

**Executive Office of the President
Office of Management and Budget**



**In consultation with the Council of Economic Advisers, the U.S. Department of
the Treasury, and the U.S. Small Business Administration**



The Economic Impact of Coronavirus Response Funds

Third Quarterly Report

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THE ECONOMIC IMPACT OF CORONAVIRUS RESPONSE FUNDS

THIRD QUARTERLY REPORT

EXECUTIVE SUMMARY

As part of the accountability and transparency provisions included in the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Office of Management and Budget (OMB), in consultation with the U.S. Department of the Treasury (Treasury), the Council of Economic Advisers (CEA), and the U.S. Small Business Administration (SBA), is charged with providing quarterly reports on the effects of certain Coronavirus response funds to the Congress and the public. This report will provide evidence regarding the effects of these funds, including a limited discussion of those stemming from funds in Division A of the CARES Act, through mid-January that are critical to accurately assessing the impact of the relief funds on employment, estimated economic growth, and other key economic indicators, including information about impacted industries.

It must be emphasized that evaluating the impact of Coronavirus response funds is fundamentally a difficult assessment due to the magnitude of the crisis. The results presented therefore remain preliminary and current as of mid-January.

This report estimates the impact of the Coronavirus response funds using high-frequency data sources.¹ The analysis indicates that the response funds have had a positive impact on the growth of real gross domestic product (GDP) and on employment in the months since the passage of the CARES Act, but that the pace of job gains has slowed sharply in recent months as the pandemic continues to weigh on the recovery, especially in face-to-face services.

Among the key findings of the study are:

- The CARES Act and other response funds helped improve economic growth and reduce unemployment. However, the pace is far below the rate necessary to pull us out of the pandemic jobs deficit in a timely way, with the jobs recovery in industries hardest hit by the pandemic having stalled as of January. The Congressional Budget Office (CBO) recently projected that without additional funding to support the Administration’s strategy to combat COVID-19 and more relief for the workers and families bearing the brunt of the public health and economic crises, the unemployment rate will remain above its pre-pandemic projections until 2024.
- We find that efforts to facilitate income replacement cushioned the shock to household incomes, as aggregate real disposable income did not decline between February 2020 and January 2021, largely due to expanded unemployment insurance (UI), Economic Impact Payments, and recovering non-transfer income. Forbearance measures further aided household balance sheets.

¹ Please note, many of the estimates provided in this report are originally available as a CEA report titled, “Evaluating the Effects of the Economic Response to COVID-19.” See the report for a more extensive analysis of CARES Act programs. The report is available here: <https://www.whitehouse.gov/wp-content/uploads/2020/08/Evaluating-the-Effects-of-the-Economic-Response-to-COVID-19.pdf>.

- The USDA's Coronavirus Food Assistance Program provided direct payments to suffering farmers that stabilized forecasts for net farm incomes.
- Measures designed to support small businesses and maintain employment helped to temporarily stabilize labor markets and facilitate recovery, though small business bankruptcy levels increased over the second half of 2020.

In sum, the CARES Act provided necessary funds for only a limited time and families and businesses are still struggling while the economy remains well below pre-pandemic levels.

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Introduction

The Coronavirus Aid, Relief, and Economic Security (CARES) Act, and related legislation, was enacted at the end of March 2020 to counteract the economic crisis resulting from the COVID-19 pandemic, which led to nearly 21 million jobs lost in April 2020 and a second-quarter contraction in real GDP of over 31 percent at an annual rate. This legislation aimed to help fight the pandemic, provide relief to businesses dealing with the temporary closing of their businesses, and provided security for households while employees face furloughs. Combined with monetary policy support, this legislation formed a necessary policy response to the economic damage resulting from the pandemic.

The economic recovery progressed through the second and third quarters of 2020. After the unemployment rate spiked to 14.8 percent in April, it fell every month through September until it reached 7.8 percent.² Nonfarm payrolls fell over by over 22 million from February to April, of which 51.5 percent was recovered through the end of the third quarter. By September, real retail sales were 4.4 percent above their February level.

Recent economic data, however, show the recovery slowed in the fourth quarter of 2020. The unemployment rate failed to continue its rapid descent and remained at 6.7 percent at the end of 2020. Nonfarm payroll employment only recovered another 4.1 percent of the 22 million drop and actually fell in December, the first decline since May. Real retail sales fell in each month of the fourth quarter.

At the end of December, the Congress passed roughly \$900 billion of relief legislation to extend several key CARES Act provisions and support vaccine production and distribution. January's data partially reflected this additional stimulus. The unemployment rate fell to 6.3 percent in January, though there was only a small increase in payroll employment. In particular, the industries hardest hit by the pandemic have still only recovered half of the jobs lost last spring. Real retail sales grew 5.0 percent in January after the Economic Impact Payments (EIP) from the December legislation began to be distributed. While the vaccination program is progressing, the virus continues to spread and variants continue to threaten progress in beating the pandemic.

As part of the accountability and transparency provisions included in the CARES Act, OMB, in consultation with CEA, Treasury, and SBA, is charged with providing to the Congress, and the public, quarterly reports on the effects of certain Coronavirus response funds, specifically "large covered funds."³ This report will provide estimates of the effects of certain Coronavirus response funds through mid-January, including a limited discussion of those falling in Division A of the CARES Act that are critical to accurately assessing the impact of the relief legislation on employment, estimated economic growth, and other key economic indicators, including information about impacted industries.

² While we cite official statistics here, the Bureau of Labor Statistics (BLS) clearly states that measurement of these statistics has been biased by their ability to conduct the survey during the pandemic, including a persistent misclassification of certain unemployed workers as employed.

³ CARES Act § 15011.

As we outlined in our first report, without direct evidence of what would have happened in the absence of the Coronavirus response funds, we cannot say with certainty the precise impact the funds had on the economy. Additionally, the difference between local responses and decisions by some states to maintain restrictions on some small businesses impacts the overall data for the Nation. Therefore, results presented in this paper should be regarded as preliminary and subject to substantial margins of error.

In this report, we find that the policy responses to the adverse shock of COVID-19 were necessary, but insufficient. They helped mitigate what was the largest macroeconomic contraction since the Great Depression, but our economy remains in significantly worse shape than prior to the pandemic. In particular, efforts to ensure income replacement and cost mitigation helped to cushion the shock to household incomes and thereby facilitate a stabilization and recovery in consumer spending, which alone constitutes 70 percent of the U.S. economy. With large parts of the relief funds supporting UI extensions and expansions, we assess that relief was targeted toward households that were more vulnerable to an adverse income shock. However, recent indicators suggest these households continue to need support. More than one in ten adults have experienced food insufficiency in early February, while one in five renters are still behind on their rent. Small business support measures designed to maintain employment played an important role in allowing firms to remain solvent, but small business bankruptcies have picked up over the last four months.

We begin by employing high-frequency economic data, as well as real-time forecasts, to quantify the magnitude of the economic disruption and situate it within its historical context, with comparisons to past economic and financial crises. We then proceed, in the next section, to analyze the effects of the Coronavirus response funds on output, unemployment and financial markets. Two more sections go on to describe how the Coronavirus response funds worked to attenuate some of the negative effects of the pandemic on households and small businesses.

This report is the third in a series that OMB will produce, in consultation with CEA, Treasury, and SBA, on the effect of Coronavirus response funds. Future reports will incorporate new analyses that become feasible with more macroeconomic indicators.

Evidence of the Effect on the Macroeconomy

Comparison to Prior Shocks

While the long-term effects of COVID-19 on the economy are uncertain and depend on how the virus progresses, the initial negative shock was unprecedented since the Great Depression. Due to their short reporting lag, initial claims for unemployment insurance (UI) provide timely information on how the COVID-19 pandemic and containment measures are affecting the labor market.⁴ In March, job losses occurred at a level not seen since the Great Depression, with weekly UI claims spiking from 282,000 the week ending March 14 to 6.9 million two weeks later. This rapid peak in UI claims dwarfs the Great

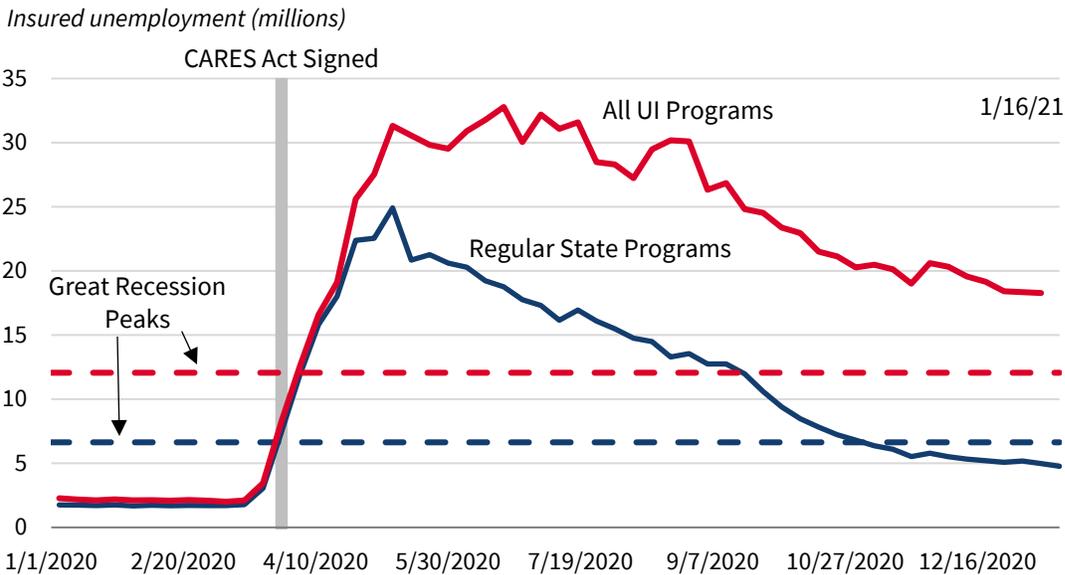
⁴ We recognize there are well-documented shortcomings with this data during the pandemic, as highlighted in a November 2020 GAO report. This includes a divergence between the number of claims and the number of individuals claiming benefits, and inconsistencies in state reporting frequencies which may have a significant impact on the changes in claims numbers from week to week.

