

Acts of Congress and COVID-19: A Literature Review on the Impact of Increased Unemployment Insurance Benefits and Stimulus Checks

By [Elena Falcettoni](#)* and [Vegard Nygaard](#)†

Abstract

This Note is meant to present an overview of what economists have analyzed regarding the implications of two main components of the CARES Act that impact individuals: the increased UI benefits and the stimulus checks. We present the findings from the literature on these two policies with an eye on potential future governmental interventions.

Congress passed the first COVID-19 relief package for businesses and individuals in March, when the Coronavirus Aid, Relief and Economic Security (CARES) Act came to life, which provided, among other things, one-time stimulus checks for individuals, extended unemployment insurance (UI) benefits, relief for state and local governments, liability protection, and the Paycheck Protection Program for small-business loan forgiveness.

The COVID-19 pandemic has kept economists busy analyzing every possible economic side of the coronavirus impact. This Note is meant to present an overview of what economists have analyzed regarding the implications of two main components of the CARES Act that impact individuals: the increased UI benefits and the stimulus checks. We present the findings from the literature on these two policies with an eye on potential future governmental interventions. Taken together, these two components alone have been effective at providing stimulus and lowering poverty. [Kaplan et al. \(2020\)](#) find that the initial UI benefits and stimulus payments boosted aggregate consumption by two percentage points, while [Bayer et al. \(2020\)](#) show that the CARES transfers reduced the output loss due to the pandemic by up to 5 percentage points. By summarizing the impact of these two provisions of the CARES Act, we hope that this Note will inform readers on the potential impact of similar provisions in the next stimulus bill. Importantly, this Note will not focus on the large COVID-19 literature that discusses health impacts, distancing measures, epidemiological models, pandemic-induced mortality changes, or the impact of other policies, domestic or foreign. For a more general review of these other topics, please refer to [Brodeur et al. \(2020.\)](#)

*Board of Governors of the Federal Reserve System and Heller-Hurwicz Economics Institute (elena.falcettoni@frb.gov). The views expressed in this Note are the views of the authors' only and do not represent the views of the colleagues at the Board of Governors or the views of the Federal Reserve System as a whole.

† University of Houston, Department of Economics (vmnygaard@uh.edu).

Unemployment Insurance Benefits

CARES provisions. The CARES Act provisions prescribe an additional 13 weeks of federally-funded benefits under the new Pandemic Emergency Unemployment Compensation (PEUC) program in addition to the standard state-administered UI programs for those currently receiving UI benefits and new applicants. These benefits were then extended for another 13 weeks (and potentially for another seven following those) through the Extended Benefits program. Normal benefits included an additional \$600 per week for up to four months, which is a provision that expired on July 31st, 2020. On August 8th, a reduced weekly check of \$300 was reinstated for an additional six weeks subject to state application. All states but South Dakota applied for it. Finally, there is also a new program, the Pandemic Unemployment Assistance (PUA,) for individuals who are self-employed, seeking part-time employment, or who otherwise would not qualify for regular UI benefits. The PUA program provides up to 39 weeks of benefit. Importantly, the CARES Act also required states to relax the criterion of actively searching for work to qualify for these benefits to account for illness, quarantine, and movement restrictions.

Impact of COVID-19 on unemployment. The COVID-19 pandemic has impacted employment greatly, especially for lower-pay and nonessential occupations, as shown in [Liu and Mai \(2020.\)](#) Over March and April 2020, job losses were larger for these occupations, especially for those with higher physical proximity or lower work-from-home feasibility. Between April and June 2020, the industries that were hit harder also recouped more jobs, but the recovery was far from full. [Chetty et al. \(2020a\)](#) show that high-wage workers experienced a recession that lasted a few weeks, and are now facing an almost-back-to-normal market, and they rarely lost jobs, whereas many low-wage workers lost their job because of the pandemic and had to experience a recession that would last for several months, with a job market that is still far from normal. [Forsythe et al. \(2020a\)](#) show that nearly all industries and occupations saw contraction in postings and spikes in UI claims, with essential jobs taking the smallest hit and leisure and hospitality services the biggest hit. The pandemic-induced increase in unemployment led to the largest rise in UI claims in U.S. history (see, i.a., [Cajner et al. 2020](#), [Chetty et al. 2020b](#), [Goldsmith-Pinkham and Sojourner 2020](#), and [Kong and Prinz 2020](#) for indicators of labor-market changes during this period.) These patterns in the data suggest that an extension of the UI benefits set to expire at the end of 2020 and an extension of the already-expired increased UI benefits are a key component of any potential stimulus bill.

