Undergraduate Research Fellowship Working Paper Series

Title:

COVID-19's Impact on the U.S. Economy and the Government's Policy Response

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ABSTRACT

This research will examine how the United States has been affected by the COVID-19 pandemic from a macroeconomic perspective and the government's policy response undertaken to mitigate the damage. We will attempt to evaluate the effectiveness of some of the federal government and the Federal Reserve's policy decisions. At the beginning of the pandemic, the economy shut down, having a daunting effect on Gross Domestic Product (GDP). In addition, unemployment skyrocketed as people left the workforce and delayed returning. Data for this research has been gathered from the Congressional Budget Office (CBO), St. Louis and Dallas Federal Reserve, the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA).

Gross Domestic Product

As defined by the Bureau of Economic Analysis (BEA), Gross Domestic Product (GDP) is a measure of economic output. It reports the total market value of all final goods and services produced within a country over a specific period. A change in the real GDP is the most widely accepted indicator or measure of the nation's overall economic health. GDP cannot, of course, address every aspect of national economic wellbeing. For example, GDP increased 33.8% in the third quarter of 2020, after a fall of 31.2% in the previous quarter, but the economy was dealing with the impact of the pandemic. As a result of the shutdown during the pandemic, the economy shrank 19.2 percent in 2020 from its 2019 fourth quarter high (Person & Mutikani, 2021). The rate of recovery, as the economy gradually reopened and rolled back Covid restrictions, is equally striking. While it was a good sign for the economy, the United States still had a long way to go in terms of confronting the ravages of the Covid-19 pandemic (Person & Mutikani, 2021).

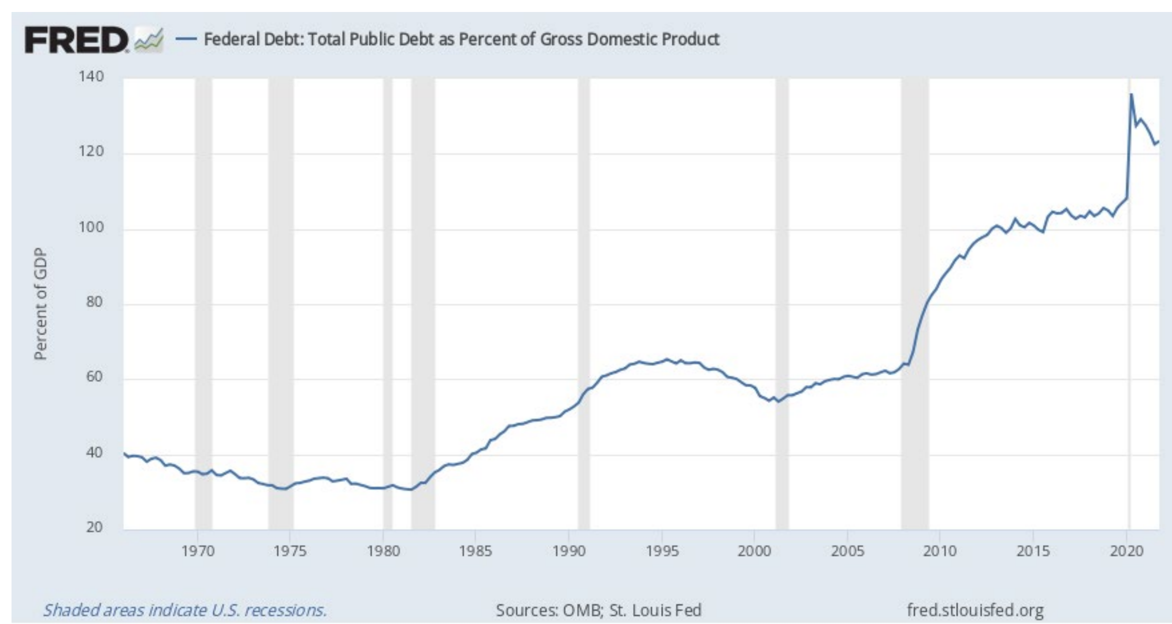
The mandatory shutdowns of businesses during the height of the pandemic left the United States with an estimated 21 million jobs lost and reduced aggregate demand which left the private sector stagnant. Retail sales declined. 8.7 percent, the largest month-to-month decrease since the bureau began recording the data (Bauer et al.). Economic activity was able to resume thanks to vaccinations, stimulus packages, and basic monetary policy. By the end of 2020, the economy still shrank 3.4 percent, the largest drop in GDP since 1946, a year after World War II ended (Person & Mutikani, 2021).