Recession's peak. However, UI claims during the Great Recession rose much more gradually, taking more than a year after the recession began to peak and several years after to return to pre-crisis levels. During the pandemic, the total number of regular UI benefit weeks claimed peaked at 24.9 million on May 9, representing over 16 percent of the 155 million non-self-employed civilian labor force reported in February 2020, and has since fallen to just over five million, below their Great Recession peak (Figure 1). Some of these claims, however, have moved on to Pandemic Emergency Unemployment Compensation (PEUC) or Extended Benefits (EB), both of which provide additional weeks of compensation for unemployment insurance filers. The regular State program data also do not include individuals receiving assistance through Pandemic Unemployment Assistance (PUA) in the CARES Act. In total, there remain over 18 million weeks claimed in all UI programs, down from a peak in June 2020 of nearly 33 million but still well above the Great Recession peak.⁵ Although the unemployment rate reached 14.8 percent in April, the highest rate since official data were first collected in 1948, the unemployment rate declined to 13.3 percent in May despite expectations of an increase. Since May, the unemployment rate declined in every month through November, falling to 6.7 percent. The rate of improvement has slowed dramatically, with the unemployment rate falling just 0.2 percentage points from October to December. This pace is far below the rate necessary to pull us out of the pandemic jobs deficit – there are about 10 million fewer jobs now relative to February.

The unemployment rate fell 0.4 percentage point from December to January to 6.3 percent, but this was largely due to a slowed pace of labor force re-entry. Part of this slowdown is likely related to the reimplementations of some mobility restrictions, but part of this could reflect the slowdown in the recovery of temporary unemployment. In particular, we estimated that up to 75 percent of the increase in unemployment from February to August was likely due to temporary rather than permanent layoffs after incorporating workers who were counted as employed but not at work—indicating they may be on temporary layoff—and adding in the excess number of workers who are not in the labor force but want a job. As of January, we estimated that up to 32 percent of remaining unemployed workers are still on temporary layoff. Notably, this corresponds with higher levels of permanent unemployment, as there are now 4.3 million workers in January who lost their jobs and are not on temporary layoff, up from 2 million in February. Similarly, 4.0 million unemployed workers in January have been unemployed for 27 weeks or more, over 40 percent of all unemployed workers.

⁵ The U.S. Department of Labor has recognized reporting issues with the PUA program, which has also impacted the accuracy of regular UI claims data. Again, see the November 2020 GAO report for more details. We note here that recent data on layoffs in the Job Openings and Labor Turnover Survey (JOLTS) are now on par with pre-pandemic levels, though they have risen in the fourth quarter. Also, the 10.7 million unemployed workers in the December Employment Report from the BLS is in line with the measured level of insured unemployment in UI claims data that exclude PUA from late December.

Figure 1. Insured Unemployment by Week, 2020-21



Data on total economic output also reflect the enormous negative shock COVID-19 had on the economy. Second quarter GDP declined 31.4 percent (annualized rate), which followed the first quarter fall in GDP of 5.0 percent (annualized rate). While a rebound occurred in the third and fourth quarters, real GDP fell 3.5 percent from 2019 to 2020 – greater than the decline experienced in 2008 or 2009 at the onset of the Great Recession.

The COVID-19 pandemic and containment measures have dealt the economy a significant blow. Compared to other large U.S. recessions, the 3.5 percent decline is near the midpoint between the 8.6 percent decline in GDP at the onset of the Great Depression in 1930 and the more modest 0.1 percent decline experienced in 2008 at the onset of the Great Recession (Table 1).

Unlike during the Great Depression, however, GDP is presently projected to rebound the following year, with the Blue Chip panel of private forecasters projecting 4.9 percent growth in 2021. This level of rebound would imply that GDP would return to pre-COVID-19 levels by the middle of 2021. The estimate from the Organization for Economic Co-operation and Development (OECD) (3.2 percent) is much lower, but the OECD projection also does not incorporate the newest stimulus package. The February CBO projection of 4.6 percent and January IMF projection of 5.1 percent are in line with the Blue Chip projection, both of which incorporate the newest stimulus package. As a result, the level of GDP in 2021 would surpass pre-COVID-19 levels for all forecasts except OECD, which would not return to 2019 levels until 2022. The CBO projects weaker growth in the latter half of 2021, which – absent additional action – would prevent a return to the pre-pandemic path of potential real GDP until 2025. The Blue Chip projections, however, include additional stimulus on the same order of magnitude as the American Rescue Plan and return to the pre-pandemic path of potential real GDP by 2023.

Table 1. GDP Growth Impacts of Previous Shocks, 1919–2022

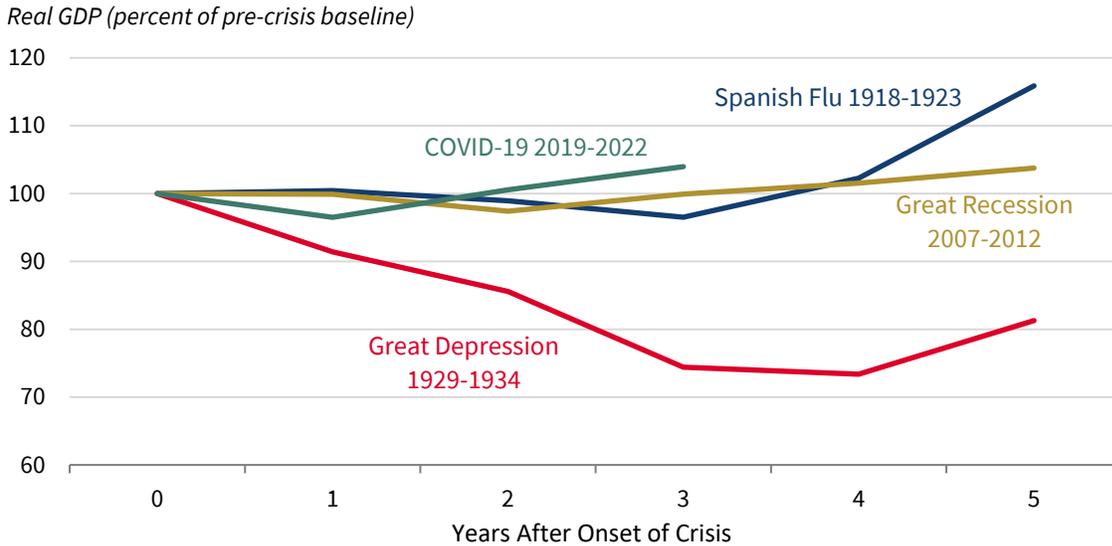
<i>Event</i>	<i>First year considered</i>	<i>Real GDP growth</i>		
		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
Spanish Flu	1919	0.4%	-1.5%	-2.4%
Great Depression	1930	-8.6%	-6.4%	-13.0%
Great Recession	2008	-0.1%	-2.5%	2.6%
COVID-19 (CBO February forecast)	2020	-3.4%	4.6%	2.9%
COVID-19 (Blue Chip February consensus forecast)	2020	-3.5%	4.9%	3.8%
COVID-19 (OECD December forecast)	2020	-3.7%	3.2%	3.5%
COVID-19 (IMF January forecast)	2020	-3.4%	5.1%	2.5%

Sources: FRED; OECD; IMF; HISTSTAT; CBO; Blue Chip; CEA calculations.

The recession induced by COVID-19 is fundamentally different from the Great Recession and the Great Depression because it had a non-economic cause. The closest epidemiological analogue, the 1918 Spanish Flu, had a much smaller effect on GDP, with growth rates of 0.4 percent and -1.5 percent in 1919 and 1920, respectively (Figure 2). Further comparisons to the Spanish Flu are complicated by the the context of World War I and the changes that the U.S. economy has undergone in the past century. For example, the increase in women’s labor force participation has increased the proportion of dual-earner households, which exacerbates the economic impact of small business closings and a lack of childcare. The composition of jobs in the economy has also shifted dramatically, away from goods-producing and towards service-sector jobs. This shift has meant that the disruption to non-essential businesses has had a much larger negative impact on the economy than the closing of retail during the Spanish Flu.

In terms of the public health response, the non-pharmaceutical interventions in 1918 and 1919 were in many ways similar to those of today. Action was primarily taken at a local rather than a national level, with cities as the primary actors. In an analysis of 43 cities’ responses, Markel et al. (2007) find that all cities adopted some form of intervention, including 79 percent that implemented concurrent school closures and bans on public gatherings. That combination of policies was in place for between one and 10 weeks with a median duration of four weeks, which is shorter on average than the duration of similar policies put in place for COVID-19. Such interventions were associated with reductions in excess deaths, with cities that implemented policies earlier and kept them in place longer experiencing fewer deaths.

Figure 2. GDP Recovery from Previous Crises



Source: FRED; HISTSTAT; Blue Chip; CEA calculations.

Note: COVID-19 projection is based on the January Blue Chip consensus forecast.

The preceding sections show that the immediate U.S. economic losses of COVID-19 were concentrated in the second quarter of 2020. One way that short-term damage could stretch into the longer term is if what began as a liquidity crisis becomes a solvency crisis for many U.S. businesses, resulting in waves of firm bankruptcies, a stubbornly higher level of unemployment, and, ultimately, a lower level of production. The initial and necessary Congressional response to provide liquidity to households and firms through the passage and implementation of the CARES Act was designed to address this risk, and evidence presented in this section suggests that it has mitigated some of the damage to GDP and ultimately the livelihoods of Americans. In December, the Congress acted to provide additional necessary liquidity for workers and small businesses.

