

NBER WORKING PAPER SERIES

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Working Paper 27796
<http://www.nber.org/papers/w27796>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
September 2020

Paper prepared for the June 2020 Brookings Papers on Economic Activity Volume. We thank Seth Murray and Edward Olivares for sharing data on timing of acceptance of PUA claims and Tomaz Cajner, Andrew Figura, Brendan Price, David Ratner and Alison Weingarden for sharing their code and data on this. Raheem Chaudhry, Danae Horn, Abigail Pitts, and Natalie Tomeh provided excellent research assistance. We thank Lisa Barrow, Stacy Dean, Robert Moffitt, Zach Parolin, Brendan Price, Dottie Rosenbaum, Jesse Rothstein, Geoff Schnorr, Jay Shambaugh, Louise Sheiner, Tim Smeeding, Ernie Tedeschi, Till von Wachter, Justin Wolfers, and Abigail Wozniak for helpful comments. This paper received research support from the Brookings Institution. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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NBER Working Paper No. 27796
September 2020
JEL No. H53,I3,I38

ABSTRACT

The COVID-19 crisis has led to spiking unemployment rates with disproportionate impacts on low-income families. School and child-care center closures have also meant lost free- and reduced-price school meals. Food prices have increased sharply leading to reduced purchasing power for families' limited income. The Families First Coronavirus Act and the CARES Act included robust responses including expansions to unemployment insurance (expansions in eligibility and \$600 per week supplement), a one-time payment of \$1,200 per adult and \$500 per dependent, an increase in SNAP payments, and the launch of the Pandemic EBT program to replace lost school meals. Despite these efforts, real time data show significant distress – notably food insecurity rates have increased almost three times over the pre-COVID rates and food pantry use has also spiked. In this paper, we explore why there is so much unmet need despite a robust policy response. We provide evidence for three explanations: (1) timing - relief came with a substantial delay (due to overwhelmed UI systems/need to implement new programs); (2) magnitude – payments outside UI are modest; and (3) coverage gaps – access is lower for some groups and other groups are statutorily excluded.

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I. Introduction

The COVID-19 crisis has hit low-income families especially hard. As unemployment rates have spiked overall, they have risen even higher for those with lower levels of education, and for Black and Hispanic individuals. Other aspects of the crisis disproportionately impact low-income families as well; for example low-income families are more likely to be headed by a single mother, and a higher share of women have lost jobs than during prior recessions. Closures of schools and child-care centers have meant that large numbers of low-income children have lost access to free- or reduced-price meals. Food prices have increased sharply leading to a reduction in the purchasing power of families' limited income.

Two pieces of legislation, the Families First Coronavirus Act and the Coronavirus Aid, Relief, and Economic Security (CARES) Act, include important provisions to respond to these historic job losses. Four elements are particularly relevant in our context. First, there were substantial expansions to unemployment insurance (UI): a \$600 per week universal supplement, a 13-week extension of eligibility, and expanded eligibility for self-employed and gig economy workers and those without sufficient earnings for normal UI. Second, a one-time payment of \$1,200 per adult (\$2,400 for a married couple) plus \$500 per dependent child under 17 was implemented (with phase outs for high-income families). Third, all Supplemental Nutrition Assistance Program (SNAP) payments were raised to the maximum benefit level – averaging a \$165 increase in monthly benefits for households receiving increases. Fourth, a new program (Pandemic EBT) was launched to provide direct payments to the millions of families whose children lost access to free and reduced-price meals while their schools were closed.

Despite these efforts, many individuals and families are suffering. Food insecurity rates have increased almost three times over the pre-COVID rates with almost a quarter of families reporting their food “just didn’t last” and they did not have money to buy more. Seven percent of adults reported receiving help from a food pantry in the prior week, with Feeding America (the national organization of food pantries) reporting a 70 percent increase in need and many news outlets documenting miles-long lines of individuals waiting to obtain for food assistance. Adverse mental health conditions have worsened, with rates of depression and anxiety doubling over pre-COVID levels. While it will be many months before we have a clear picture of how family incomes are changing, it is evident from the available real-time data that there currently remains tremendous unmet need.

Why do we see so much need and distress despite a policy response of unprecedented magnitude? In this paper, we examine this question and provide evidence for three explanations. First, is the timing of the response; many relief payments especially to low-income families came with a substantial delay—and could not be weathered without hardship (or emergency charity aid) for those who lacked savings or access to credit. Payment delays have been driven by overwhelmed UI systems, the need to engineer new programs, and application requirements for the most disadvantaged families built into the delivery system. To the extent that these are factors, we should see improvements as administrative capacity and payments increase across time—though of course hardship may increase once again when emergency payments are rolled back. Second, outside of the UI system, the magnitude of payments made to low-income families was relatively modest—averaging \$30 to \$40 per week—and may not have been sufficient to offset increased need. Third, there are coverage gaps in the response and some who were hit by the economic shock had no recourse from existing safety net programs. Importantly, despite expansions intended to make UI coverage more universal than it has traditionally been, the limited real-time data suggest that there are still many unemployed workers who are not receiving UI.

Furthermore, and more structurally, over the past several decades the U.S. has steered its social safety net, which has always been less far-reaching and less funded compared to other rich countries, to focus on work. Through the shift from cash assistance to earnings supplements, and through adding work requirements to programs designed to meet basic food and healthcare needs, the United States has built a social safety net that delivers less insurance and has placed more emphasis on incentivizing work and topping up low earnings. The current system may meet need during times of low unemployment, but it is ill suited to protect against job loss and high unemployment. Cash welfare payments for the non-disabled are extremely limited and are either not countercyclical or only very slightly so (Bitler and Hoynes 2016a; Bitler, Hoynes, and Iselin, forthcoming). While SNAP payments typically can quickly increase in response to rising need, the benefits are modest, and recent policy changes—tying SNAP receipt to work for some groups and making it more difficult for immigrants to participate—will dampen SNAP’s counter-cyclical impact if not waived. As a result, there are many who are likely falling through holes in the safety net.

This analysis leads us to discuss the set of policy responses that could be applied to this documented need. Policies including the emergency policies expanding UI and SNAP and replacing missed school meals could be extended and adapted to the ongoing crisis. In addition, following the successful policies of the 2009 stimulus, one could consider increasing maximum SNAP benefits by 15 percent. Because UI and SNAP only serve a limited subset of those in need, another round of stimulus payments could provide relief, potentially targeted more narrowly to low-income families.

Second, structural policy changes to our work-based social safety net could enable it to function more effectively in economic downturns. One approach is to update the UI system to reach a larger share of unemployed workers—including the self-employed and those with inconsistent work histories. Another approach is to build more effective counter-cyclical into these key safety net programs, with policy changes automatically triggered by increases in the unemployment rate and shutting off when economic recovery takes place. Additionally, there would be value in harmonizing Federal and state data systems to facilitate automation of relief payments to all eligible recipients.

II. The COVID-19 Shock to Economic Wellbeing

To begin, we deploy the available data to monitor the current, real-time measures of household well-being, with particular attention to the disadvantaged population.¹

To understand who is at risk under COVID-19 for needing new or increased access to the social safety net, we start by describing the extent of job loss. We use the monthly Current Population Survey (CPS) to document increases in unemployment across education groups (e.g., Blau et al., 2020, Montenegro et al. 2020) pooling the data for 24 months ending in June 2020, limiting the sample to ages 18-64, and estimating a model with calendar month dummies (to control for seasonality) and month dummies for the four months beginning in March 2020. In Appendix Table 1, we present the estimated coefficients on the COVID-19 month dummies (March, partially treated; April; May and June); each provides estimates the effect of the crisis on labor market outcomes, net of typical seasonal patterns.² As has been widely discussed, the

¹ Han et al. (this volume) and Parolin et al (2020) use available data to estimate real time measures of poverty.