Effectiveness of UI benefits and difficulty to reach the most marginalized. The effectiveness of the UI benefits has been well-documented. [Faria-e-Castro \(2020\)](#) finds that UI benefits are successful at stimulating consumption, leading to an increase in GDP. [Han et al. \(2020\)](#) show that UI benefits, their expansion, and the stimulus checks led to a decline in poverty during the pandemic, which would have risen in the absence of these programs. [Cortes and Forsythe \(2020\)](#) show that 49 percent of the UI and CARES benefits went to workers who were in the bottom-third of the earnings distribution before the pandemic happened, which reversed the increase in labor-earnings inequality that followed the beginning of the pandemic because of the concentration of job losses among low-paying jobs. [Montenovo et al. \(2020\)](#) document the disparities in job losses by occupation and relate the pre-pandemic sorting by gender, race, and ethnicity into different occupations and industries to the gaps in unemployment across these categories. [Bhutta et al. \(2020\)](#) use detailed data from the Survey of Consumer Finances to estimate that an additional 38

percent typical working families would be able to cover six months of expenses after an unexpected income disruption, such as a job loss, under the increased UI benefits implemented with the CARES Act compared to the standard UI benefits alone. The immediate effectiveness of UI benefits to meet basic needs is also documented by [Karpman and Acs \(2020\)](#) and [Giannarelli et al. \(2020\)](#), both of which also discuss the difficulty to reach the poorest part of the population. Delays in payment of UI benefits, also due to an overwhelmed system, are also documented in [Bitler et al. \(2020\)](#). [Parolin et al. \(2020\)](#) also provide evidence for the challenges involved with reaching the most-marginalized parts of the population and they argue for the need of an expansion of UI benefits to contain poverty. In particular, they show that minorities were hit particularly hard by the pandemic and that the expiration of the CARES Act benefits led to an increase in poverty which was even higher than pre-pandemic levels. [Bell et al. \(2020\)](#) find that in California alone, communities of concentrated poverty and with a higher share of racial and/or ethnic minorities have received UI benefits at such a lower rate than wealthier, whiter communities that the number of regular UI beneficiaries would have been 23 percent higher if the rate of receipt of UI benefits across the two types of communities had been equalized. Since it was particularly difficult to reach the individuals in the population who would benefit the most from these programs, this evidence is suggestive of a need for even-greater outreach from the government to the most-marginalized parts of the U.S. population.

Temporary vs. permanent layoffs. While UI benefits have been generally effective, a separate strand of this literature analyzes the difference in impact between unemployment types: those who are on temporary layoffs and those who are permanent job losers. The individuals on temporary layoffs are those who are only unemployed on a temporary basis because they lost their job because of the lockdown but they expect their unemployment to end as soon as the lockdown ends. The individuals who are permanent job losers are those who lost their job but who do not expect to resume their job as soon as the lockdown is over. [Barrero et al. \(2020\)](#) estimate that 42 percent of pandemic-induced layoffs will result in permanent job loss. [Carroll et al. \(2020\)](#) use a consumer model in which individuals are part of three possible employment categories (employment, temporary layoff, permanent job loss) and then estimate the impact of the increased unemployment insurance benefits (as well as the stimulus checks) on consumer spending for consumers of each of these categories. They note that spending would be lower even without unemployment shocks because restrictive measures to contain the pandemic, such as lockdowns, led to the limited access of goods and services, therefore limiting spending opportunities. The employed, by definition, do not receive any UI benefits. Those individuals who are on temporary layoffs particularly benefit from the CARES Act provisions, which provide them with the means to smooth their consumption throughout their transitory shocks. Their spending recovers fully within a year. For those individuals who are permanent job losers, the authors estimate that regular consumption spending takes three years to recover on average. The impact of UI benefits is high, but the permanent job losers would particularly benefit from an expansion of UI benefits if the lockdown was extended, as their unemployment shock is always longer than the length of the lockdown itself. Because the increased UI benefits have already expired, but at the same time employment has not yet come back to normal and further restrictions are being put into place, we can interpret these results to mean that the permanent job losers would benefit from an extension of the UI benefits as long as restrictions are in place because their unemployment will be long-lasting even following the end of pandemic-induced restrictions. [Gregory et al. \(2020\)](#) also differentiate between those on temporary layoffs and those who are permanent job losers and find that the lockdown