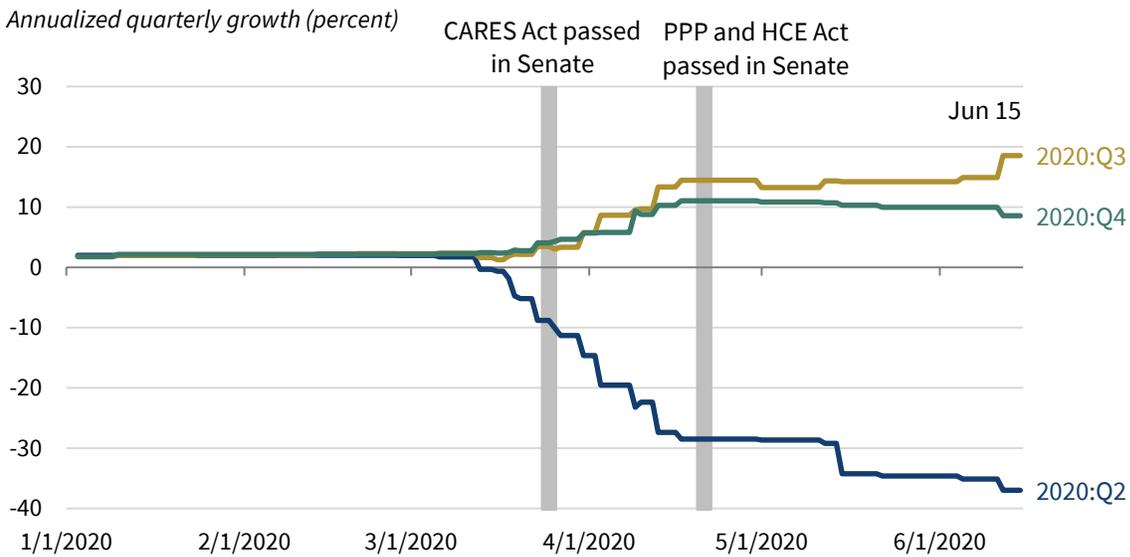
Impact on GDP

A growing economics literature is studying the impact of the COVID-19 pandemic on the U.S. economy. Some of this literature seeks to project the impact on 2020 GDP, in light of social distancing and other mitigation measures. Economic models include predictions for the impact on end-of-year GDP that range broadly depending on modeling assumptions. See, for example, Alvarez, Argente and Lippi (2020); Baker, Bloom, Davis and Terry (2020); and Eichenbaum, Rebelo, and Trabandt (2020). Eichenbaum, Rebelo, and Trabandt (2020) develop a model that predicts GDP losses of anywhere from 7 percent to 22 percent that increase with the severity of containment measures.

While the aforementioned academic studies did not incorporate the impact of the CARES Act in their projections, market forecasts do and are frequently revised to reflect changes in policies. As of mid-January, the consensus market forecast is more optimistic than the projections in those academic studies. The Wall Street Journal median consensus forecast (out of a sample of 60 economists) expects GDP to fall 2.5 percent for 2020, and the Blue Chip Consensus forecast projects -3.5 percent growth for 2020.

Figure 3 shows the weekly evolution of these market forecasts around the passage of Coronavirus relief legislation. The outlook for 2020:Q2 deteriorated throughout the spring, and forecasts were continually revised down after mid-March as social distancing practices became prevalent and as analysts took into account new information provided by high-frequency economic indicators pointing to the steeper depth of the downturn. On the other hand, market analysts continued to revise the forecasts for 2020:Q3, 2020:Q4 and 2021 upward, particularly after the passage of the CARES Act (Figures 3 and 4). A similar jump in 2021 forecasts occurred after the passage of the Appropriations Act at the end of December (Figure 4).

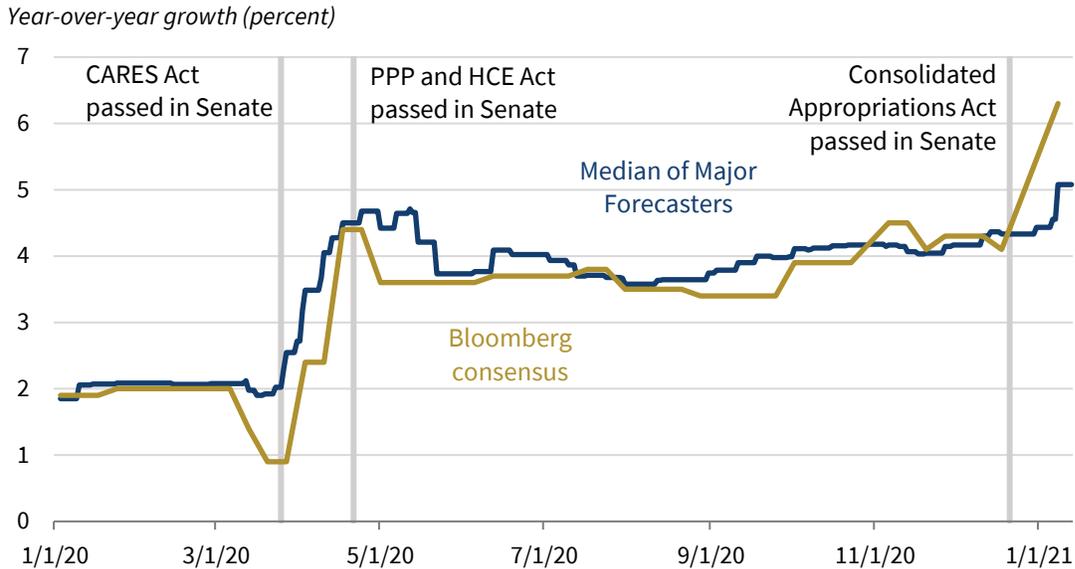
Figure 3. Evolution of Median Forecasts for 2020 Quarterly GDP



Source: Bloomberg.

Note: PPP and HCE Act = Paycheck Protection Program and Health Care Enhancement Act.

Figure 4. Evolution of Forecasts for GDP in 2021

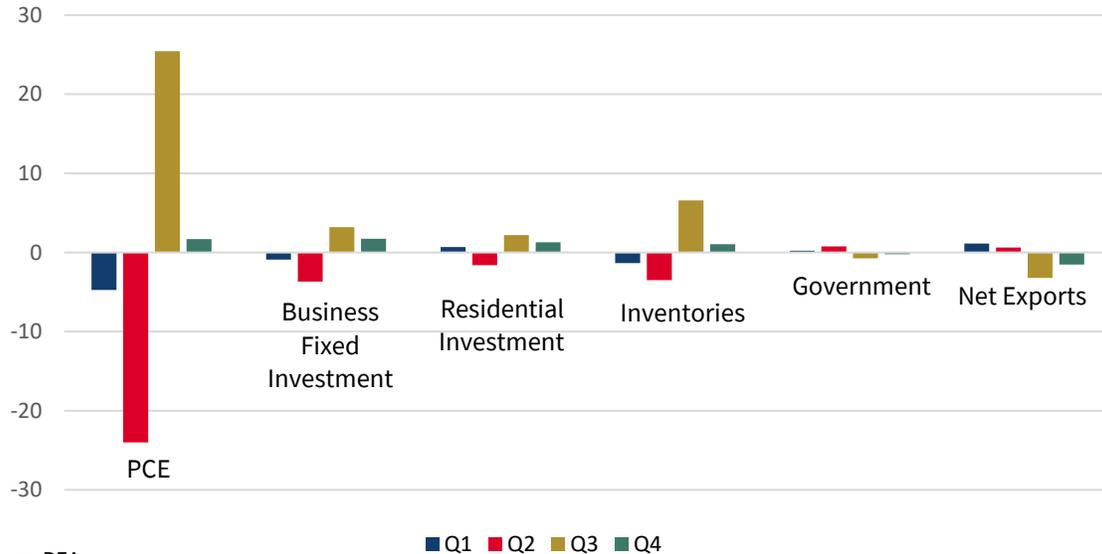


Many have asked how much worse the GDP outlook would be in the absence of the Coronavirus relief legislation. There are some outside estimates of the economic impact of the Coronavirus response legislation, but substantial economic uncertainty surrounds all current estimates. For example, the CBO produced its own estimate of the economic impact of pandemic-related legislation in September, estimating that second and third quarter GDP growth improved 11.6 and 13.1 percentage points while subsequent recovery in the fourth quarter of 2020 was estimated to be 7.2 percentage points slower. However, the CBO analysis relies on the use of fiscal multipliers for different parts of the relief legislation, which are uncertain in this unique macroeconomic environment.

A closer examination of the contributions to the percent change in real GDP shows that pandemic-induced mitigation strategies during the second quarter had the greatest impact on the largest component of real GDP, personal consumption expenditures (Figure 5). The impact of the Coronavirus response legislation can be seen in the rebound in personal consumption expenditures in the third quarter. American workers utilized the Economic Impact Payments and expanded unemployment insurance to bring about a large third-quarter increase in retail spending as the labor market recovered. Real durable goods purchases have increased dramatically after sharp declines in March and April, surpassing their level from February 2020. Spending on non-durable goods have also recovered past February levels after a less severe drop, though both slide slightly in November as the pandemic intensified. Similarly, retail spending slowed dramatically in the fourth quarter. Spending on services has yet to return to pre-pandemic levels, dragged down by lower spending on healthcare, transportation, recreation, and food and accommodation, all industries disproportionately impacted by the pandemic.

Figure 5. Contributions to Percent Change in Real GDP, 2020

Percentage points



Source: BEA.