Debt-to-GDP ratio

Figure 1 shows the U.S. public debt to GDP ratio from 1965 to 2021. In the fourth quarter of 2019, the last full quarter before the economy was shutdown, the public debt was around

108% of GDP. In the second quarter of 2020 the debt jumped to 134% of GDP but has since declined to about 123% in the fourth quarter of 2021.

Figure 1



While the debt to GDP ratio reached 119% in 1946 (a year after the United States exited World War II), the current high debt to GDP ratio is of concern to economists because other factors, such as an extension of 2017 tax cuts and major demographic shifts, have some economists projecting that the debt could increase to 222% of GDP by 2050 (Auerbach et al., 2021). In the short term, the fiscal spending, and the spike in debt to GDP might be viewed as necessary and inevitable to rescue the economy from the sudden economic shock and social trauma of the pandemic, as the need for relief to individual families and businesses became evident. Nevertheless, the public debt should be further decreased in the coming years to avoid a potential future fiscal crisis and to be prepared for the next pandemic-like crisis. Unfortunately, recovery and growth of the nation's economy is not projected to be as strong as in the postwar

period, even with historically low-interest rates arising from a more active Federal Reserve and complex Federal Reserve balance sheet, which will be discussed below. One possible way to reduce the deficit would be to increase taxes, but this has been historically unpopular politically and can backfire economically if it leads to a slowdown in economic activity.

The Federal Reserve's Response to COVID-19

In times of nationwide panic, bank runs can occur in which a large majority of depositors withdraw cash emptying banks of funds, a sum which banks do not hold given the fractional reserve banking system of most modern economies. Fortunately, most modern economies have government backed bank deposit insurance, so that bank runs no longer occur in modern economies. Nevertheless, the natural human nature desire to hold liquidity during uncertain times is still with us. At the beginning of the pandemic, the economy shifted its focus towards a desire to hold liquidity, which significantly interrupted financial markets. This triggered various responses from the Federal Reserve to intervene and keep economic damage to a minimum. One way the Fed responded was by lending to large financial institutions that are major "market-makers" in the buying, selling, and holding of major financial assets. Using a program called the Primary Dealer Credit Facility (PDCF), financial institutions presented the Fed with diversified securities as collateral, such as municipal bonds, corporate bonds, and commercial paper in exchange for credit. During this process, the Fed offered low-interest loans for up to 90 days to 24 primary dealers (Cheng et al.). The main objective was to support financial institutions in maintaining a smoothly operating credit market during the pandemic. Commercial institutions and consumers alike were leaning towards avoiding risky investments and hoarding cash, which caused primary dealers to run into the problem of financing an increasing inventory of securities.

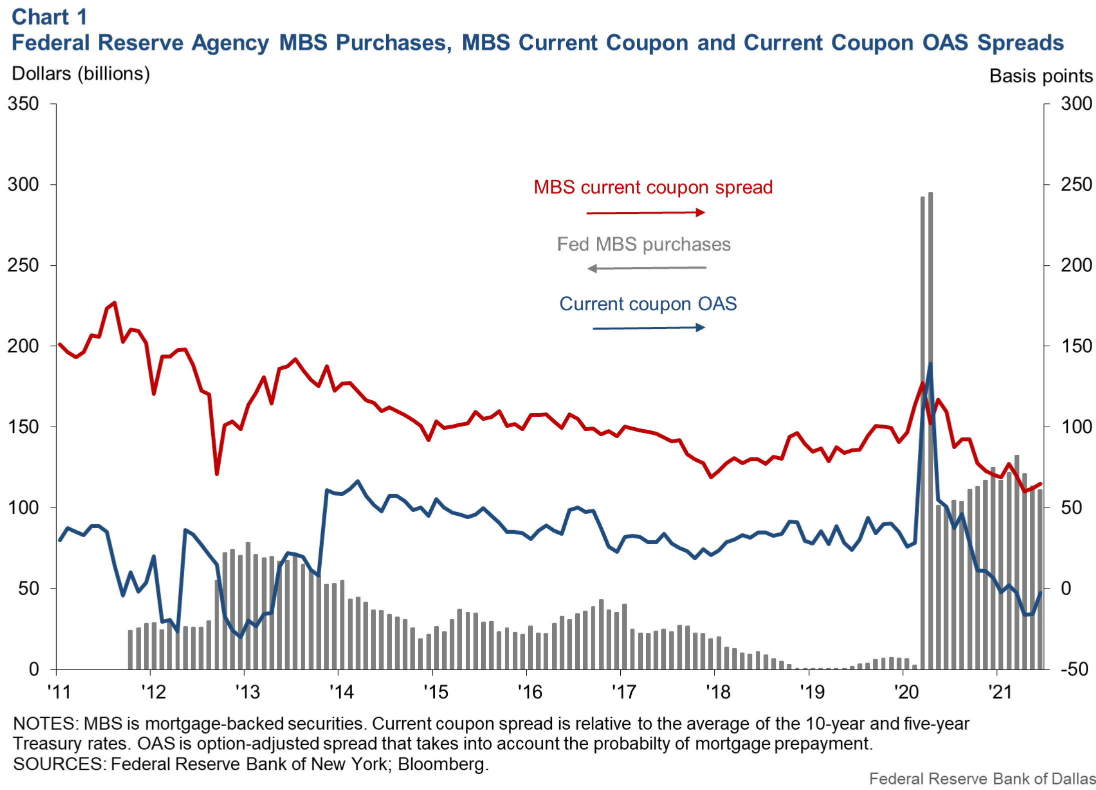
In the wake of economic damage, credit is king, and the Fed stepped in to wear its temporary crown as the lender of last resort and aid credit markets flowing. At its peak in April 2020, the Fed had made about $35 billion in outstanding loans through the pandemic PDCF (Martin and McLaughlin, 2021).