disproportionately disrupts the latter group, because it takes a much-longer period of time for them to find a new job. The difference between a temporary pandemic-induced unemployment and a more permanent job loss is important to inform policy, as discussed in [Gallant et al. \(2020\)](#) and in [Forsythe et al. \(2020b\)](#), who suggest that policies designed to prop up labor demand would be successful.

Generosity of UI benefits and return-to-work decisions. The effectiveness of the UI benefits is also due to their generosity: as reported by [Ganong et al. \(2020\)](#), this leads to a median replacement rate (the level of total UI benefits divided by the pre-unemployment wage) of 134 percent. They find that around two-thirds of workers have a replacement rate greater than 100 percent (as in, they receive higher benefits than the wage they used to receive.) This generosity has spurred a lot of discussion on whether such high benefits would reduce workers' willingness to go back to work because they suddenly make more than their previous wage (see, for example, [Barrero et al. 2020](#).) Both [Petrosky-Nadeau \(2020\)](#) and [Boar and Mongey \(2020\)](#) show that this is not the case because the UI benefits are too small and too short-lived to make it worth it for individuals to give up a return-to-work offer. Their findings are confirmed by data evidence showing that return-to-work and employment rates were not lower in states where the UI benefit expansion was larger (see [Altonji et al. 2020](#), [Bartik et al. 2020](#), [Dube 2020](#), and [Marinescu et al. 2020](#).) In the very short-term, [Fang et al. \(2020\)](#) find that expanded UI benefits would lead to higher unemployment in the second half of the year, with larger effects with higher benefits, but that the policy would still enhance well-being for the population as a whole.

Optimality of UI benefits. The studies discussed so far analyzed the effectiveness of UI benefits and their impact on return-to-work offers, but they did not focus on whether the policy intervention was optimal. Theoretically, [Guerrieri et al. \(2020\)](#) show that abundant social insurance is a key ingredient of an optimal policy response in a pandemic (together with a loosening of monetary policy,) where such a policy would reallocate income from workers in sectors that are not particularly affected by the pandemic to workers in sectors that are particularly hit by the pandemic. [Bredemeier et al. \(2020\)](#) provide evidence for this result quantitatively. [Mitman and Rabinovich \(2020\)](#) find that the \$600/week-policy was close to optimal and that UI benefits should be optimally increased at the start of the crisis but then lowered as the economy reopens to align incentives to return to work. Nevertheless, coupling extended UI benefits with a re-employment bonus would be an even-better option as individuals would receive much-needed help while maintaining all incentives to search for a job. It is worth noting that the previously-discussed studies both empirically and quantitatively show that return-to-work rates were not significantly affected by increased UI benefits, therefore indicating that this disruption was likely minimal. [Birinci et al. \(2020\)](#) find that the optimal policy would bundle UI benefits with payroll subsidies. [Kapička and Rubert \(2020\)](#) analyze the optimal policy by including virus transmission and by examining what the optimal labor-market policy would be to save lives and find that it would have been optimal to shut down businesses, impose a quarantine several weeks before the pandemic peak, and move a quarter of workers out of employment to limit transmission.

Stimulus Checks

CARES provisions. The CARES Act provision prescribes a direct cash payment of \$1,200 for each adult with an annual income of \$75,000 or less plus \$500 for each child. For incomes higher than \$75,000, the benefit begins to phase out and is nil for any income at or above \$99,000.