Impact on Unemployment

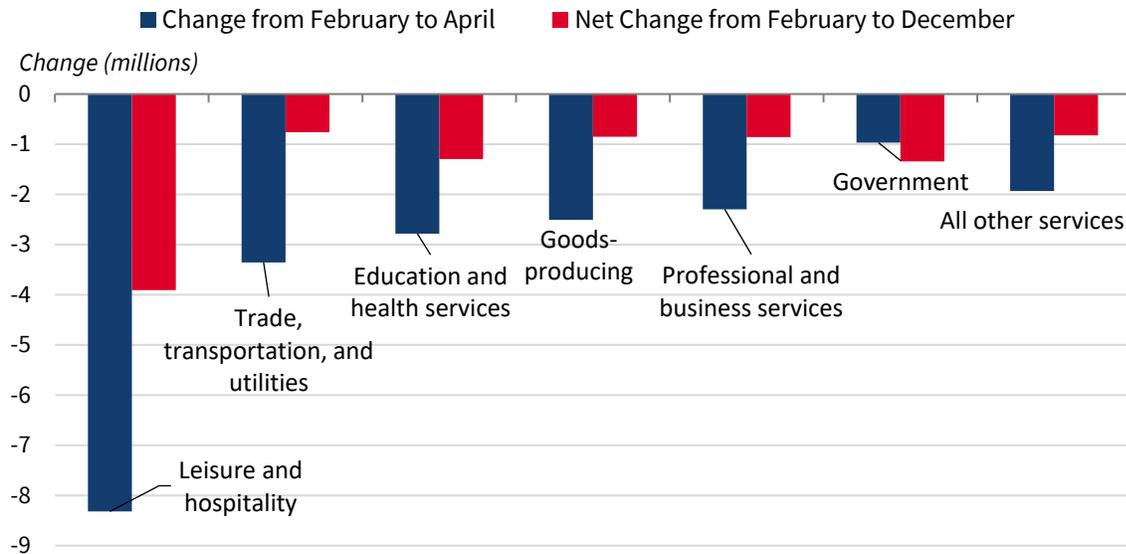
After March's jobs report showed evidence for a labor market collapse, the unemployment rate spiked to 14.8 percent in April. However, May's unemployment rate unexpectedly declined to 13.3 percent.⁶ This is consistent with the idea that the CARES Act helped workers stay connected to firms and helped those firms be in a position to hire workers back as the economy adopted social distancing precautions. In the first five months of recovery, 11.4 million jobs lost were regained, per the BLS' Current Employment Statistics. The pace of recovery slowed in the fourth quarter, with only an additional 850,000 jobs recovered over the last three months of the year, 680,000 of which were in October. January showed continued weakness in job recovery, adding just 49,000 jobs. This pace is far below the rate necessary to overcome the pandemic jobs deficit – with about 10 million fewer jobs now relative to February 2020. By the end of the third quarter, the unemployment rate reached 7.8 percent, and the unemployment rate has fallen to just 6.7 percent in December and 6.3 percent in January. As we have previously mentioned, though, BLS has acknowledged there are measurement issues in their household survey and there has been an uptick in workers leaving the labor force who have had their job search constrained by the pandemic.

Recent jobs reports also highlight the damage to all private industries. Over 8 million jobs in the leisure and hospitality industry were lost in March and April, with only half having been recovered from May to December (Figure 6). The same is true for the nearly 3 million jobs lost in the education and health services industries. These sectors continue to be hindered by the pandemic, and more and more of these jobs are

⁶ We believe the impact was actually even larger, when correcting for a misclassification of workers in the BLS reports. The decline from April to May would have been from 19.5 percent to 16.4 percent, a drop of 3.1 percentage points.

being permanently lost. The job losses in December and weak job recovery in January highlight the need for this continued support while the public health emergency continues.

Figure 6. Payroll Job Losses by Sector Since February 2020



Sources: Bureau of Labor Statistics; CEA calculations.

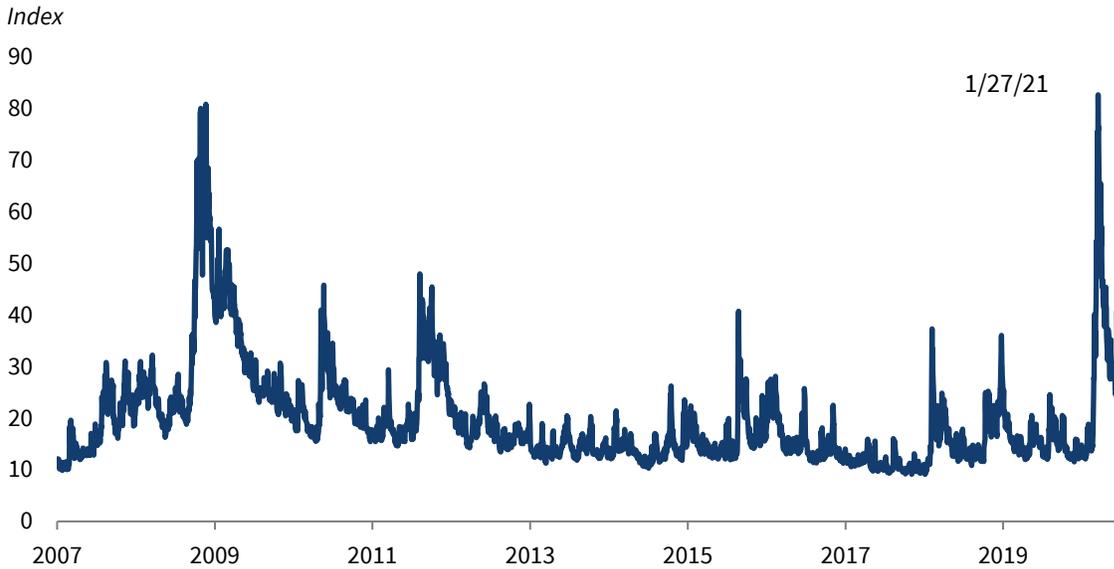
Note: All other services is the sum of the financial activities, information, and "other services" categories.

Impact on the Financial Sector

A variety of indicators of financial distress increased significantly early in the COVID-19 pandemic period but have since receded. Preliminary findings indicate the monetary and public policy responses have mitigated the epidemic’s impact on financial markets.

The VIX, an index of expected stock market volatility derived from options prices, spiked from 27 in late February to a peak of 83 on March 16 (Figure 7). It has fallen since then back to pre-pandemic levels (as of the end of December, the VIX was 23).

Figure 7. Market Volatility Index (VIX), 2007–21



Source: Wall Street Journal.

Similarly, corporate bond spreads such as the spread between Baa bonds relative to Treasury notes show a similar pattern peaking around March 23 and then receding (Figure 8).

Figure 8. Baa Corporate Bond and 10-Year Treasury Note Spread, 2006–21



Source: Moody's.

The trends in these indicators, and others, suggest that these programs have played a necessary role in easing market strain and ensuring access to liquidity for businesses, households, and communities.

The extraordinary Federal Reserve response to the COVID-19 pandemic attempted to improve liquidity and restore market function of the economy. The Federal Reserve, with the approval of and financial

support by Treasury, quickly announced plans for the Commercial Paper Funding Facility (CPFF), Money Market Mutual Fund Liquidity Facility (MMLF), the Primary Market Corporate Credit Facility (PMCCF), the Secondary Market Corporate Credit Facility (SMCCF), the Term Asset-backed Securities Loan Facility (TALF), the Municipal Liquidity Facility (MLF), and the Main Street Lending Program (MSLP). These emergency lending facilities were established under section 13(3) of the Federal Reserve Act and include equity or credit protection provided by Treasury to protect the Federal Reserve from losses. Treasury also authorized the creation of the Primary Dealer Credit Facility (PDCF) and Paycheck Protection Program Liquidity Facility (PPPLF). The CPFF, MMLF, and PDCF functioned as backstops for these critical short-term funding markets by providing liquidity for commercial paper issuers, market intermediaries, and buyers of money fund assets, reversing the fear-driven outflows that occurred in March. The PMCCF, SMCCF, TALF, PPPLF, MLF and MSLP aimed to support longer-term funding and credit markets, preventing otherwise-solvent borrowers from facing financing pressures because of a broader downturn in liquidity and thereby underpinning employment and the broader economy.

Evidence of the Effect on Households

To ensure sufficient liquidity for households in light of the crisis, the Congress put forward sources of cash support targeted at those who are the most vulnerable and those who lost their jobs because of the pandemic. The initial success of this approach is evident in the labor market. As of the time of writing of this report, the unemployment rate declined from a high of 14.8 percent in April to 6.7 percent in December, per the BLS. In parallel, there has been a continuing decline in the number of regular UI benefit weeks claimed, falling from 25.1 million during the week ending May 9 to 10.1 million the week ending January 16.⁷ We estimate the improvement in the unemployment rate from May to January was almost entirely due to some of those on temporary layoffs returning to work.⁸ However, the fourth quarter reversed that trend, with the number of unemployed on temporary leave being outpaced by the number not on temporary leave. Moreover, the January unemployment rate remains 2.8 percentage points above the rate in February 2020, before the pandemic. However, over this same time period, more than 4 million workers have dropped out of the labor force, disproportionately women.

The Congress provided additional benefits to Americans to protect against economic insecurity. Workers at firms with fewer than 500 employees (though firms who employ health care providers and emergency responders and those with fewer than 50 employees may exclude such employees) were provided expanded paid sick days and family and medical leave benefits so that they could take time off to quarantine due to the illness, look after those in their family who needed to quarantine, or care for

⁷ These totals reflect the sum of regular state-program insured employment, Pandemic Emergency Unemployment Compensation (PEUC), and Extended Benefits (EB). For the week ending January 16 total, a reporting lag requires PEUC and EB to be from the week ending January 9. These numbers do not include self-employed and gig-economy workers on the PUA program but align closely with the number of unemployed workers reported in the monthly BLS Employment Report. With the recent extension in PEUC eligibility, these figures should remain comparable over the coming months.

⁸ We estimate that 21.9 million temporary layoffs were reversed from April to January, after incorporating those workers who were classified by the BLS as *employed but not at work* who may have actually been on temporary layoff. The total number of unemployed fell 19.6 million over the same period, suggesting the addition of 2.3 million more permanent unemployed workers.

children whose childcare programs or schools were closed. In short, numerous aspects of the relief bills, particularly the CARES Act, were aimed at helping households cushion the economic impact of the pandemic. However, without additional relief, it could be years before the country fully recovers from the COVID-19 downturn.

Impact on Household Income

Key components of the CARES Act provided income directly to Americans. In June 2020, Parolin, Curran, and Wimer (2020) estimate that these CARES Act provisions could lower the poverty rate to 11.3 percent if households have high access to these benefits, below the 12.5 percent pre-crisis poverty rate and the 16.3 percent poverty rate projected in the absence of the CARES Act. By October 2020, Parolin et al. (2020) had found that the poverty rate increased by 1.7 percentage points to 16.7 percent from February to September. This spike was largest for Black and Hispanic individuals, as well as children. The expiration of EIP and UI benefit supplements drove the September poverty rate above pre-crisis levels.