Another response the Federal Reserve deployed to ease money markets was Quantitative Easing. On March 23rd, 2020, the Fed resumed purchasing substantial debt securities, a key instrument used during the Great Recession (Milstein & Wessel, 2021). The Fed's initial goal was to restore operations to the mortgage-backed securities market, which then changed to supporting the economy. In June 2020, the Fed began purchasing at least $80 billion a month in treasuries and $40 billion in mortgage-backed securities. As the economy progressed in regaining stability, the Fed reduced its purchases by $10 billion in treasuries and $5 billion in mortgage-backed securities in November 2021. At an ensuing meeting in December 2021, the Fed announced a further reduction of its purchases by $20 billion in treasuries and $10 billion in mortgage-backed securities (Milstein & Wessel, 2021) We can see in Figure 2, the brief increase in mortgage-backed security purchases, that soon tapered off by June of 2021.

Short-term solutions often cause long-term problems. For the Federal Reserve, this adage translates to the problem of moral hazard when they bail out financial institutions with policies such as the relaxing of regulatory requirements and extensions of credit during economic downturns. If we examine the Great Recession in detail, discretionary monetary policy, and low interest rates were potential causes (Taylor, 2009). Furthermore, federal regulatory policies encouraged private-sector lenders to make dicey investments in the affordable housing market. One example of this being the inactions of regulators for Fannie Mae and Freddie Mac to disapprove subprime rate mortgages for unqualified candidates (Guynn, 2010). These financial

imbalances are not only unique to the United States economy; worldwide examples also include catastrophic financial imbalances in Ireland in 2007, Portugal in 2005, Spain in 2007, and Greece in 2007 after easing restrictions due to easy money by the European Central Bank and lax financial restrictions by the European Union (Ahrend, 2010).

Figure 2



The Federal Reserve has followed a similar decision by eliminating the reserve requirement. In the process of relaxing restrictions, the Fed also encouraged commercial banks and other financial institutions to reach into capital and liquidity reserves to boost lending during the pandemic (Milstein & Wessel, 2021). Two precautionary measures took place to ensure banks did not take advantage of the toned-down regulations. First, the Fed restricted large bank share buybacks on March 15, 2020, and required "[t]he biggest U.S. banks… to put their capital

to use helping consumers and businesses struggling with the rapid economic slowdown…" (Benoit, 2020).

The second precaution, the more enforced and involuntary step, was The Federal Reserve's stress tests. A stress test helps to provide confidence that a bank could survive a severe economic downturn. If banks in general have positive stress tests, the banking system can be thought to be in decent shape to support the economy. Federal Reserve Vice-Chairman, Randal Quarles, has said, "Over the past year, the Federal Reserve has run three stress tests with several different hypothetical recessions, and all have confirmed that the banking system is` strongly positioned to support the ongoing recovery (Federal Reserve, 2021)." These tests evaluate, under hypothetical scenarios, the approximate losses, revenue, and capital that financial institutions would have after incurring significant losses.