² The baseline comparison we suggest is to February 2020, but of course, the regression results would be the same as long as the omitted month is not during March-June.

current crisis has made it difficult to measure unemployment and the Bureau of Labor Statistics has documented a spike in the share recorded as having jobs but not being at work and also in those not in the labor force but wanting work—many of whom should likely be classified as unemployed instead.³ We estimate those receiving a COVID-19 shock to unemployment (netting out the previous year) and show three measures of the unemployment shock: the March-June change in those unemployed, unemployed or having a job and are not at work, and unemployed or having a job and not at work or not in the labor force.⁴ Our preferred measure is the most expansive and is shown in column 3. Overall, by April 2020 there was a 14.1 percentage-point increase in the share unemployed or with a job but not at work or not in the labor force (or a 8 percentage-point increase in unemployed, an 11.2 percentage-point increase for those unemployed or with a job but not at work). The labor market shock has been significantly greater for those with lower levels of education. The increase in April unemployment (for our preferred measure) was 17.8 percentage points for those with high school or less compared to 8.8 percentage-points for those with a college degree or more. Because children’s exposure to economic shocks has been shown to have long-lasting health and economic consequences (Hoynes and Schanzenbach, 2018), we also analyze changes in children’s exposure to the crisis as measured by changes in labor market status for adults 18-64 in their household.⁵ As shown in Appendix Table 2, children in households with a household head with high school degree or less experienced an 10.1 percentage point increase in the likelihood they lived with an adult who was unemployed, with a job but not at work or not in the labor force in April, compared to 6.9 percentage points for children with a head with a college degree. These striking inequalities in the extent of the economic shock across education groups continue through May and June 2020 and are evident for all of the labor market measures. This result—that recessions increase

³ <https://www.bls.gov/cps/employment-situation-covid19-faq-may-2020.pdf>. The BLS has documented that some share of those reporting they have a job but are not at work likely are unemployed given ideal definitions of these measures and also notes similar concerns for those not in the labor force due to COVID. Some who would like to have work but are not measured as in the labor force reached record levels during the crisis, likely due to closures, stay at home orders, and concerns about engaging in the labor market (also noted in the BLS FAQ).

⁴ For completeness the table also shows estimates for has a job and not at work (column 4), and not in the labor force (column 5).

⁵ Note that unlike measures about own labor force participation and employment status, these measures are not mutually exclusive, as a child living with more than one adult can live with adults with various employment outcomes.

unemployment more for lower education groups than higher education groups—is a recurring feature of U.S. business cycles (Hoynes et al., 2012; Aaronson et al., 2019).

Also important to the underlying context is that these economic indicators increased more and did so more quickly during the COVID-19 crisis, compared to the Great Recession (see Appendix Figures 1a and 1b).⁶ The (official) unemployment rate spiked to 14.7 percent in April 2020 and has remained above 10 percent through July (the most recent data available) during COVID-19, while it reached 10 percent for only a single month in the Great Recession. Food prices have increased quickly during COVID-19 driven in large part by the largest single-month increase in nearly 50 years in March.⁷

Next we move beyond labor market outcomes to examine real-time measures of family economic wellbeing. We start by analyzing food insecurity—a summary measure indicating that a household does not have reliable access to the food they need due to lack of resources. Usually, a household’s food insecurity status is categorized based on their answers to an 18-item questionnaire, ranging from how often the household worried that their food would run out before there was money to buy more, to whether a child in the household has gone for a day without eating due to lack of money for food. Food insecurity rates can be thought of as a measure of economic (lack of) well-being, and the time series pattern is highly correlated with unemployment rates (Schanzenbach and Pitts, 2020).

During the COVID-19 pandemic, surveys collecting real-time data have not asked the entire battery of food security questions, but instead have asked only a few questions drawn from the survey. We show estimates from three waves of the COVID Impact Survey, which asked respondents whether the following statement was often true, sometimes true, or never true for their household over the past 30 days: “The food that we bought just didn’t last, and we didn’t have money to get more.” We code a respondent as being food insecure if they report that the statement was often or sometimes true. To compare food insecurity rates during COVID-19 to the past, we calculate the share answering yes to the same question in the National Health Interview Survey (NHIS). The NHIS asks the full food security questionnaire, but we limit the

⁶ The Appendix Figures differ in when the series documenting unemployment rates and price changes in the Great Recession begins, with 1a starting at the beginning of the Great Recession and 1b showing the run-up to the unemployment peak.

⁷ These price increases do not include increased time and hassle costs of obtaining food for many families during COVID-19.

analysis to responses to the single item asking whether the respondent agrees that their food “just didn’t last.”⁸

Figure 1 displays trends in food insecurity rates for households overall and for those with children.⁹ For respondents overall, rates of food insecurity increased sharply from 11 percent in 2018 (the latest available NHIS estimate) to 23 percent in April 2020. Low-income families with children have been hit particularly hard during this period, between the loss of free and subsidized school meals due to school closures and particularly elevated unemployment rates among women. This is reflected in even greater elevation in food insecurity among respondents with children, from 13 percent in 2018 to 34 percent in April 2020.¹⁰ The large increase in (seasonally adjusted official) unemployment, from 3.5 percent in February to 14.7 percent in April—an out of sample prediction with strong linearity assumptions to be sure—explains more than half of the increase in food insecurity. Some of the remaining unexplained increase in food insecurity may be due to the sharp increase in food prices (Appendix Figure 1) or loss of free or reduced-price school meals due to school closures.¹¹ Food insecurity rates remain elevated but have come down somewhat from their April peak, with overall rates of 22 percent in May and 20 percent in June (32 percent and 27 percent for respondents with children, respectively).

Other measures of real-time hardship are also elevated. Figure 2 displays the share of households reporting receipt of emergency food from a food bank, food pantry or church, based on an annual time series 2002-2018 drawn from the CPS-Food Security Supplement (CPS-FSS) collected each December that asks about receipt of emergency food over the past month. The blue and orange lines present trends for households overall and for those with children. The

⁸ Like the COVID Impact Survey, the NHIS also asks about experiences in the past 30 days. To make the data series comparable, we weight the NHIS at the respondent level; the COVID Impact Survey only provides respondent-level weights. In general, in the NHIS the share answering that their food “just didn’t last” is consistently 1.24 (overall) to 1.27 (with children) times the food insecurity rate based on the full questionnaire, see Appendix Table 3.

⁹ Appendix Figure 2 shows increases in food hardship measures using the Census Bureau’s Household Pulse Survey compared with the Current Population Survey’s Food Security Supplement. The Household Pulse Survey asks a different question from the food security questionnaire and inquires about the past 7 days. Results are qualitatively similar.

¹⁰ Karpman et al. (2018) find that food insecurity rates are higher in self-administered online surveys than they are in telephone or in-person interviews, which they theorize is in part due to reduced social desirability bias, suggesting that the self-administered versions might be more accurate descriptions of respondent well-being.

¹¹ While many schools continued to offer grab-and-go meals, according to our calculations from the Census Household Pulse survey fewer than 10 percent of households with children report receiving “free meals through the school or other programs aimed at children.” Ananat and Gassman-Pines (2020) find that 11 percent of low-income families reported picking up a grab-and-go meal at their child’s school in the first weeks of school closures. Usually 58 percent of students are eligible for free or reduced-price meals at school.

previous peak, in 2014, showed 2.8 percent of households receiving emergency food (3.6 percent for households with children) per month. The point estimates for the COVID-19 period represent responses from the Census Household Pulse Survey (pooled across the April 23-June 26 period), which asked respondents to report on emergency food from these sources over the past week. Comparing across data sources, *weekly* receipt of free food is at or above its previous peak *monthly* rate.¹²

In addition, measures of mental health are also being tracked in real-time during COVID-19 and show elevated rates of distress across three categories: whether the respondent had little interest in doing things; felt down, depressed or hopeless; or felt nervous, anxious or worried. During COVID-19, the share of adults reporting mental health problems in the past week has doubled compared with rates from 2017-18, suggesting serious distress.¹³ Rates are generally higher among those with lower levels of education, and this gradient persists during COVID-19 (see Appendix Table 4).

The Census Household Pulse survey also asks respondents to rate their confidence in their ability to pay for basic needs in the coming weeks. In May, more than half of respondents indicated they are not “very confident” in their ability to pay for the food they need in the next four weeks, with 9 percent indicating they are “not at all confident.” These rates are uniformly higher among respondents with children and are higher among respondents with lower levels of education (see Appendix Table 5). Among those who have a rent or mortgage payment, 43 percent overall and 51 percent of those with children did not have “high confidence” that they could make their next payment. Together, the evidence suggests that households and individuals are struggling across a variety of dimensions during COVID-19.