Increased Aggregate Disposable Personal Income

Absent a strong policy response, the COVID-19 recession would have likely caused a dramatic reduction in disposable personal income as workers lost jobs and businesses shut down. The April unemployment rate was 14.8 percent, the highest it has been since the Great Depression, and the rate for May was 13.3 percent.⁹ In surveys, households reported high levels of concern about their financial security, with nearly half reporting significant losses of both income and wealth (Coibion, Gorodnichenko, and Weber 2020).

Yet, per data from the Bureau of Economic Analysis (BEA), aggregate real disposable personal income rose substantially in April after a large reduction in March and remained elevated above pre-pandemic levels from May through January. While employee compensation fell drastically in March and April, aggregate real disposable personal income rose due to the government transfers through the CARES Act. On May 8, 2020, Treasury and IRS announced that nearly 130 million Americans had received Economic Impact Payments, worth more than \$218 billion, in less than five weeks. In total, approximately 162 million Economic Impact Payments totaling about \$271 billion were delivered in round one, with more appropriated in late December.¹⁰

The expansions to the unemployment insurance program have also propped up incomes. As of mid-January, over \$423 billion has been received by households, \$77 billion of which has come since the start of the fourth quarter 2020. Outlays since October have been dominated by \$29 billion for PUA benefits for self-employed and gig-economy workers, \$23 billion for PEUC benefit extensions for workers who have exhausted their regular State benefits, and \$18 billion in Federal Pandemic Unemployment Compensation (FPUC) provided through an additional \$300 in weekly benefits that was added in the Appropriations Act in December 2020. Recent research has found no evidence that these funds discourage employment. For example, Altonji et al. (2020) found that workers who experience larger increases in UI generosity did not

⁹ Some estimates put the rate at higher than the official U-3 rate. See, for example, Fairlie, Couch, and Xu (2020).

¹⁰ See <https://www.irs.gov/statistics/soi-tax-stats-coronavirus-aid-relief-and-economic-security-act-cares-act-statistics>.

experience large declines in employment when the benefits expansion went into effect and that those individuals returned to their previous jobs at similar rates as others.¹¹

While incomes grew, real personal consumption saw a dramatic downturn in April, the largest one-month decline on record.¹² Real personal consumption rose in every month from May to October but faltered in November and December before growing again in January after Treasury distributed more Economic Impact Payments. Still, it remains 1.8 percent lower than pre-pandemic levels. Personal saving saw its largest one-month increase on record in April, pushing personal saving as a percentage of aggregate real disposable income to 33 percent, a record high. Personal savings saw decreases between May and November but ticked up in December and January and remain elevated. As gathering restrictions ease through 2021, it is possible that savings rates will come down and the accumulated household liquidity may be partially unwound.

Despite higher personal savings and incomes compared to February 2020, there is evidence that households hardest hit by the pandemic need more support. The Census Bureau Household Pulse Survey has recently shown high rates of hardship. One in seven adults with children lacked sufficient food in mid-February, one in five renters were behind on rent (this increases to one in four for renters with children), and one in three adults had trouble paying for usual household expenses. These rates were even higher for Black and Latino households.

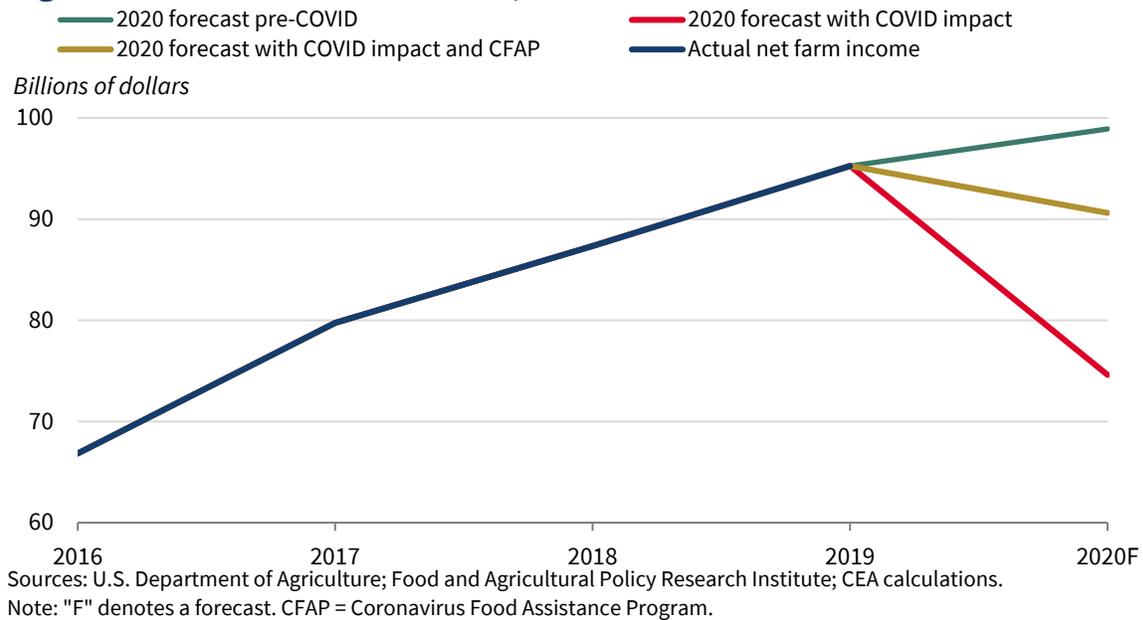
Impact of the Coronavirus Food Assistance Program on Farm Incomes

The CARES Act authorized provisions to support farmers who were harmed by the consequences of the COVID-19 epidemic. These provisions took the form of USDA's Coronavirus Food Assistance Program (CFAP). The COVID-19 epidemic and the associated economic response disrupted food and agricultural markets, resulting in a dramatic drop in farm income for a wide array of agricultural products. CFAP makes available \$16 billion of financial assistance for producers of affected commodities, including \$9.5 billion to compensate for losses due to commodity price reductions between mid-January and mid-April 2020 and another \$6.5 billion for ongoing market disruptions. In early February 2020, before the extent of the impact on agricultural markets was understood, U.S. net farm income for 2020 was forecast to be \$99 billion, which would have been a 4 percent increase over 2019 and the highest net farm income since 2014. By June, as the magnitude of the epidemic became apparent, analysts had revised the forecast of 2020 net farm income down by more than \$24 billion (25 percent) when CFAP payments are excluded. Including the \$16 billion in emergency farm payments raises forecasts for net farm income to \$91 billion (Figure 9).

¹¹ Other research supports this conclusion. Bartik et al. (2020a) find no evidence that high UI replacement rates drove jobs losses or slowed rehiring, while Marinescu, Skandalis and Zhao (2020) show that employers did not experience greater difficulty finding applicants for their vacancies after the CARES Act, despite the large increase in unemployment benefits.

¹² A recent paper by Chetty et al. (2020) shows that the largest declines in consumption spending came from the richest income households. As of June 10, high income households cut spending by 17 percent while those in low income households cut spending by only 4 percent. This is likely a function of stimulus payments as well as unemployment benefit receipt.

Figure 9. U.S. Net Farm Income, 2016–20



Supplemental Nutrition Assistance Program

The Families First Coronavirus Response Act (FFCRA), which passed in March 2020, provided temporary benefit increases up to the maximum allotment for households not already receiving the maximum. The CARES Act provided over \$15 billion in additional contingency funding for increased costs associated with the FFCRA provisions, as well as anticipated increased participation in the Supplemental Nutrition Assistance Program (SNAP). As provided by the FFCRA and CARES Act, the U.S. Department of Agriculture (USDA) also provided waivers of certain requirements so that nutrition programs could reach families and children while social distancing restrictions were in place. The FFCRA also suspended work requirements for non-disabled, childless adults through the month after the end of the COVID-19 public health emergency. Funding for SNAP was expanded and increased in the December Appropriations Act.

Recent data have shown dramatic increases in food hardship. According to the Census Bureau Household Pulse Survey from January 20-February 1, nearly 11 percent of all adults in the U.S. reported that their household sometimes or often didn't have enough to eat in the prior week. This was up from 3.4 percent of adults that reported their household did not have enough to eat at some point over the full 12 months of 2019. Adults in households with children were more likely to report not having enough to eat, as well as Black and Latino adults. The vast majority of these households reported not being able to afford to buy more food as the reason for the lack of enough to eat.

Education

Between the first and third week of March, close to 100 percent of kindergarten, primary, and secondary schools closed. These closures have had a substantial negative effect both on the U.S. economy and on children themselves. Academic literature finds that children are likely to experience a persistent 2.3 – 3.7

percent decline in future earnings as a result of lower human capital accumulation from the shortened school year.¹³ The loss of human capital accumulation will also have deleterious effects on long-term growth for the country.

Meanwhile, the absence of parents from workplaces due to lack of childcare results in lost economic output. Those parents are likely to experience a persistent 1 percent drop in lifetime earnings because of lost job experience, as well.¹⁴ We estimate that 18 percent of the workforce may fall into this category. Overall, data indicate that only about 30 percent of workers are likely to be able to telecommute.

Assuming that school closures and distance learning reduce work experience for even just four months, affected workers—as a lower bound, 70 percent of the one-quarter of the workforce with young children at home—are estimated to lose 1 percent of lifetime earnings. Furthermore, mothers—and single mothers especially—are less able to telecommute. While 45 percent of married men with children can telecommute, the number falls to 42 percent for married women and falls dramatically to 21 percent for single women. The effects are likely to be particularly severe for early-career single mothers, who will experience not just lower earnings but also less secure job prospects. Moreover, keeping schools closed and implementing distance learning disproportionately harms lower-income families, who are less able to obtain additional help with childcare, are less able to obtain additional tutoring or instruction to supplement distance learning, and are less likely to have internet access and laptops required for distance learning. These families are the most vulnerable to shocks, since they are the least likely to be able to work from home, and least likely to have accumulated savings.