A stress test simulation for 2021 assumed a global recession that damaged commercial real estate and corporate debt markets. As a result, the unemployment rate increased to 10.75 % during the year. Gross Domestic Product fell by 4% from the fourth quarter of 2020 through the third quarter of 2022, asset prices declined, including a 55% decline in equity prices (Board of Governors of the Federal Reserve, 2021). To recognize the importance of stress tests, one need only compare these hypothetical stress-test numbers to what happened due to the pandemic in 2020. As stated by The Bureau of Labor Statistics (BLS), the U.S. economy experienced "13% unemployment during the second quarter of the year." (Smith, 2021) Additionally, the Bureau of Economic Analysis cites that the GDP decreased at annual rate of 32.9% in the second quarter of 2020 as well (BEA, 2020). Stress tests are a barometer of how banks would hold up during an economic catastrophe. In the 2021 stress test, it was revealed that 23 of the largest banks would lose a total of $470 billion, with 34% of those losses coming from commercial real estate and

corporate loans. Despite that loss, the bank capital ratios would only decline by 10.6%, still leaving them with more than double the minimum reserve requirements (Federal Reserve, 2021).

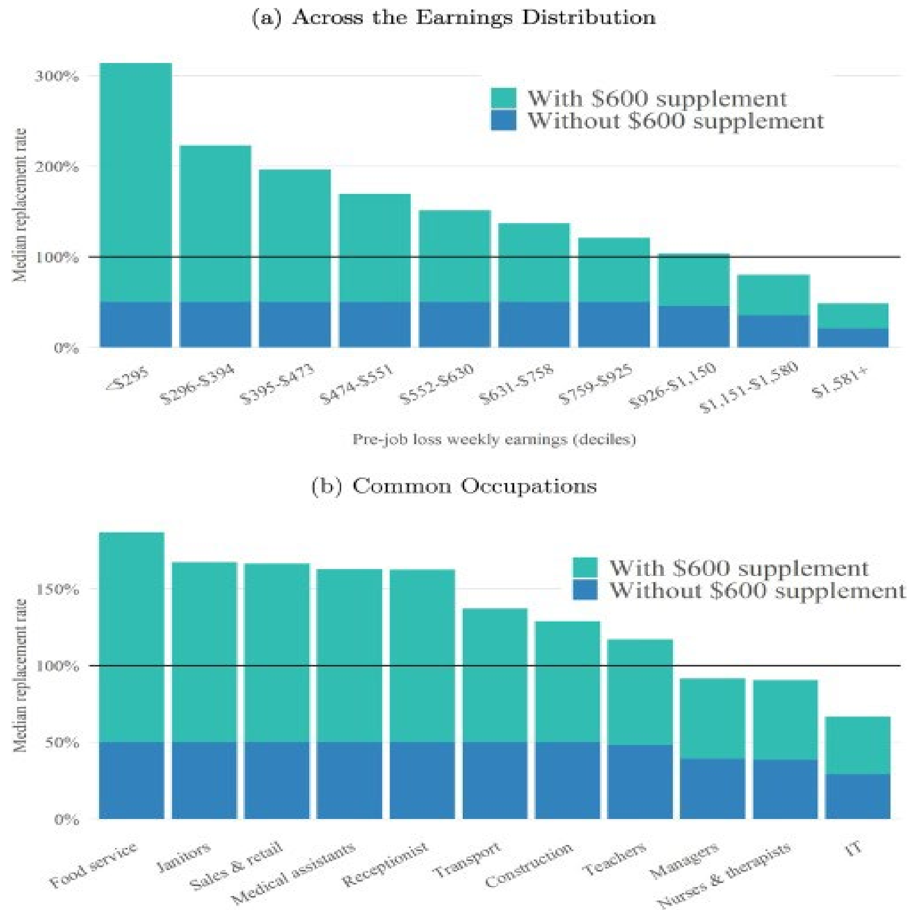
Labor Market

The labor force, as defined by the Bureau of Labor Statistics, is comprised of all people 16 years or older who are employed or unemployed. The unemployment rate is the percentage of the labor force that is unemployed. Unemployment insurance (UI) is a joint federal-state program that, although varies from state to state, provides temporary income, generally up to 26 weeks, to people who are unemployed. To be eligible one must have been previously employed for a specified period. Most states typically pay out 30% to 50% of the worker's previous earnings. As the pandemic began to spread across the country, the amount of unemployment insurance claims topped 33 million in the second quarter of 2020. This compares to a level of claims that is typically instead in the hundreds of thousands, with the previous high at 625,000 during the week of October 2, 1982. (Kovalski & Sheiner, 2022).

