MPC during the pandemic.

Key Takeaways

1. Output and private consumption increased on impact to the COVID-19 stimulus packages.
2. The responses of output and private consumption are lower during the COVID-19 recession than those during other recessionary periods. Such lower responses are induced by a low MPC during the pandemic.
3. My results indicate that the effectiveness of a stimulus package depends on the nature of an economic downturn.

Normative Implication: policy makers should consider carefully the characteristics of an economic downturn before deciding on how large the stimulus packages should be and whether an increase in government consumption or government investment is necessary.