III. The Policy Response: How Much Money is Going to Whom and When?

Between the Families First Coronavirus Act (passed March 18) and the CARES Act (passed March 27), more than \$1.8 trillion dollars have been allocated in relief and assistance nationally. Four elements are particularly important for lower-income families: expansions to SNAP, the new Pandemic-EBT (P-EBT) program that provides payments to compensate for

¹² The COVID Impact Survey also asks about receipt of food over the past 7 days from a food pantry and finds even higher estimates—6.8% for respondents overall and 8.3% among those with children, averaged across their 3 waves of data collected from April-June.

¹³ The 2017-18 data measures are for the past 2 weeks.

missed school meals, expansions to UI, and the one-time Economic Impact Payments (EIP). As we will show, these four policies account for about \$600 billion and main response of direct payments to households. Here we track what we know about the magnitude of these benefits, who they went to, and the timing of their activation.

By design, and even without Congressional action, SNAP is structured to respond quickly to increased need. Households that newly become eligible due to unemployment or other loss of income can apply for SNAP and generally receive benefits with 30 days. Indeed, across states, SNAP participation increased more between February and April in states with larger increases in unemployment rates (see Appendix Figure 3) following the pattern found in prior downturns (Bitler and Hoynes 2016).¹⁴ Additionally, during COVID-19 Congress made temporary changes that increased both participation and (for many participants) benefit levels. Usually, SNAP benefits are reduced as a household's income increases—with a maximum monthly benefit of about \$170 per person reduced by 30 cents for each additional dollar in income (after allowable deductions). While state and federal health emergencies are in progress, states can award all SNAP participants the maximum benefit (a provision known as the Emergency Allotment). This increased SNAP spending (holding participation constant) and provides an average increase in benefits of 40 percent to those on SNAP with higher incomes—such as the working poor (for whom SNAP tops up earnings) who have been at particular risk for job loss. To date there has been no benefit increase for the most disadvantaged SNAP recipients who were already receiving the maximum benefit. Additionally, states are temporarily allowed to extend eligibility periods for currently participating households for six months—under normal circumstances recipients are required to reapply for benefits every 6 to 12 months—so offices already stretched by health-related office closures and the need to socially distance could concentrate on screening new applicants. This temporary policy change increased SNAP participation by reducing the flows *out* of the program during the pandemic.

As a result, SNAP spending and participation are increasing with unprecedented speed, as shown in Figure 3 but as we show below, the magnitude is small relative to UI and the Economic Impact Payment. Although national data on SNAP participation only come with some lag, the

¹⁴ Worth noting, Florida experienced the largest increase in SNAP participation, likely due in part to their strong administrative system for SNAP developed to quickly deploy Disaster-SNAP after hurricanes. Rosenbaum (2020) provided SNAP data.

figure presents the percentage increase in SNAP participation (orange solid line) across 43 states that have released their data for April and/or May (these states account for 97 percent of SNAP participation). Relative to February, SNAP participation increased by 12 percent in April, and by 17 percent by May. For comparison, SNAP participation increases during the Great Recession are shown as the orange dotted line. It took 9 months to see the same SNAP participation increase during the Great Recession, but of course unemployment also grew more slowly during that recession.¹⁵ SNAP spending (green solid line) is calculated using Daily Treasury Statements and compares spending on SNAP by month through July relative to spending in February. Some of the spending increase is due to the new P-EBT program, which provides benefits patterned after SNAP to families who lost access to free- or reduced-price meals due to school closures. By the end of July, SNAP spending has more than doubled. Our calculations suggest about 20 percent of the increase is explained by increases in participation, 40 percent is due to paying all participants the maximum benefit, and 40 percent is from P-EBT payments. Much of this increase is slated to end soon, as P-EBT payments have not (yet) been extended to cover fall school closures, and states are only eligible to pay maximum benefits to all SNAP participants as long as there is a state and federal health emergency. Spending grew much more slowly during the Great Recession (green dotted line) and increased substantially when the 15 percent increase in maximum SNAP benefits authorized by Congress as part of the ARRA stimulus package was implemented.

The Congressional policy response also included large expansions to UI, including a \$600 per week supplement, a 13-week extension of fully federally funded benefits, and an expansion of eligibility for self-employed and gig-economy workers and other patches to reach workers who were previously excluded from eligibility (under the new Pandemic Unemployment Assistance or PUA program).¹⁶ The number of UI participants has increased to record levels, with 34.5 million total continuing claims through the week ending July 4, as shown in Appendix Figure 5. After their early May peak, regular continuing claims have started to decrease while PUA claims, after considerable delay in initiation, started to increase.

¹⁵ Appendix Figure 4 shows the growth of SNAP spending and participation for the 12 months leading up to the unemployment rate peak during the Great Recession. The patterns are qualitatively similar.

¹⁶ The Federal government also is funding the "waiting" week for UI, so benefits get out more quickly and most states have suspended search requirements for obtaining UI during the health crisis through May at least.

The one-time Economic Impact Payments included in the CARES Act provide \$1,200 per adult (\$2,400 for a married couple) and \$500 per dependent under 17. This was structured as a fully refundable tax credit, phased out beginning at annual incomes of \$150,000 for married couples, \$112,000 for head of household filers, and \$75,000 for single filers. Treasury provided automatic payments for all who filed federal taxes in tax years 2018 or 2019 as well as many elderly or disabled individuals receiving payments through Social Security or Veteran’s Affairs programs.¹⁷ However, entire families that included any immigrant adult without an SSN were ineligible, thus excluding many citizen children and spouses (if not in the military). The initial payments were made to those with direct deposit information during the week of April 17 and paper checks followed more slowly after that.

Putting this all together, Figure 4 shows weekly spending on Economic Impact Payments, UI, and SNAP (including P-EBT) calculated from Daily Treasury Statements.¹⁸ The increase in UI payments have averaged \$23 billion per week since May. We estimate \$137 billion in Economic Impact Payments were made in mid-April when the direct deposit payments were made, with smaller amounts paid in subsequent weeks as the paper checks rolled out. Increases in SNAP, the only program with payments narrowly targeted to low-income families, hover around \$1 billion per week, with some weekly fluctuation due to variation across states in timing of monthly SNAP benefit payments and disbursement of P-EBT benefits. Between these three categories of spending, nearly \$600 billion in new expenditures occurred between April and July—almost \$360 billion through UI, \$216 billion through Economic Impact Payments, and less than \$20 billion in new spending came through SNAP.¹⁹

There is some emerging evidence that these payments are helping alleviate hardship. For example, unemployed workers who report receiving UI have lower levels of food insecurity than do those who unsuccessfully attempted to receive UI. Food insecurity rates reported in the COVID Impact Survey dropped from 23 percent in April to 20 percent in June for respondents overall, and from 35 percent to 28 percent among respondents with children (Figure 1). The Census Household Pulse survey shows improvements in the share of respondents stating that they are “very confident” they will be able to afford to purchase the foods they need over the

¹⁷ Some of the SSA groups had to submit forms to receive dependent payments

¹⁸ We follow Tedeschi (2020) here, who estimates Economic Impact Payment and UI payments by calculating year-over-year changes by week. We also use this approach for SNAP spending.

¹⁹ Appendix Figure 6 shows cumulative weekly spending using the same data.

next four weeks, increasing from 55 percent of households at the beginning of May to 60 percent at the beginning of June. Furthermore, new evidence finds that receipt of P-EBT payments decreases measures of food hardship (Bauer et al., 2020). Despite noteworthy improvements, these measures are still extremely elevated, and are generally worse for families with children, and for Black and Hispanic respondents.

IV. With This Policy Response, Why Is There Need?

Given the policy response to date, why do we see such large unmet economic need? There are three driving factors: delays in the receipt of payments that were authorized, modest benefit levels (for programs other than UI), and holes in coverage. In this section, we describe elements of the policy implementation, including slow rollout, cumbersome administrative processes, as well as more structural deficiencies.