Congress responded to this surge in unemployment claims by creating the Federal Pandemic Unemployment Compensation (FPUC) program, an emergency program created to increase unemployment benefits by an additional $600 per week. As a result, some unemployed workers were earning more from UI during the pandemic than they had been earning while they were employed. In Figure 3, we can see the percentage of replacement earnings in some common occupations exceeded more than twice their previous earnings. For example, an unemployed worker who had been earning less than $295 per week at a business that closed because of the pandemic, could have received UI over 300% of their previous earnings! As the pandemic

slowly subsided this obviously created disincentive for some workers to return to their previous jobs.

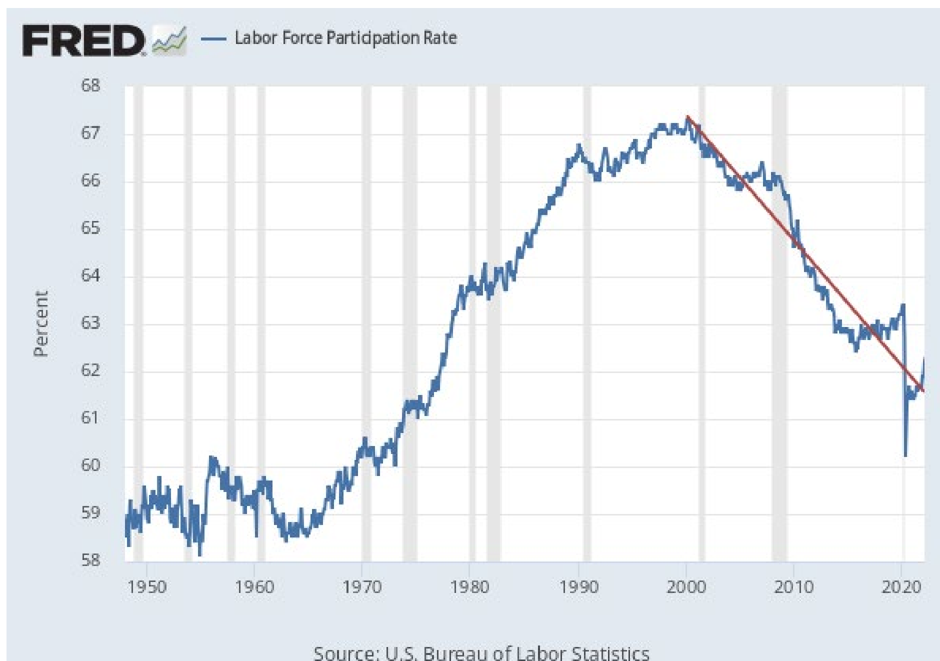
Figure 3



This leads to a need to examine a final important aspect of the labor market that seems to have been significantly affected by the pandemic, this is the Labor force participation rate. The labor force participation rate is the percentage of civilian noninstitutional population 16 years of age and older who are currently looking for work or are already employed. Since at least the year 2000, the labor force participation has been steadily declining as shown in Figure 4. This is in part due to aging Baby Boomers and an increase in the percentage of the population 65 and older

entering retirement. As we can see in the Figure 4, while the participation rate was certainly declining before the pandemic, COVID-19 decreased the rate dramatically further. It is likely that this was at least partly because of generous unemployment and other benefits that allowed people to stay home and still receive government checks to help them pay their bills.

Figure 4



Conclusion

While the U.S. economy, and other economies around the world, experienced the first global pandemic of the 21st century, both presidential administrations acted swiftly with fiscal and monetary tools to fight the economic effects of the pandemic. These efforts included shutting down the economy to prevent further transmission of the virus, and providing additional, temporary unemployment insurance. The government was able to provide aid when needed but at the cost of currently having the highest amount of public debt in history. The Federal Reserve, with much less bureaucracy and red tape, did a great job of keeping credit markets flowing as

they purchased billions in diversified securities from primary lenders such as JP Morgan Chase, Bank of America, and others, along with mortgage-backed securities purchase. As parts of the economy return to normal, the labor market is an area of concern to economists. With minimum wage remaining $7.25 since 2009, it has been worrisome to see the amount of people unwilling to return to the labor force as the economy reopened. Perhaps there has been a cultural shift or a demand for higher wages to participate in the labor market. In conclusion, the United States did an adequate job of handling the pandemic and has since recovered from most of the effects initially witnessed in early 2020.

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