Impact of stimulus checks on spending. [Carroll et al. \(2020\)](#) use their model to also estimate the impact of the stimulus checks on consumer spending for consumers in each of the three employment categories: those who are employed, those who are on temporary layoffs, and those who are permanent job losers. The employed are the ones that suffer the least, save a good part of the stimulus check upon receipt, but their spending rebounds immediately as soon as the lockdown ends. The lack of spending choices available during the lockdown induces the saving, while spending rebounds once those choices become available again due to those individuals' healthy finances. For the other two groups, i.e. both for the individuals on temporary layoffs who expect to resume their job once the lockdown ends and for the individuals who are permanent job losers who do not expect to resume their job, the unemployment insurance benefits provide a much-bigger impact on their spending because of the larger per-individual amount. For those individuals who are permanent job losers in particular, the impact of the checks on immediate consumption is quite small because they know they will need to smooth that check over a longer period of time. For the employed, whose impact on spending is only due to the stimulus checks, the authors find that, even without a lockdown, only about 20 percent of the stimulus amount would be spent immediately. The fact that only 20 percent of the checks would be spent even in the absence of any restrictive measures is indicative of the impact that the pandemic directly had on spending. This impact is also evident in household-level bank-account data, as in [Bachas et al. \(2020,\)](#) in weekly state-level data, as in [Kobayashi et al. \(2020,\)](#) and in the aggregate, as verified by the Bureau of Labor Statistics (2020) analysis in April, which showed that aggregate income rose because of the policy interventions despite the output and consumption decline caused by the restriction measures.

Optimality of stimulus checks. The previously-discussed papers take government interventions as given. The optimality of these interventions, however, is not examined. By contrast, [Nygaard et al. \(2020\)](#) analyze what would be the (constrained-)optimal allocation of the stimulus checks under information that can be observed by the government through the individuals' tax returns, such as the individuals' marital status, age, income, or number of children. To derive the optimal allocation of stimulus checks, they first use a life-cycle consumption-savings model with heterogeneous consumers to predict the consumption responses to \$100 increments of cash transfers by age, income, marital status, and number of children. They then compare all feasible allocations of the stimulus checks across households to examine whether the government could both spend less and achieve more stimulus than what was accomplished under the CARES Act, and derive the allocation that leads to the highest stimulus effect. They find that the poor and the young, especially those with children, should have received a larger check, which is an allocation that would have allowed for the same stimulus effect at half the cost of the actual allocation. [Nygaard et al. \(2020\)](#) further study the optimal allocation of a second round of stimulus checks. They find that the first round of checks was not large enough. Consequently, the optimal second-round policy is similar to the optimal first-round policy: money should be allocated to the young

and to poor households with children. Their findings also suggest that a stricter income requirement would lead to a larger stimulus effect.

Empirical analysis of spending patterns following stimulus. A separate strand of this growing literature uses large administrative datasets, such as transaction records, or large-scale surveys (such as [Wozniak et al. 2020](#), among others,) to measure how consumption changed following the pandemic. [Bhutta et al. \(2020\)](#) estimate that an additional two percent of typical working families would be able to cover six months of expenses after an unexpected income disruption, such as a job loss, thanks to the receipt of the stimulus check. [Baker et al. \(2020\)](#) find that recipients on average spent about a third of the stimulus checks within a few weeks with larger effects for poorer consumers. [Coibion et al. \(2020\)](#) find that individuals reported having spent or planned to spend around 40 percent of the total transfer on average, where the amount is higher for the unemployed, the more financially-constrained, those in larger households, less educated, and who qualified for smaller transfers. [Armantier et al. \(2020\)](#) find that 29 percent of all stimulus payments was used for consumption, with another 35 percent used to pay down debt and the rest saved. [Chetty et al. \(2020a\)](#) find that stimulus payments to low-income households had large effects on their consumption. [Karger and Rajan \(2020\)](#) use transaction-level data during the two weeks before and after the stimulus check to analyze the change in credit- and debit-card spending immediately following the stimulus receipt. They find that the poor spent most of their check, while those in better financial health spent 23 percent of their transfer. [Sahm et al. \(2020\)](#) find that poorer individuals spend most of their checks to repay debt and that the richest individuals are those who save the largest share of the amount received. [Misra et al. \(2020\)](#) use transaction-level data from debit cards and find that about 40 percent of every dollar in stimulus is spent within the first four days from receipt and document geographical differences in spending. [Li et al. \(2020\)](#) also document geographical differences by using transaction-level data from debit cards owned by low-income households, but also find that the stimulus payments had a positive and sizable effect on spending for low-income households and that the positive effect from the stimulus payment was four times as high in absolute value as the negative effect that the lockdown had on spending for the same group. Positive effects on the poverty level were also found by [Han et al. \(2020.\)](#) All of these data findings are consistent with the models discussed above: the poor, the young, and those with children are likely to benefit from higher amounts of stimulus as they are more financially-constrained and would spend a higher amount of the transfer received for any check amount.