Evidence of the Effect on Businesses

In this section, we focus on provisions specifically aimed at businesses that improved access to financial resources and allowed businesses to weather the crisis. We explore how the availability of forgivable loans and grants has allowed small businesses to retain employment, re-open, and recover revenues. While the small business optimism index compiled by the National Federation of Independent Business (NFIB) showed a 13.1-point improvement in September, relative to April, the index fell 8.1 points in the fourth quarter. The combined index is a combination of several sub-indexes, of which most followed a similar pattern. When it came to sales and capital expenditures, actual values have remained stable in the fourth quarter, but expectations have softened. Of the businesses surveyed in September, a net of about 23 percent more businesses were optimistic about creating jobs than not, which represented a 22-percentage point increase from April. In December, this net percent fell to 17 percent. Small businesses have begun to increase compensation and plan to continue to do so; a net 21 percent more surveyed firms reported increasing compensation for their employees than reported decreasing compensation for employees over the past three months, while 14 percent more firms planned to increase compensation over the next three months in December.

¹³ The range of decline in future earnings is derived from prorating full-year earnings declines to the three-month reduction in the school year caused by COVID-19. Sources for the range are Angrist and Krueger (1992) and Bhuller et al. (2017).

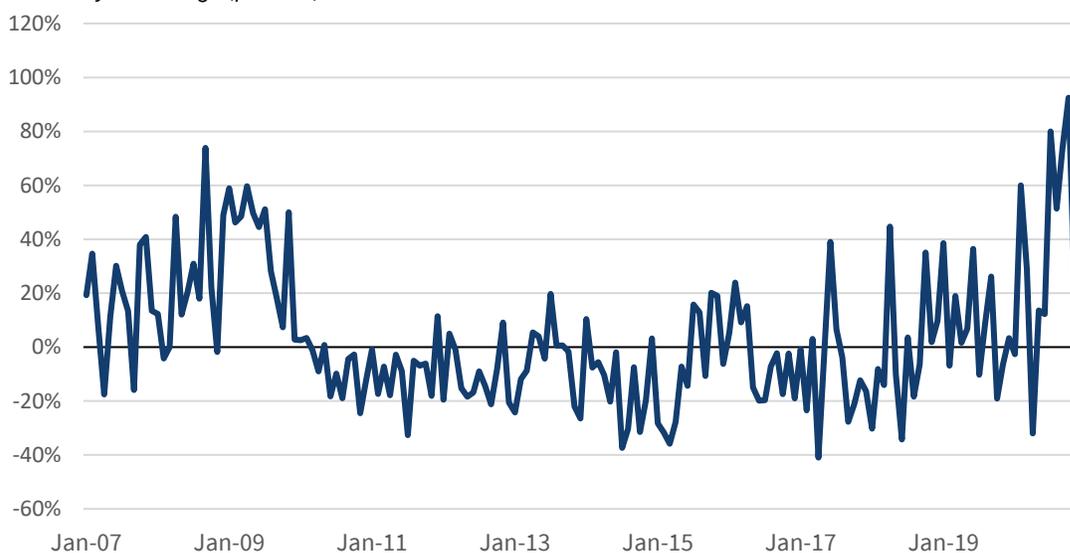
¹⁴ Estimate derived from prorating the drop in lifetime earnings for each one year of lost job experience, as estimated in Altonji and Williams (2005).

Impact on Small Business Bankruptcies

A concern in any crisis is the impact on business bankruptcies and failures, which can then lead to even higher levels of sustained unemployment. Small business bankruptcies for the second quarter as a whole decreased by 1.8 percent (Figure 10). In the third and fourth quarter, the change in year-over-year bankruptcies accelerated to 68.4 percent and 74.9 percent, respectively. This included a year-over-year increase of 110 percent in December.

Figure 10. Chapter 11 Small Business Bankruptcy Filings, 2007-20

Year-over-year change (percent)



Source: Justice Department; CEA calculations.

Bankruptcies could be biased by a number of factors. First, the social distancing mechanisms may have affected filing rates, both for the court systems and debtors. If business owners are unable to connect with lawyers or face difficulties submitting electronic filings, this could lead to filing delays that would show up as higher filings later in the data. At the same time, courts' ability to take on cases might be affected by State restrictions.

How Small Businesses Have Responded to the Coronavirus Response Legislation

Small Business Employment Recovery

Small businesses may show other signs of distress, such as an inability to obtain loans, an increase in delinquencies, and a decline in employment and job openings. Several databases track conditions for small businesses nationwide. Here, we review data from Homebase and Opportunity Insights. The Homebase data and Opportunity Insights data indicate that many small businesses have reopened, with employees coming back to work, though the recent data shows the recovery is fading.

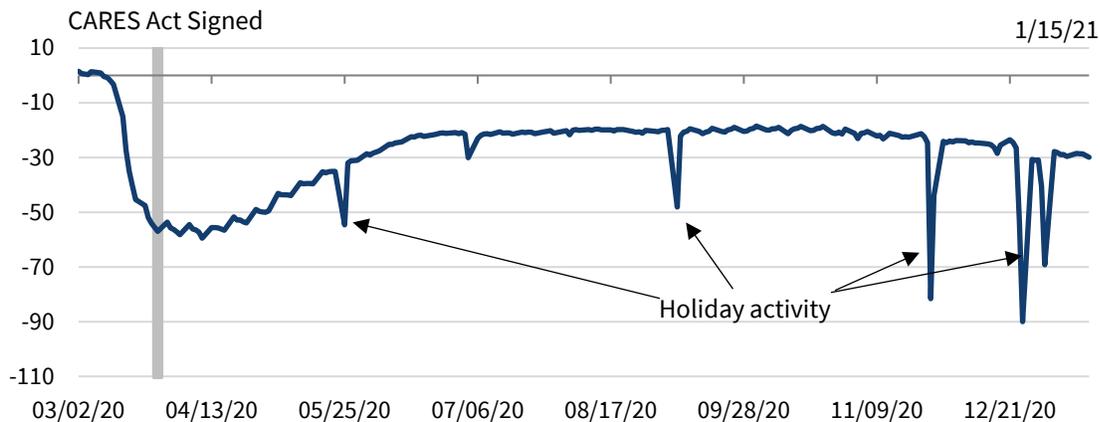
Homebase is a company that provides software to help small business owners manage employee timesheets. Since the start of the pandemic, Homebase has maintained a database of U.S. small business

employment using data from more than 60,000 businesses that use their software. The data covers more than one million employees that were active in the United States in January 2020. Most Homebase customers are businesses that are individually owned, or operator-managed in restaurant, food and beverage, retail, and services.

The Homebase data show the dramatic impact of the COVID-19 pandemic on small businesses. Figure 11 illustrates the daily change in the number of hourly employees working at small businesses using Homebase compared to a January baseline. In mid-March, the number of employees working fell to a level that is about 55-60 percent lower than normal conditions. As States eased pandemic-induced restrictions, many hourly employees went back to work but as of mid-October, employees working at small businesses using Homebase were approximately 20 percent below normal conditions. Following the recent surge in the pandemic, this has increased again to 30 percent below normal conditions.

Figure 11. Change in the Number of Small Business Hourly Employees Working, 2021

Percent change (relative to January 2020 base)



Source: Homebase.

Note: All the rates compare that day vs. the median for the day of the week for the period January 4, 2020 – January 31, 2020.

Support for small businesses in relief legislation likely helped businesses maintain the employment through the spring and summer of 2020. For example, Bartik et al. (2020b) found that PPP loans led to a 14-30 percentage point increase in a business’s expected survival, with the largest impacts on survival for businesses with more employees. Through the closure of the PPP on August 8, SBA had approved more than 5.2 million PPP loans for a total of more than \$525 billion by nearly 5,500 lenders, helping small businesses employing an estimated 51 million workers, which represents more than 80 percent of small business payrolls. After funds for the second draw PPP loans were appropriated in December, another 1.9 million loans have been approved for a total of \$140 billion by 5,150 lenders. Of the 1.9 million loans approved, 1.3 million have been second draw loans and 600,000 have been first draw loans. While 97 percent of the new first draw loans have gone to firms with 10 or fewer employees, just 74 percent of the second draw loans have gone to the smallest firms. This disparity highlights evidence by Neilson,

Humphries and Ulysea (2020) that small businesses were less aware of the PPP and less likely to apply than larger businesses.¹⁵

Based on Census tract matching, we estimate that approximately 28 percent of PPP funds went to businesses in low- and moderate-income (LMI) areas—a figure proportionate to the LMI share of the U.S. population. The PPP has provided funds to a wide variety of industries in all sectors of the economy, including construction (12.4 percent), manufacturing (10.3 percent), food and hospitality services (8.1 percent), health care (12.9 percent), and retail (7.7 percent), among many others.

Research by Autor et al. (2020) using administrative payroll data from Automatic Data Processing, Inc. (ADP) finds that the PPP saved between 1.4 and 3.2 million jobs through just the first week of June. Chetty et al. (2020) found PPP effects of a similar magnitude, concluding that PPP had relatively small effects on employment rates. However, because PPP has also stemmed business closures, the total employment effect is could be considerably larger over time as those salvaged businesses re-hire furloughed workers. Treasury’s Office of Economic Policy produced a December working paper that studies the impact of regional banking differences, which varied the timing of PPP rollout, on UI claims. The study concluded that an aggregate of 18.6 million jobs could have been preserved through the program.