The available real-time evidence shows that despite high levels of aggregate claims, many workers, especially those with low levels of education, are not receiving UI. We establish this finding from survey and administrative data sources and is consistent with experiences during previous recessions. Panel A of Table 1 presents data from week 3 of COVID Impact Survey data collected May 30 – June 6 (Wozniak et al. 2020). We tabulate data on receipt of UI and SNAP among workers reporting being on furlough. The survey asks “In the past 7 days, have you either received, applied for, or tried to apply for any of the following forms of income assistance, or not?” and the interviewer asks about UI and SNAP. The table presents the responses separately for those with a high school education or less, some college, or a college degree or more. The results show striking disparities in access to UI payments – among furloughed persons with a high school degree or less, 42 percent were receiving UI compared to 52 percent for those with a college degree or more. And this disparity in access to UI is consistent with prior recessions. Panel B of Table 1 presents a similar gradient for the Great Recession using the 2008 Panel of the Survey of Income and Program Participation. Using the sample of individuals in short-term unemployment near the trough of the Great Recession, 29 percent of those with a high school degree or less were receiving UI compared to 47 percent of college graduates. It is also important to note that this table suggests that there is only partial overlap between UI and SNAP receipt among the unemployed/furloughed, and a substantial

share obtain SNAP but not UI. Around half of furloughed (during COVID-19) or short-term unemployed (during the Great Recession) report receiving neither UI nor SNAP.

To explore why UI does not reach all unemployed workers, now and in previous recessions, we use the 2019 CPS Annual Social and Economic Supplement (which covers 2018 calendar year) and the 2020 UI calculator in Ganong et al. (2020) to simulate the share of individuals age 20-59 with positive earnings who would be eligible for UI (under normal UI rules, i.e. without Federal expansions) if they became unemployed.²⁰ There are sharp disparities in eligibility, with much lower eligibility rates for those in lower-income families (see Appendix Figure 7). For workers in families with income below 100 percent of poverty, only 63 percent are eligible for UI compared to 87 percent among all workers. Among those with income below poverty, 14 percent of the ineligible are unauthorized (not eligible to work legally), another 7 percent are ineligible due to being self-employed, and 17 percent are authorized and have wage and salary earnings, but do not meet the work history requirements.²¹ Importantly, the new PUA provisions in the CARES Act have attempted to fill the gap in eligibility for the self-employed and those with insufficient work history so it is possible that more of these 7 + 17 percent now have UI eligibility; changes have not altered ineligibility rates for unauthorized workers. Thus, as many as 14 percent of those under the poverty level may still be ineligible under the best-case scenario. In addition, there is widespread variation in the share of those unemployed who obtain UI conditional on being eligible. O'Leary and Wandner (2020) report that in 2018, the share of the eligible unemployed receiving UI ranged from 10.5 percent in North Carolina to 95 percent in Rhode Island. Murray and Olivares (2020) report that states with higher rates of pre-COVID UI utilization among those eligible are paying out more claims in the COVID era, suggesting a role for administrative burdens.

²⁰ The code for the Ganong et al (2020) calculator is available at https://github.com/ganong-noel/ui_calculator. Ganong et al. (2020) also present eligibility estimates using their calculator; their approach differs slightly from ours. They focus on all workers who are U.S. citizens, have hourly wage and salary earnings above the federal minimum wage, and who are eligible for UI based on their earnings history. Our sample differs in that we restrict the sample to workers ages 20-59 and expand it to include all workers regardless of immigration status and with any positive earnings, not just those with wage and salary earnings above the federal minimum wage. When estimating potential eligibility should they be laid off and average weekly benefits, we treat workers who are likely unauthorized immigrants as ineligible for UI benefits. We also ignore self-employment income in determining UI eligibility and benefits.

²¹ We follow Passel (2007) to identify survey respondents as unauthorized immigrants.

Next, we turn to real-time administrative data to assess how the UI system responded to this unprecedented increase in unemployment. Ideally we would present, weekly and by state, the number of persons receiving regular UI, PUA, and the \$600 supplement, along with the dates of initiation for the new programs. While we (and others) have made valiant attempts to assemble this, as of this writing there is no systematic data source available to identify this information. One approach is to use Department of Labor reports of weekly continuing claims. However, many concerns have been raised about the use of continuing claims to capture number of recipients, particularly for PUA. First, the count of continuing claims is the number of weeks*people not the number of people—this is particularly problematic when there are delays in processing and back payments are issued with first payments.²² Second, continuing claims can include claimants who are still pending a determination and denials can occur after this stage (Hedin et al. 2020). Additionally, PUA continuing claims appear to be inconsistently reported during the COVID-19 crisis.²³ Another approach is to use Department of Labor reports of weekly initial claims—yet these also have weaknesses, including subsequent denials, double counting due to returning to UI after brief return to work, and, particularly for PUA, capturing possible fraud.²⁴

Despite these data challenges, the available evidence clearly points to significant delays, especially in the rollout of PUA across states. This is not surprising, as states had to design entirely new methods to ensure eligibility for PUA, and states varied widely in their administrative capacity and the need for social distancing in the early months of the pandemic. Additionally, for a state to receive Federal reimbursements for PUA, its recipients must be ineligible for state UI. In practice, in some states PUA applicants must apply to and be rejected from the regular UI program before they could separately apply for PUA, leading to further

²² For example, if it takes four weeks to process the claim when the first payment is made, it will count “4” in continuing claims that week due to the back pay.

²³ Take Florida for example: the first initial claim reported to DOL for PUA was for the week ending June 27 despite an April 25 press release announcing people could start applying for PUA. Additionally, there have been no continuing claims reported as data downloaded August 9 yet the state [data dashboard](#) reports they have paid out \$453 million of PUA as of August 9. Using data shared by Morales and Olivares (2020) and Cajner et al. (2020) we document similar discrepancies between the timing of the first week first claims were reported to the Department of Labor and when states reported that they started accepting PUA claims, with at least 23 states accepting PUA applications at least 7 days before the first week of initial claims was reported to DOL, and with the average difference being 29 days. We thank them for generously sharing their data.

²⁴ For example, the state of Ohio froze 270,000 claims as of August 7 in order to investigate fraud at a time when about 500,000 PUA claims had been paid, and the U.S. Labor Department inspector general raised concerns about fraud in a May 26 Alert Memorandum.

delays. Using information from state press releases, we can document significant delays and wide differences in when PUA was first paid out—ranging from as early as March in New Hampshire (which had passed a program expanding UI to the self-employed even before the CARES Act), to April 30 in California, to May 11 in West Virginia and May 26 in Kansas.²⁵ States also varied in the timing of their payment of the Federal supplemental \$600 weekly payment (FPUC) which was meant to go to all UI recipients.

Using less granular monthly data, we can also calculate for the U.S. a more reliable measure of the UI *utilization rate* by taking the ratio of “first UI payments” available monthly for regular and PUA UI from the Department of Labor (currently through May 2020 for all states reporting PUA first payments) to the total number of unemployed.²⁶ First payments get around the problem of subsequent denials as well as being an unduplicated count of recipients. Combining regular state UI and PUA first payments, we find that 6.4 percent of the unemployed had received a first payment in March, rising to 53.9 percent in April and 84.9 percent in May (see Appendix Table 6). If we limit to payments for PUA, we find 1.6 percent of the unemployed received a first payment by April 2020 rising to 11.0 percent in May.

In summary, the combination of real-time survey and administrative data, the historical patterns, and policy changes during COVID-19 suggest that while UI is serving the majority of the unemployed, it is far from universal. During COVID-19, UI has been slow to reach the unemployed and there is a sizeable share—disproportionately those with low levels of education—who are not receiving benefits. This is consistent with available pre-COVID evidence.

Coverage was incomplete for the Economic Impact Payments as well. According to the Daily Treasury Statements (shown in Appendix Figure 6), cumulative payments for the one-time Economic Impact Payments (\$1,200 per adult and \$500 per child under 17) through the end of July 2020 are around \$215 billion. However, despite the apparent universality of the payment for those with income below the high income phase-out level, the design of the payment scheme has

²⁵ Many states also started by sending PUA applicants the minimum payment (plus, where relevant the additional \$600 Federal payment), and then later determined actual payment eligibility amounts and sent back payments where appropriate.