Difficulty to reach the most marginalized. Finally, while the most disadvantaged would benefit the most from these stimulus payments, [Bitler et al. \(2020\)](#) discuss how many individuals remained and still are in distress despite the unprecedented policy response due to delays in implementation, the modest payments outside of UI benefits, and statutory requirements that exclude individuals that would benefit the most from the payments themselves. In particular, [Marr et al. \(2020\)](#) estimate that 12 million non-tax-return filers who are eligible for the stimulus check did not automatically receive it and had to request it. Because of this extra hurdle, there was a nearly-20-percentage-point difference in the receipt rate of stimulus checks between those eligible individuals below and above the poverty rate, at the expense of the poorer individuals. The papers discussed suggest that an implementation which does not favor those who are the most in need is far from an optimal allocation of the stimulus checks and leads to payments being made to those who would consume less of the overall payment because of their better financial health, and therefore to a lower stimulus effect overall.

References

- Altonji, Joseph, et al. "[Employment Effects of Unemployment Insurance Generosity During the Pandemic.](#)" *Yale University Manuscript* (2020).
- Armantier, Olivier et al. "[How Have Households Used Their Stimulus Payments and How Would They Spend the Next?.](#)" *Liberty Street Economics* 20201013b, Federal Reserve Bank of New York (2020)
- Bachas, Natalie, et al. "[Initial impacts of the pandemic on consumer behavior: Evidence from linked income, spending, and savings data.](#)" *NBER Working Paper* w27617 (2020).
- Baker, Scott R., R. A. Farrokhnia, Steffen Meyer, Michaela Pagel, and Constantine Yannelis. "[Income, liquidity, and the consumption response to the 2020 economic stimulus payments.](#)" *NBER Working Paper* w27097 (2020).
- Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis. "[Covid-19 is also a reallocation shock.](#)" *NBER Working Paper* w27137 (2020).
- Bartik, Alexander W., et al. "[Measuring the labor market at the onset of the COVID-19 crisis.](#)" *NBER Working Paper* w27613 (2020).
- Bayer, Christian, et al. "[The Coronavirus Stimulus Package: How large is the transfer multiplier?.](#)" *Working Paper* (2020).
- Bell, Alex, Thomas J. Hedin, Geoffrey Schnorr, and Till von Wachter. "[December 21st Analysis of Unemployment Insurance Claims in California During the COVID-19 Pandemic.](#)" *California Policy Lab Report* (2020).
- Bhutta, Neil, et al. "[COVID-19, the CARES Act, and families' financial security.](#)" *SSRN Working Paper* 3631903 (2020).
- Birinci, Serdar, et al. "[Labor Market Policies during an Epidemic.](#)" *FRB St. Louis Working Paper* 2020-024 (2020).
- Bitler, Marianne, Hilary W. Hoynes, and Diane Whitmore Schanzenbach. "[The social safety net in the wake of COVID-19.](#)" *NBER Working Paper* w27796 (2020).
- Boar, Corina, and Simon Mongey. "[Dynamic trade-offs and labor supply under the CARES Act.](#)" *NBER Working Paper* w27727 (2020).
- Bredemeier, Christian, Falko Juessen, and Roland Winkler. "[Bringing back the jobs lost to Covid-19: The role of fiscal policy.](#)" *Covid Economics: Vetted and Real-Time Papers* 29 (2020): 99-140.
- Brodeur, Abel and Gray, David M. and Islam, Anik and Bhuiyan, Suraiya. "[A Literature Review of the Economics of Covid-19.](#)" *IZA Discussion Paper* 13411 (2020).