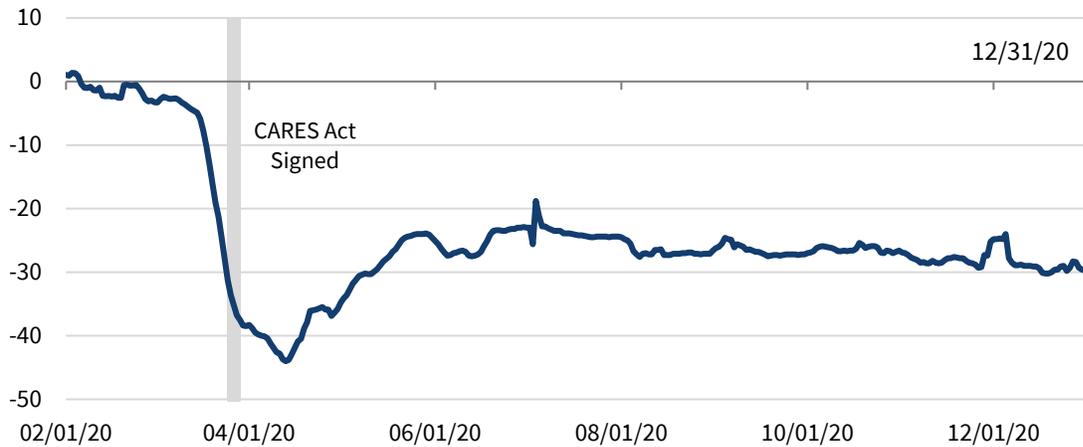
Small Business Openings

Opportunity Insights, a not-for-profit research center based at Harvard University, has also developed a dataset to track the impact of COVID-19 on small businesses since January 2020. They assemble data from different sources of “credit card processors, payroll firms, job posting aggregators, and financial services firms” to construct time series to track the impact of COVID-19. Figure 12 shows that by mid-April, the number of small businesses open had fallen over 40 percent compared to January. The number temporarily improved to about 25 percent below that of January 2020 in the third quarter, but slipped back to 30 percent below the January 2020 level by the end of 2020.

¹⁵ The authors also showed that, among businesses who applied for PPP loans, smaller businesses applied later, faced longer processing times, and were less likely to have their applications approved.

Figure 12. Change in the Number of Small Businesses Open 7-Day Average, 2020

Percent change (relative to January 2020 base)



Source: Opportunity Insights.

Note: All the rates compare that day vs. the median for the day of the week for the period January 4, 2020 – January 31, 2020.

Conclusion

This report provides initial estimates of the economic impact of the suite of Coronavirus response legislation passed in March and April 2020, with brief introductory comments on the legislation passed in December 2020. While the results reported here remain preliminary, it is clear that the actions taken by the Congress to mitigate the negative impacts of the pandemic on the economy and consumers were necessary, allowing millions of Americans to maintain consumer spending and businesses to mitigate employment losses. Moreover, surges of liquidity and income replacement through Economic Impact Payments and UI expansions helped mitigate the economic shock, preventing a decline in aggregate disposable income. However, the actions were insufficient. Small business bankruptcy levels increased over the second half of 2020 and the pace of job gains has slowed sharply in recent months.

This report documents the potential effects of fiscal and monetary actions thus far, accounting for what may have occurred in the absence of such a response. Support for households bolstered income for many Americans, but recent evidence suggests more support is needed.

The crisis is not over and additional relief is needed. As the Nation continues its path to recovery, the Federal Government remains committed to taking the necessary steps needed to protect and improve the lives and livelihoods of all Americans.

Appendix

Coronavirus Response Funding Overview

Phase 1: Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123)

In total, this act provided \$7 billion in emergency funding for Federal agencies' response. Highlights include:

- Public Health and Social Services Emergency Fund, to fund countermeasures and support for emergency response and healthcare entities.
- CDC-wide public health response activities, including some global health efforts. In addition, the act provided funds for CDC's Infectious Diseases Rapid Response Reserve Fund.
- National Institutes of Health research and development of therapeutics, vaccination, and diagnostics for COVID-19.
- State and international assistance programs to prevent, prepare for, and respond to the virus.

Phase 2: Families First Coronavirus Response Act (P.L. 116-127)

In total, provided \$192 billion. Highlights include:

- Refundable tax credits for private-sector employers who provide required paid sick and family leave.
- Public Health and Social Services Emergency Fund, to pay claims of providers to provide COVID-19 testing and related services for uninsured individuals.
- Emergency transfers to State agencies for unemployment compensation administration expenses.
- Farmers to Families Food Box donation and distribution program.
- Nutrition programs, including Women, Infants, and Children (WIC) nutrition benefits and State and local agency operations, food banks through The Emergency Food Assistance Program (TEFAP), territory nutrition assistance grants, and such sums authority for the SNAP P-EBT program to support families while schools are closed.
- Emergency Medicaid Federal Medical Assistance Percentage (FMAP) increase of 6.2 percentage points for States that meet certain requirements, to provide fiscal relief and help States manage increased enrollment and health care costs. This increase will also support other Federal/State programs including the Children's Health Insurance Program, as well as foster care and adoption assistance programs.
- Department of Veterans Affairs (VA), to provide support for the VA medical care and information technology response, along with small amounts for other VA needs, chiefly personal protective equipment (PPE).

Phase 3: Coronavirus Aid, Relief, and Economic Security (CARES) Act (P.L. 116-136)

In total, provided \$2.1 trillion to respond to the COVID-19 outbreak and its impact on the economy, public health, State and local governments, individuals, and businesses. Highlights include:

- Economic stabilization, supporting trillions in Federal Reserve lending to business and State/local governments, including loans to airlines, related businesses, and businesses critical to national security.
- PPP loans to small businesses, and certain non-profits, veterans' organizations, and Tribal business concerns, that can be fully forgiven if the funds are used for approved payroll and non-payroll costs (such as utilities and rent).
- Economic Impact Payments for individuals to provide \$1,200 per eligible individual plus \$500 per qualifying child. These amounts phase out for higher-income taxpayers.
- Coronavirus Relief Fund to provide general economic support to States, localities, and tribal governments. These funds can be used to address medical or public health needs related to COVID-19, as well as unemployment or business closures.
- Tax provisions, including,
 - Increases deductibility of charitable contributions through calendar year 2020;
 - Modifies limitation on losses for taxpayers other than corporations;
 - Establishes temporary employee retention tax credit, to encourage businesses to keep employees on payroll;
 - Increases utilization of net operating losses arising in tax years 2018 through 2020;
 - Increases deductibility of business interest expenses for tax years 2018 through 2020;
 - Accelerates refundability of corporate minimum tax credits;
 - Suspends aviation excise taxes through the rest of calendar year 2020;
 - Delays payment of certain employer payroll taxes through the end of calendar year 2020 and allows employers to pay them over the next two years; and
 - Retroactively permits 100-percent bonus depreciation for qualified improvement property acquired and placed in service after September 17, 2017.
- Pandemic unemployment assistance and other emergency unemployment compensation measures.
- Public Health and Social Services Emergency Fund for countermeasures and support for emergency response and healthcare entities.
- Emergency increase in unemployment compensation.
- Disaster Relief Fund for emergency protective measures including: PPE and medical supplies, temporary medical facilities and personnel, sheltering, and 100 percent of National Guard Title 32 costs until June 24, 2020.
- Transportation: Transit Infrastructure Grants and Grants in Aid for Airports. The transit grants cover capital and operating expenses to maintain service, and to reimburse lost revenue due to the public health emergency. The airport grants cover operating and capital expenses at over 3,000 airports. Both grants reflect nearly three times the level of funding provided for these programs in FY 2020.
- Payroll support to the airline industry to maintain employment and avoid job cuts.
- Education Stabilization Fund to support States, school districts, and institutions of higher education to prevent, prepare for, and respond to COVID-19, as well as direct financial assistance to students that can be used to cover education, food, housing, healthcare, and childcare expenses.
- Temporary relief for most Federal student loan borrowers, by pausing payments, with 0 percent interest, for all Department of Education-held student loans.
- Nutrition Programs: Supplemental Nutrition Assistance Programs (SNAP), the Food Distribution Program on Indian Reservations (FDPIR), nutrition assistance block grants to territories, Child

Nutrition programs, Older Americans Nutrition Programs, and TEFAP funding for food banks. Support for these programs has been expanded to serve more individuals and to fund innovative ways to deliver meals to children while schools are closed.

- Department of Veterans Affairs, to provide support for the VA medical care and information technology response, along with small amounts for other VA needs, chiefly PPE.
- Coronavirus Food Assistance Program, a package of assistance to specialty crop, dairy, livestock, and row crop producers that includes funds provided through both the CARES Act and the Commodity Credit Corporation.
- Department of Defense (DOD), including for: medical care for service members, dependents, and retirees; diagnostics and medical research; PPE for medical and non-medical personnel; procurement of vaccines and anti-virals; National Guard and Reserve support for DOD missions; DOD private sector care costs; and Defense Production Act purchases.
- Funding for Economic Injury Disaster Loan (EIDL) Advances (grants), a new program that provided interim funding to EIDL lending program applicants, could be used for a wide range of obligations such as rent, payroll, debt payments, and healthcare benefits.
- Additional borrowing authority for the United States Postal Service. The funds are to be extended by Treasury if the Postal Service determines that it is unable to fund operating expenses due to COVID-19 related changes.
- Department of Justice grants to support State, local, and tribal law enforcement in the response to COVID-19.

Phase 3.5: PPP and Health Care Enhancement Act (P.L. 116-139)

In total, provided \$493 billion in additional funding for small business loans, health care providers, and testing. Highlights include:

- Additional funds for the PPP.
- Additional funds for the Public Health and Social Services Emergency Fund.
- Additional funds for the Small Business Administration EIDL lending program, and additional funds for EIDL Advances (grants).