²⁶ Regular and PUA UI first payments come from the 902P and 5159 forms from the Department of Labor, respectively. PEUC first payments are very small, so we exclude them from the graphs. For the denominator we use CPS monthly estimates of those unemployed (adjusted for changes in those with a job but not at work and not in the labor force over the previous year).

left out the most disadvantaged Americans. First, the law excludes immigrant families who are deemed ineligible if any adult or spouse lacks a Social Security number (unless the family included a member of the military).²⁷ Second, the payments were sent automatically, with no additional action, for tax filers (in 2018 or 2019) and those receiving benefits from the Social Security Administration or Veterans Affairs. Marr et al. (2020) estimate that 12 million nonfilers are eligible for the relief payment but did not automatically receive it. Instead to receive these payments individuals are required to apply for the payment through a new IRS non-filer tool. This nonfiler population is a disadvantaged group with low income, and an estimated three quarters of them are eligible for SNAP or Medicaid. Based on the Urban Institute Coronavirus Tracking Survey, wave 1, fielded between May 14 and May 27, 59 percent of adults with income below poverty reported that they had received their Economic Impact Payment compared with 78 percent among those eligible with income above poverty.

Another source of delay in benefits reaching needy families came from having to create a new program in the midst of the pandemic. When schools across the U.S. closed in mid-March, 30 million students lost daily access to free or reduced-price school meals. To offset this loss, Congress authorized the new Pandemic EBT program to provide food benefits to families who lost subsidized school meals. In order to participate, though, states had to set up and receive approval from USDA this completely new program. Payments came out slowly, as shown in Figure 5, by two months after the Families First Act authorized the program, very few states had made payments—about 15 percent of eligible families lived in states where P-EBT benefits began being dispersed to those on SNAP (where pre-existing debit cards could be used) and fewer than 10 percent lived in states where non-SNAP recipients eligible for school meals programs were dispersing P-EBT benefits. Many states did not make retroactive payments until June or July.

In sum, this discussion illustrates the delays and incomplete coverage in the policy response. Also among those eligible we have incomplete take-up of these programs. Why? This is a direct result of the “application-based” policy environment. Across the different relief provisions, some payments were made automatically (recovery rebate for previous tax filers, increase in SNAP benefit for existing participants) while others required application (UI,

²⁷ Also ineligible are adult dependents, 17-year-olds, and college students whom their parents can claim as dependents.

recovery rebate for some non-filers, Pandemic EBT for those not on SNAP in some states). Decades of research shows that take-up rates are incomplete when an application is required. Individuals need to know about the program to access them (Currie 2006). Administrative hassles are built into many programs and contribute to the less than complete take-up (Herd and Moynihan 2019). In addition, as the COVID-19 crisis has highlighted, states have made policy choices that result in differential capacity to quickly enroll newly unemployed individuals.

V. Putting the Policy Response in the Context of the Broader Social Safety Net

The COVID-19 crisis has been met with an extraordinary economic policy response. It is important to understand, though, that the U.S. social safety net—the foundation beneath this policy response—has been redesigned in recent decades in ways that have made it less responsive to economic downturns. In the years following the Great Recession, many states have reduced the generosity of their UI programs. Average replacement rates to low-income workers are below 50 percent in many states (Appendix Figure 8), providing very limited earnings replacement. More generally, our social safety net has shifted toward a work-conditioned social safety net, using earnings subsidies to increase incomes among workers but offering relatively little out-of-work assistance (to those not elderly or disabled). These changes have been ushered in through the 1996 welfare reform law, expansions to the Earned Income Tax Credit (EITC), and, for some populations, work requirements for SNAP. More recently work requirements have been adopted in some states for Medicaid and regulations implemented to expand SNAP work requirements. The result is a social safety net with an emphasis on promoting and rewarding work—a system that may be adequate during times of low unemployment but provides too little insurance against job loss and economic shocks.²⁸

Recent work by Bitler, Hoynes and Iselin (2020) and Bitler and Hoynes (2016) summarizes how participation in SNAP, UI, the EITC and cash welfare varies with the unemployment rate at the state level, and how that has changed over time. In the period since 2007, only UI shows a robust countercyclical response, with a 1 percentage-point increase in unemployment leading to an 18 percent increase in UI spending. SNAP has a weaker response,

²⁸ For reference, anti-poverty effects of existing programs in 2018 for children, adults with and without children, and the elderly are presented in Appendix Figure 9. The Earned Income Tax Credit has the largest anti-poverty impact for children and adults who live with them, followed by SNAP, housing assistance, and school meals. Among the elderly and childless adults, Social Security overwhelmingly has the largest anti-poverty effect.

with a one percentage-point increase in the unemployment rate leading to a 7 percent increase in SNAP spending. Neither the work-conditioned EITC nor cash welfare systematically change in response to the economy. In other words, despite its important role in reducing poverty, the EITC is poorly suited to insure consumption against job loss.²⁹

Overall, the literature shows that on the eve of the COVID-19 crisis, the safety net was providing uneven and incomplete protection. While UI is strongly counter-cyclical overall, not all unemployed workers receive benefits—including undocumented immigrants and those with inconsistent work histories. Cash welfare does not respond to aggregate economic need, and the EITC is not designed to provide insurance against job loss. SNAP does have the capacity to expand during economic downturns, but benefits are modest and since its benefits are food vouchers they are only partially fungible. In addition, recent policy changes risk further dampening the protective effects of SNAP by imposing stricter work requirements among non-disabled adults without dependents and reducing participation among immigrants and families with mixed immigration status.³⁰

VI. Looking Forward

Next we discuss the set of policy responses that could be applied to this documented need. The increased payments authorized by Congress for UI, SNAP and for missed school meals have been crucial, if incomplete, responses—but all are in danger of not being continued as cases continue to surge at the time of this writing. For example, the \$600/week UI supplement was allowed to expire at the end of July, and PUA (covering the self-employed) is scheduled to expire at the end of December. The temporary increase in SNAP payments is not tied to the state of the economy, but instead is only authorized through the duration of national and state health emergencies. Pandemic EBT has not yet been extended into the 2020 school year for students

²⁹ Bitler et al. (2017) show that lack of cyclicity of the EITC masks two opposing responses: a procyclical effect for single filer EITC recipients (whose EITC payment falls or is lost all together with economic shocks) and a countercyclical effect for married filers (or more generally those with higher predicted earnings) for whom a labor market shock can bring them down into EITC eligibility.

³⁰ When labor market conditions are poor, states can waive SNAP time limits when particular economic conditions (based on employment statistics in the state or local area) are met, so that food assistance is not conditional on employment during bad economic times. The Trump Administration issued a new rule effective April 1 2020 making it more difficult to obtain time-limit waivers. Importantly, the new rule requires that states have elevated unemployment rates for at least the previous 12 months, slowing the ability of the program to respond to immediate need at the onset of an economic downturn.

who are engaged in remote learning. This potential rollback in support is occurring despite an unemployment rate that still exceeds the maximum rates experienced in the Great Recession. One obvious option is to continue the policy responses of July, in particular those applying to UI and SNAP but phase them out only as the economic emergency recedes.

As a general matter, our safety net as designed may need an additional boost during recessions to have a strong countercyclical response. Usual state UI systems generally provide low payments (as a share of wages) for a short duration. SNAP benefits are modest and are intended to supplement other food resources. The EITC tops up low earnings but is not countercyclical. Because these limitations are known, and since there is a high cost both to policy uncertainty and to delays in relief payments, one solution which could provide countercyclical smoothing would build automatic expansions into key safety net programs during recessions (as proposed in Boushey et al. 2019). For example, following the successful policies of the 2009 stimulus, maximum SNAP benefits could be increased by 15 percent (thereby reaching those most disadvantaged recipients who did not gain from the current SNAP expansions). In order to support a work-based safety net, the UI system could be redesigned to provide more insurance and to reach a larger share of disadvantaged unemployed workers during recessions, for example by making permanent the pandemic expansions to UI that extended coverage to self-employed and gig workers and to those with limited work histories, although this may require rethinking the UI tax system for these groups. We could also build a harmonized federal and state data system to facilitate automated relief payments to all eligible Americans. For example, information from state administered SNAP and Medicaid data systems should have been available to the Treasury to facilitate EIP payments for this group. Finally, this crisis has made clear the value for states in increasing their administrative capacity for their programs, particularly UI.