Bureau of Economic Analysis, 2020. Personal Income and Outlays: April 2020. BEA 20—24. Bureau of Economic Analysis, Washington, DC.

Cajner, Tomaz and Figura, Andrew and Price, Brendan M. and Ratner, David and Weingarden, Alison. “[Reconciling Unemployment Claims with Job Losses in the First Months of the COVID-19 Crisis.](#)” *FEDS Working Paper* 2020-055 (2020).

Carroll, Christopher D., Edmund S. Crawley, Jiri Slacalek, and Matthew N. White. “[Modeling the consumption response to the CARES Act.](#)” *International Journal of Central Banking* (2020).

Chetty, Raj, John N. Friedman, Nathaniel Hendren, and Michael Stepner. “[The Economic Impacts of COVID-19: Evidence from a New Public Database Built from Private Sector Data.](#)” *NBER Working Paper* 27431 (2020a).

—. “[Real-time economics: A new platform to track the impacts of COVID-19 on people, businesses, and communities using private sector data.](#)” *Opportunity Insights* (2020b).

Coibion, Olivier, Yuriy Gorodnichenko, and Michael Weber. “[How Did US Consumers Use Their Stimulus Payments?.](#)” *NBER Working Paper* w27693 (2020).

Cortes, Guido Matias and Forsythe, Eliza. “[Impacts of the COVID-19 Pandemic and the CARES Act on Earnings and Inequality.](#)” *Upjohn Institute Working Paper* 20-332 (2020).

Cox, Natalie, et al. “[Initial impacts of the pandemic on consumer behavior: Evidence from linked income, spending, and savings data.](#)” *University of Chicago, Becker Friedman Institute for Economics Working Paper* 2020-82 (2020).

Dube, A. “[The Impact of the Federal Pandemic Unemployment Compensation on Employment: Evidence from the Household Pulse Survey.](#)” *Working Paper* (2020).

Fang, Lei, Jun Nie, and Zoe Xie. “[Unemployment insurance during a pandemic.](#)” *Federal Reserve Bank of Kansas City Working Paper* 20-07 (2020).

Faria-e-Castro, Miguel. “[Fiscal policy during a pandemic.](#)” *FRB St. Louis Working Paper* 2020-006 (2020).

Forsythe, Eliza, et al. “[Labor demand in the time of COVID-19: Evidence from vacancy postings and UI claims.](#)” *Journal of public economics* 189 (2020a): 104238.

—. “[Searching, Recalls, and Tightness: An Interim Report on the COVID Labor Market.](#)” *NBER Working Paper* w28083 (2020b).

Gallant, Jessica, et al. “[Temporary Unemployment and Labor Market Dynamics During the COVID-19 Recession.](#)” *NBER Working Paper* w27924 (2020).

Ganong, Peter, Pascal J. Noel, and Joseph S. Vavra. "[US Unemployment Insurance Replacement Rates During the Pandemic.](#)" *NBER Working Paper 27216* (2020).

Giannarelli, Linda, Laura Wheaton, and Gregory Acs. "[2020 Poverty Projections: Initial US Policy Response to the COVID-19 Pandemic's Economic Effects is Projected to Blunt the Rise in Annual Poverty.](#)" *Washington, DC: Urban Institute* (2020).

Goldsmith-Pinkham, Paul, and Aaron Sojourner. "[Predicting Initial Unemployment Insurance Claims Using Google Trends.](#)" *Working Paper* (2020).

Gregory, Victoria, Guido Menzio, and David G. Wiczer. "[Pandemic Recession: L or V-Shaped?.](#)" *NBER Working Paper 27105* (2020).