Phase 4: Consolidated Appropriations Act (P.L. 116-260), Divisions M and N

In total, provided \$868 billion in additional funding for small businesses, individuals, state and local governments, and vaccinations. Highlights include:

- Additional funds for the PPP, including a provision for the deductibility of expenses paid for by PPP loans.
- Additional funds for SBA EIDL Advances (grants).
- Small business funds for businesses in low-income communities.
- Emergency grants for live music venues, movie theaters and museums.
- Additional funds for a \$600 Economic Impact Payment, available for most Americans with adjusted gross incomes below \$75,000.
- Extensions of increased Federal unemployment benefits for an additional 11 weeks, including an additional \$300 per week until mid-March

- Additional funds for education, including grants for K-12 education, higher education (including for HBCUs and for-profit college financial aid), and funds for the Governor’s Emergency Education Relief Fund.
- Funding to States for testing, tracing and COVID mitigation.
- Funding to States and the CDC to assist with vaccine procurement and distribution, including building a strategic stockpile.
- Other health funding, including for mental health, additional health care provider grants, an increase in the physician pay schedule, and a repeal of the Medicare sequester through March 2021.
- Additional funds for a second round of payroll support for airline workers.
- Funding to States for transit infrastructure and State highway funding.
- Grants and funding to additional public transit providers, such as buses, ferries, airports, and Amtrak.
- Additional funds to expand and increase nutrition and agriculture programs, including a 15 percent increase in monthly SNAP benefits through the end of June 2021 and direct payments to the farming and ranching industry.
- Funds to States to continue to provide rental assistance programs, which also includes rent arrears, utilities, and home energy costs. There is also an extension of the eviction moratorium for tenants with annual incomes below \$99,000 to the end of January 2021.
- Funds to support the Child Care Development Block Grant program.
- Support for community lenders, including through Community Development Block Grants.
- Funds to provide grants and investment in broadband technology to support remote learning.
- An amendment to financial support for the U.S. Postal Service provided in the CARES Act.
- An extension and expansion of the Employee Retention Tax Credit.
- A reinstatement of the 100 percent deductibility of business meals for 2021 and 2022.
- An increase in the Earned Income and Child Tax Credit, facilitated by allowing taxpayers to use their 2019 income if they experienced job loss in 2020.
- An extension of the Families First Paid Leave Credits through March 2021.
- Extensions of The CARES Act provisions for charitable donations and employer-paid student loan exclusions.
- Included in this package was a reduction in previous budget authority, which offsets new budget authority for Divisions M and N of this Act.

References

- Altonji, J., Z. Contractor, L. Finamor, R. Haygood, I. Lindenlaub, C. Meghir, C. O’Dea, D. Scott, L. Wang, and E. Washington. 2020. *Employment Effects of Unemployment Insurance Generosity During the Pandemic*. Tobin Center for Economic Policy. New Haven, CT: Yale University.
- Altonji, J. and N. Williams. 2005. “Do Wages Rise with Job Seniority? A Reassessment.” *ILR Review* 58, no. 3: 370-397.
- Alvarez, F., D. Argente, and F. Lippi. 2020. *A Simple Planning Problem for COVID-19 Lockdown*. BFI Working Paper. Chicago, IL: Becker Friedman Institute.
- Angrist, J. D. and A. B. Krueger. 1992. *Estimating the Payoff to Schooling Using the Vietnam-Era Draft Lottery*. NBER Working Paper 4067. Cambridge, MA: National Bureau of Economic Research.
- Autor, D., D. Cho, L. D. Crane, M. Goldar, B. Lutz, J. Montes, W. B. Peterman, D. Ratner, D. Villar, A. Yildirmaz. 2020. *An Evaluation of the Paycheck Protection Program Using Administrative Payroll Microdata*. Working Paper.
- Baqae, D.R. and E. Farhi. 2020. “Nonlinear Production Networks with an Application to the COVID-19 Crisis.” CEPR Discussion Paper No. DP14742.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3603974.
- Baker, S., N. Bloom, S. Davis, and S. Terry. 2020. *Covid-Induced Economic Uncertainty*. NBER Working Paper 26983. Cambridge, MA: National Bureau of Economic Research.
- Bartik, A., M. Bertrand, F. Lin, J. Rothstein, and M. Unrath. 2020a. *Measuring the Labor Market Onset of the COVID-19 Crisis*. BFI Working Paper No. 2020-83. Chicago, IL: Becker Friedman Institute.
- Bartik, A., Z. Cullen, E. Glaeser, M. Luca, C. Stanton, and A. Sunderam. 2020b. *The Targeting and Impact of Paycheck Protection Program Loans to Small Businesses*. NBER Working Paper 27623. Cambridge, MA: National Bureau of Economic Research.
- Bhuller, M., M. Mogstad, K. G. Salvanes. 2017. “Life-Cycle Earnings, Education Premiums, and Internal Rates of Return.” *Journal of Labor Economics* 35, no. 4: 993-1030.
- Burns, A., D. van der Mensbrugghe, and H. Timmer. 2006. “Evaluating the Economic Consequences of Avian Influenza.” World Bank.
<https://web.worldbank.org/archive/website01003/WEB/IMAGES/EVALUATI.PDF>.
- CBO (Congressional Budget Office). 2020. “The Effects of Pandemic-Related Legislation on Output.”
<https://www.cbo.gov/publication/56597>.
- CEA (Council of Economic Advisers). 2020. “Evaluating the Effects the Economic Response to COVID-19.”
<https://www.whitehouse.gov/wp-content/uploads/2020/08/Evaluating-the-Effects-of-the-Economic-Response-to-COVID-19.pdf>.

- CEA (Council of Economic Advisers). 2019. "Government Employment and Training Programs: Assessing the Evidence on Their Performance." <https://www.whitehouse.gov/wp-content/uploads/2019/06/Government-Employment-and-Training-Programs.pdf>.
- CEA (Council of Economic Advisers). 2019. "Mitigating the Impact of Pandemic Influenza through Vaccine Innovation." <https://www.whitehouse.gov/wp-content/uploads/2019/09/Mitigating-the-Impact-of-Pandemic-Influenza-through-Vaccine-Innovation.pdf>.
- Chetty, R., J. Friedman, N. Hendren, and M. Stepner. 2020. *How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data*. Working Paper 2020-05. Cambridge, MA: Opportunity Insights.
- Chetty, R., J. N. Friedman, N. Hendren, M. Stepner, and the Opportunity Insights Team. 2020. "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data." https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf.
- Coibion, O., Y. Gorodnichenko, and M. Weber. 2020. "The cost of the covid-19 crisis: Lockdowns, macroeconomic expectations, and consumer spending." NBER Working Paper 27141. Cambridge, MA: National Bureau of Economic Research.
- Eichenbaum, M., S. Rebelo, and M. Trabandt. 2020. *The Macroeconomics of Epidemics*. NBER Working Paper 26882. Cambridge, MA: National Bureau of Economic Research.
- Fairlie, R.W., K. Couch, and H. Xu. 2020. *The Impacts of Covid-19 on Minority Unemployment: First Evidence from April 2020 CPS Microdata*. NBER Working Paper 27246. Cambridge, MA: National Bureau of Economic Research.
- Faulkender, M., R. Jackman, and S. Miran. 2020. *The Job-Preservation Effects of Paycheck Protection Program Loans*. Treasury Office of Economic Policy Working Paper 2020-01. Washington, DC: The Department of the Treasury.
- GAO (Government Accountability Office). 2020. "Urgent Actions Needed to Better Ensure an Effective Federal Response." <https://www.gao.gov/reports/GAO-21-191/>.
- JHU (Johns Hopkins University). 2020. "COVID-19 United States Cases by County." <https://coronavirus.jhu.edu/us-map>.
- Jonas, O. 2013. "Pandemic Risk." Background paper, World Bank. https://www.worldbank.org/content/dam/Worldbank/document/HDN/Health/WDR14_bp_Pandemic_Risk_Jonas.pdf.
- Kilbourne, E.D. 2006. "Influenza Pandemics of the 20th Century." *Emerging Infectious Diseases* 12, no. 1: 9-14.
- Marinescu, I. E., D. Skandalis, and D. Zhao. 2020. *Job Search, Job Posting and Unemployment Insurance During the COVID-19 Crisis*. Working Paper.

- Markel, H., H. Lipman, J. Navarro, A. Sloan, J. Michalsen, A. Stern, and M. Cetron. 2007. "Nonpharmaceutical Interventions Implemented by US Cities During the 1918-1919 Influenza Pandemic." *Jama* 298, no. 6: 644-654.
- McKibbin, W. 2009. "The Swine Flu Outbreak and Its Global Economic Impact." <https://www.brookings.edu/on-the-record/the-swine-flu-outbreak-and-its-global-economic-impact/#:~:text=Fearing%20this%20outbreak%20may%20lead,a%20lack%20of%20public%20confidence.>
- McKibbin, W., and A. Sidorenko. J. 2006. "Global Macroeconomic Consequences of Pandemic Influenza." Lowy Institute for International Policy. https://www.lowyinstitute.org/sites/default/files/pubfiles/McKibbin_Sidorenko%2C_Global_macroeconomic_1.pdf.
- Neilson, C., J. Humphries, and G. Ulyssea. 2020. *Information Frictions and the Paycheck Protection Program*. NBER Working Paper 27624. Cambridge, MA: National Bureau of Economic Research.
- Parolin, Z., M.A. Curran, J. Matsudaira, J. Waldfogel, and C. Wimer. 2020. *Monthly Poverty Rates in the United States during the COVID-19 Pandemic*. Poverty and Social Policy Working Paper.
- Parolin, Z., M.A. Curran, and C. Wimer. 2020. "The CARES Act and Poverty in the COVID-19 Crisis." *Poverty and Social Policy Brief*, 4 no. 8.
- Ruhle, Stephanie, Leticia Miranda and Michael Capetta. "PPP likely saved 35 million jobs, says JP Morgan CEO Jamie Dimon." *NBC News*, Aug 11, 2020. Accessed at <https://www.nbcnews.com/business/economy/ppp-likely-saved-35-million-jobs-says-jpmorgan-chase-ceo-n1236341> .
- U.S. Census Bureau. 2020. "Small Business Pulse Survey Data." <https://portal.census.gov/pulse/data/#downloads>.
- U.S. Census Bureau. 2020. "Household Pulse Survey Data." <https://www.census.gov/programs-surveys/household-pulse-survey/data.html>.
- Verikios, G., M. Sullivan, P. Stojanovski, J. Giesecke, and G. Woo. 2011. "The Global Economic Effects of Pandemic Influenza." <https://static.rms.com/email/documents/liferisks/papers/the-global-economic-effects-of-pandemic-influenza.pdf>.