VII. Conclusions

The COVID-19 recession is unlike previous recessions due to its depth and speed of onset. In response to this shock, Congress enacted a number of smart short-term fixes to the safety net that have improved its ability to insure low-income families during this recession, including increasing UI payments and extending eligibility, increasing SNAP payments to some participants, sending cash relief payments (EIP), and introducing a new program to replace

missed school meals (P-EBT). Without question, these policies have improved the responsiveness of the safety net to this crisis and have reduced suffering that would have occurred without these actions.

Even with these valuable policy responses, there is still tremendous unmet need. Food insecurity has sharply increased, as has the share of families relying on emergency food pantries. Some excess suffering occurred because much of the policy response was slow to roll out and reach needy families. The available yet incomplete data suggest a sizeable subset who experienced shocks have not received safety net payments, for example some workers who lost their jobs are not receiving benefits from UI or SNAP. In addition, there remain great economic risks if additional policy responses are removed too quickly, because the underlying U.S. safety net does not provide adequate protection during recessions.

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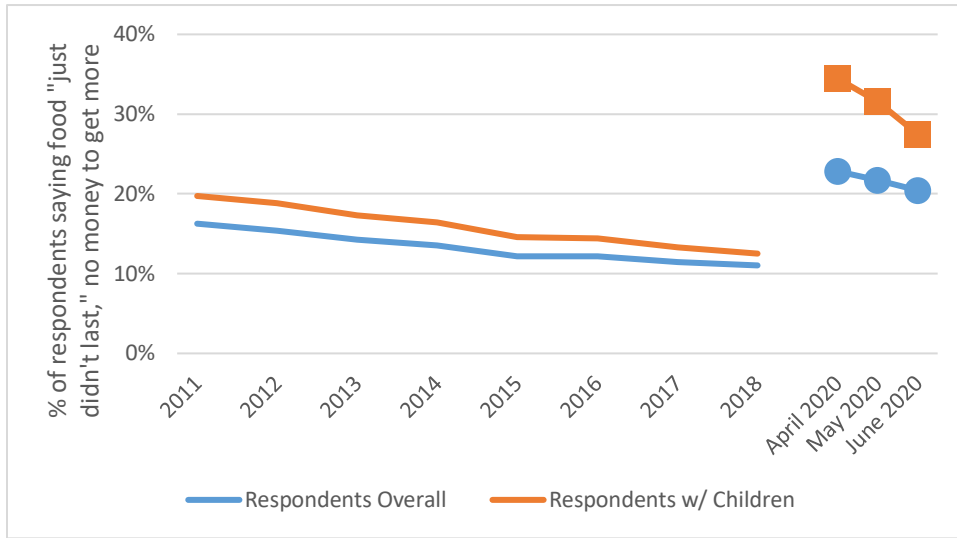
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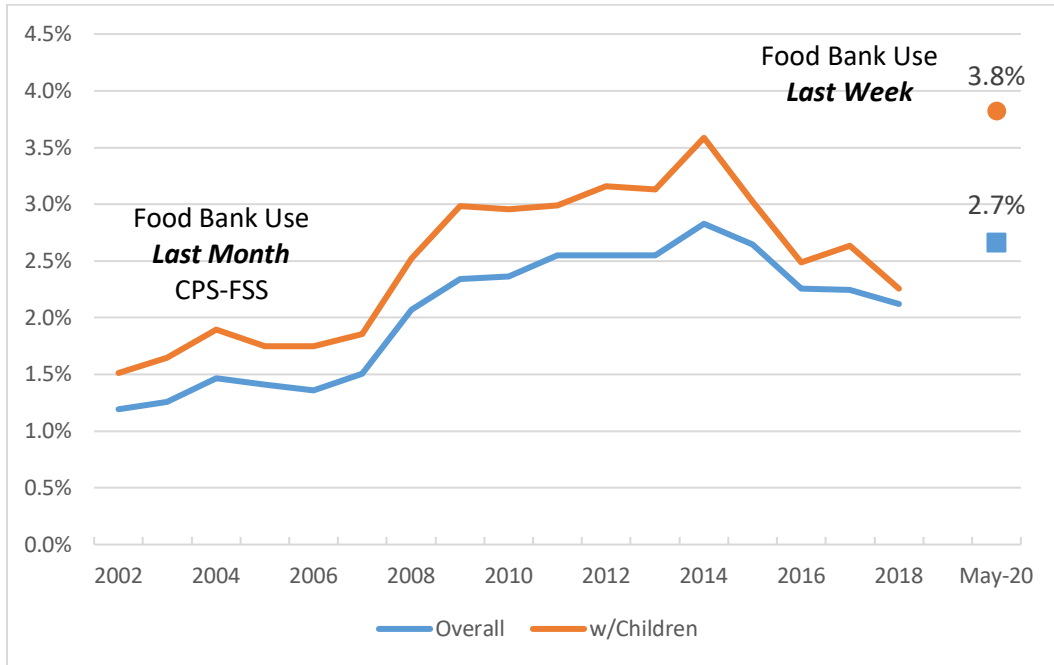
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Figure 1. Food Insecurity Rates, 2011-2018 and During COVID-19



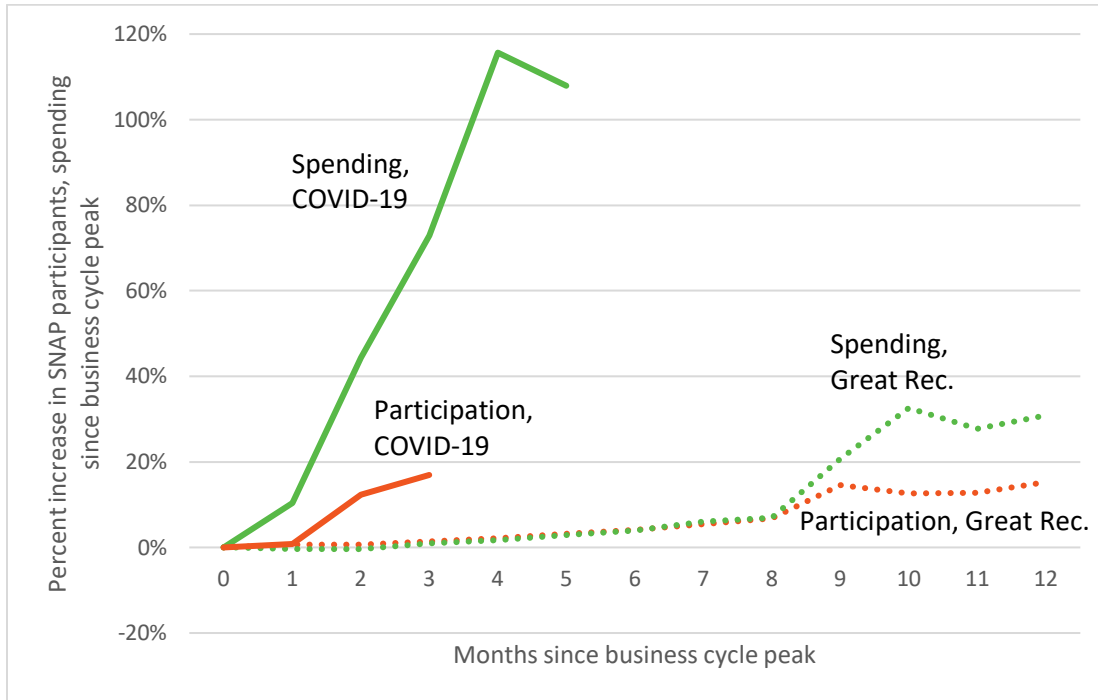
Notes: Authors’ tabulations from the National Health Interview Survey (NHIS) and the COVID Impact Survey. The blue (orange) line is the annual average share of respondents (respondents with children) reporting that over the past 30 days it was sometimes or often the case that their “food just didn’t last” and they didn’t have money to get more, calculated from the NHIS 2011-2018. The three connected blue (orange) dots at the right are share of respondents (respondents with children) reporting that over the past 30 days it was sometimes or often the case that their “food just didn’t last” and they didn’t have money to get more, calculated from the COVID Impact Survey collected April 20-26, May 4-10, and May 30-June 8 and labelled April, May, and June 2020, respectively. Statistics are respondent-weighted.