Guerrieri, Veronica, et al. "[Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages?.](#)" *NBER Working Paper 26918* (2020).

Han, Jeehoon, Bruce Meyer, and James X. Sullivan. "[Income and Poverty in the COVID-19 Pandemic.](#)" *NBER working paper w27729* (2020).

Kapicka, Marek, and Peter Rupert. "[Labor markets during pandemics.](#)" *Manuscript, UC Santa Barbara* (2020).

Kaplan, Greg, Benjamin Moll, and Gianluca Violante. "[The great lockdown and the big stimulus: Tracing the pandemic possibility frontier for the US.](#)" *NBER Working Paper w27794* (2020).

Karger, Ezra and Aastha Rajan. 2020. "[Heterogeneity in the Marginal Propensity to Consume: Evidence from Covid-19 Stimulus Payments.](#)" *Federal Reserve Bank of Chicago Working Paper 2020–15* (2020).

Karpman, Michael, and Gregory Acs. "[Unemployment Insurance and Economic Impact Payments Associated with Reduced Hardship Following CARES Act.](#)" *Washington, DC: Urban Institute* (2020).

Kobayashi, Satoshi, Kaori Nakahara, Takemasa Oda, and Yoichi Ueno. "[The Impact of COVID-19 on US Consumer Spending: Quantitative Analysis Using High-Frequency State-Level Data.](#)" *Bank of Japan Review Series 20-E-7* (2020).

Kong, Edward, and Daniel Prinz. "[The impact of shutdown policies on unemployment during a pandemic.](#)" *Covid Economics* 17 (2020): 24-72.

Li, Kangli, et al. "[The Impact of COVID-19 Lockdowns and Stimulus Payments on Spending of US Lower-income Consumers.](#)" *SSRN Working Paper 3681629* (2020).

Liu, Ou and Mai, Tam. "[Employment during the COVID-19 Pandemic: Collapse and Early Recovery.](#)" *Working Paper* (2020).

Marinescu, Ioana Elena, Daphné Skandalis, and Daniel Zhao. “[Job search, job posting and unemployment insurance during the COVID-19 crisis.](#)” *Job Posting and Unemployment Insurance During the COVID-19 Crisis* (2020).

Marr, Chuck Kris Cox, Kathleen Bryant, Stacy Dean, Roxy Caines and Arloc Sherman. “[Aggressive State Outreach Can Help Reach the 12 Million Non-Filers Eligible for Stimulus Payments.](#)” *Center on Budget and Policy Priorities* 11 (2020).

Misra, Kanishka and Singh, Vishal and Zhang, Qianyun Poppy. “[Impact of the Cares Act Stimulus Payments on Consumption.](#)” *Working Paper* (2020).

Mitman, Kurt, and Stanislav Rabinovich. “[Optimal unemployment benefits in the pandemic.](#)” *Working Paper* (2020).

Montenovo, Laura, et al. “[Determinants of disparities in covid-19 job losses.](#)” *NBER Working Paper* 27132 (2020).

Nygaard, Vegard M., Bent E. Sørensen, and Fan Wang. “[Optimal Allocation of the COVID-19 Stimulus Checks.](#)” *SSRN Working Paper* 3691091 (2020).

Sahm, Claudia, Matthew Shapiro, and Joel Slemrod. “[Consumer Response to the Coronavirus Stimulus Programs.](#)” Slides (2020).

Parolin, Zachary, et al. “[Monthly Poverty Rates in the United States during the COVID-19 Pandemic.](#)” *Center on Poverty and Social Policy at Columbia University* (2020).

Petrosky-Nadeau, Nicolas. “[Reservation Benefits: Assessing job acceptance impacts of increased UI payments.](#)” *Federal Reserve Bank of San Francisco Working Paper* 2020-28 (2020).

Wozniak, Abigail, Joe Willey, Jennifer Benz, and Nick Hart. [COVID Impact Survey: Version 1](#) [dataset]. Chicago, IL: National Opinion Research Center, 2020.