Figure 2. Received Food from a Food Bank/Pantry or Church, All Households and Households with Children



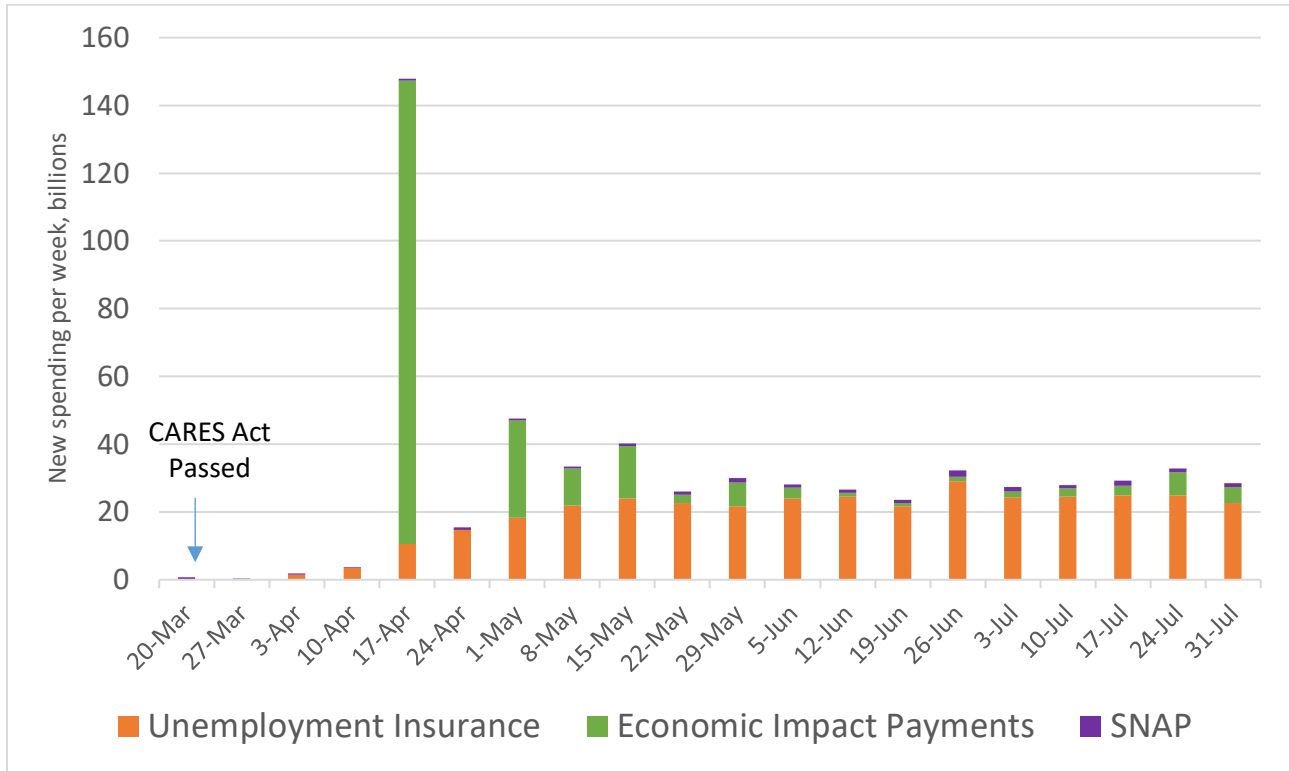
Notes: Authors' tabulations of CPS Food Security Supplement (CPS-FSS) and Census Pulse Survey. The blue and orange lines plot the share of households (blue) or households with children (orange) who reported using a food bank, pantry or church sometime *in the last month* from the CPS-FSS for December 2002-2018. The blue square (orange circle) plot the share of households (households with children) who visited a food pantry *in the past week*, based on the Census Pulse Survey pooled across April 23-May 26. Statistics are weighted to be representative of all U.S. households, using household weights in the CPS-FSS and calculating pseudo-household weights in the Census Pulse Survey by dividing the respondent weight by the number of adults in the household.

Figure 3. Percentage Increase in SNAP Participation and Spending Since Business Cycle Peak: COVID-19 vs. Great Recession



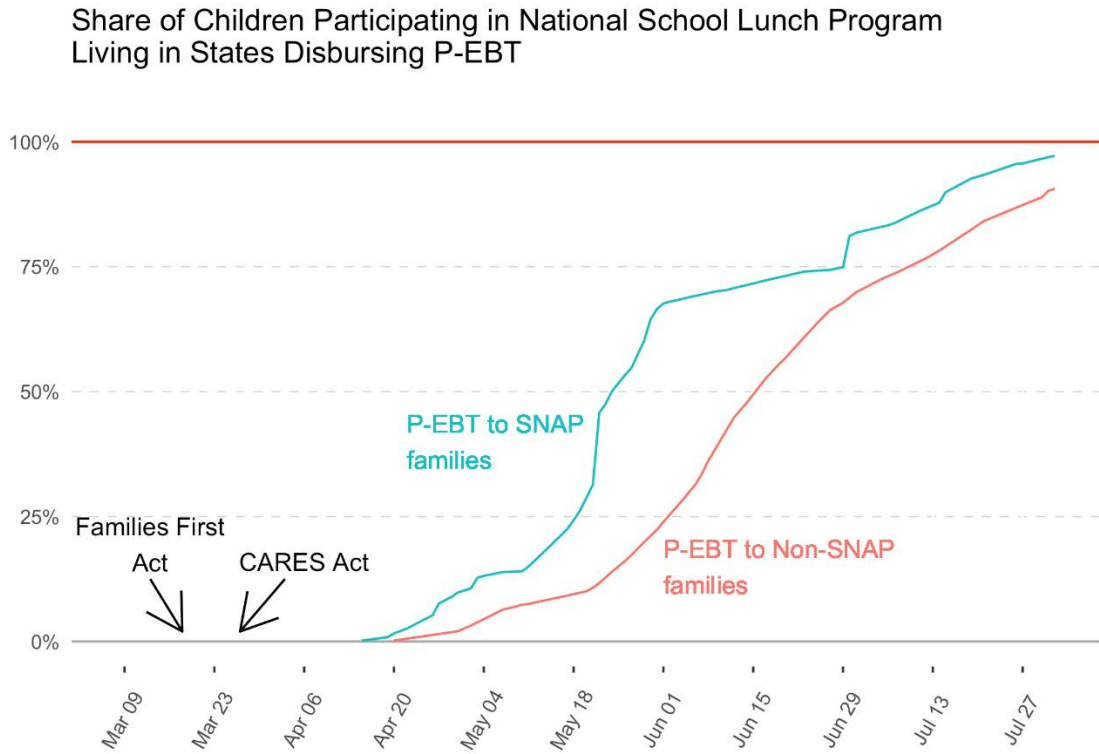
Notes: Authors' calculations of Great Recession spending and caseload data, and February 2020 caseload data, from USDA, Food & Nutrition Service, SNAP Data National Level Annual Summary. Growth in caseloads in March-May 2020 calculated from states that have reported caseload data as of July 31, 2020. 43 (42) states have released April (May) SNAP participation, and these states made up 97% (97%) of all SNAP participation in February. Growth in SNAP spending in 2020 is reported in Daily Treasury Statements through July 31, 2020. All series are plotted as growth by month since the business cycle peak, which was December 2007 for the Great Recession and February 2020 for the COVID-19 recession.

Figure 4. Weekly Spending on Unemployment Insurance, Economic Impact Payments, and SNAP by Week (Billions of 2020\$)



Notes: Authors' tabulations of Daily Treasury Statements through July 31 for SNAP, Unemployment Insurance Benefits, and IRS Tax Refunds to Individuals. We difference expenditures from the inflation-adjusted same-week payments in 2019 to net out the seasonality in payments and to separate Economic Impact Payments from usual tax refunds. We censor Economic Impact Payments at zero prior to the week of April 17.

Figure 5. Timing of Pandemic Assistance Payments for P-EBT



Notes: The blue (red) line displays the share of children who participate in the National School Lunch Program who live in states that have disbursed Pandemic-EBT (P-EBT) payments to families receiving free or reduced-price meals who also participate in SNAP (do not participate in SNAP).

Table 1. Program Receipt Among the Unemployed

	Any UI	Any SNAP	Both UI + SNAP	Neither
	(1)	(2)	(3)	(4)
Panel A: Furloughed Individuals, June 2020				
<=High School	42%	11%	6%	52%
Some College	55%	24%	18%	38%
BA +	52%	9%	6%	46%
Panel B: Short-term Unemployed Individuals, 2008				
<=High School	29%	29%	6%	48%
Some College	37%	21%	5%	47%
BA +	47%	6%	3%	50%

Notes: Panel A is authors' tabulations of the COVID Impact Survey for the sample of furloughed workers, survey week 3 (collected May 30-June 8). We tabulate data on receipt of UI and SNAP, where the survey asks "In the past 7 days, have you either received, applied for, or tried to apply for any of the following forms of income assistance, or not?" The sample consists of those reporting they are unemployed due to furlough at the time of the survey. Panel B is authors' tabulations of the 2008 SIPP Panel and includes individuals ages 20-59 who were unemployed and looking for work for at least a week in the first month of wave 6 of the 2008 SIPP (January – April 2010) and had been unemployed for fewer than 4 months. Receipt of UI and SNAP is measured for the first month of wave 6. UI refers to own receipt and SNAP refers to receipt within the household. All statistics are weighted to be representative of the adult population.

APPENDIX TABLES & FIGURES

Appendix Table 1. Changes in Measures of Unemployment, Has a Job but Not at Work, and Not in the Labor Force, Adults 18-64, All and by Education Group

	Unemployed	Unemployed/has job not at work	Unemployed/has job not at work/NILF	Has job, not at work	NILF
	(1)	(2)	(3)	(5)	(8)
<u>Panel A: Means in February</u>					
All	3.0%	4.8%	27.5%	1.8%	22.7%
HS DO/HS grad	4.3%	5.9%	36.2%	1.7%	30.3%
Some college	2.8%	4.5%	28.9%	1.8%	24.4%
4-year degree	1.8%	3.9%	16.7%	2.1%	12.7%
<u>Panel B: All 18-64, coeff. from regressions with month fixed effects</u>					
March 2020	0.5%	1.0%	1.3%	0.6%	0.2% (NS)
April 2020	8.0%	11.2%	14.1%	3.3%	2.9%
May 2020	6.9%	8.8%	10.8%	1.8%	2.1%
June 2020	5.5%	5.8%	7.1%	0.3%	1.3%
<u>Panel C: HS DO/HS grad. 18-64, coeff. from regressions with month fixed effects</u>					
March 2020	0.7%	1.4%	2.2%	0.7%	0.8%*
April 2020	9.4%	13.7%	17.8%	4.3%	4.1%
May 2020	8.2%	10.3%	13.4%	2.2%	3.0%
June 2020	5.8%	6.4%	9.1%	0.6%	2.7%
<u>Panel D: 18-64 with some college, coeff. from regressions with month fixed effects</u>					
March 2020	0.3%*	0.8%	1.6%	0.6%	0.8% (NS)
April 2020	9.6%	13.3%	17.1%	3.7%	3.8%
May 2020	8.7%	11.1%	13.9%	2.4%	2.7%
June 2020	6.8%	7.3%	9.0%	0.6%	1.6%
<u>Panel E: 18-64 with 4-year degree, coeff. from regressions with month fixed effects</u>					
March 2020	0.4%	0.8%	0.6% (NS)	0.4%*	-0.1% (NS)
April 2020	5.3%	7.3%	8.8%	2.0%	1.5%
May 2020	4.4%	5.5%	6.5%	1.1%	1.0%
June 2020	4.4%	4.1%	4.7%	-0.3% (NS)	0.6% (NS)

Notes: Author's calculations based on pooled monthly CPS data, Panel A; and 24 months ending in June 2020 in Panels B-E. Regressions in Panel B-E show coefficients on dummies for March 2020, April 2020, May 2020, and June 2020. Regressions in Panel B-E control for month in year dummies and use monthly CPS weights. Panel C shows outcomes for Panel B specification for HS DO/HS graduates. Panel D is same but for some college adults. Panel E is same but for those with a 4-year degree. Outcomes are own occurrence for adults 18-64. Estimates all significant at at least the 5% level with state level clustering unless marked * (10% level) or (NS) (insignificant). N is 1,652,477 for the full sample; 606,065 for the HS DO/HS graduate sample; 466,257 for the some college sample; and 557,431 for the 4 year college degree sample. 22,722 members of the full sample did not report their education level.

Appendix Table 2. Changes in Probability Child Lives with Someone 18-64 by Employment Outcomes

	Unemployed	Unemployed/has job not at work	Unemployed/has job not at work/NILF	Has job, not at work	NILF
	(1)	(2)	(3)	(5)	(8)
<u>Panel A: Means in February, children in HH with 18-54 year old with HH head ed.</u>					
All	6.4%	10.0%	61.3%	3.9%	55.8%
HS DO/HS grad.	9.3%	12.7%	70.4%	3.8%	64.2%
Some college	6.4%	9.8%	60.2%	3.5%	54.8%
4-year degree	3.6%	7.8%	53.3%	4.2%	48.3%
<u>Panel B: Children living with any 18-64 YO, coeff. from regressions with month fixed effects</u>					
March 2020	1.3%	2.3%	1.0% (NS)	1.2%	0.2% (NS)
April 2020	12.6%	18.0%	10.1%	6.2%	2.5%
May 2020	12.1%	15.2%	8.4%	3.7%	2.1%
June 2020	9.9%	10.6%	6.8%	1.2%	2.3%
<u>Panel C: Children living with HS DO/HS grad. HH head and at least 1 18-64 YO, coeff. from regressions with month fixed effects</u>					
March 2020	2.1%	3.1%	2.0%*	1.3%	0.3% (NS)
April 2020	15.1%	21.7%	11.8%	8.0%	3.4%
May 2020	14.8%	18.2%	9.3%	3.8%	3.2%
June 2020	12.0%	12.1%	9.3%	0.5% (NS)	5.7%
<u>Panel D: Children living with some college HH head and at least 1 18-64 YO, coeff. from regressions with month fixed effects</u>					
March 2020	0.9% (NS)	2.8%	2.3%*	2.0%	2.1% (NS)
April 2020	14.7%	20.4%	13.6%	6.5%	5.2%
May 2020	14.8%	19.3%	13.7%	5.4%	5.4%
June 2020	11.2%	13.0%	9.6%	2.1%	3.5%
<u>Panel E: Children living with 4-year degree HH head and at least 1 18-64 YO, coeff. from regressions with month fixed effects</u>					
March 2020	0.9%*	1.4%	-0.8% (NS)	0.4% (NS)	-1.1% (NS)
April 2020	9.5%	13.7%	6.9%	4.5%	0.1% (NS)
May 2020	8.0%	9.9%	5.7%	2.5%	0.4% (NS)
June 2020	7.8%	7.6%	4.5%	0.6% (NS)	0.7% (NS)

Notes: Author's calculations based on pooled monthly CPS data, Panel A; and 24 months ending in June 2020 in Panels B-E. Regressions in Panel B-E show coefficients on dummies for March 2020, April 2020, May 2020, and June 2020. Regressions in Panel B-E control for month in year dummies and use using monthly CPS weights. Panel C shows outcomes for Panel B specification for HS DO/HS graduate household (HH) heads. Panel D is same but for some college HH heads. Panel E is same but for those with heads with a an 4-year degree. Outcomes are any occurrence for children living with at least 1 adults 18--64. Estimates all significant at at least the 5% level with state level clustering unless marked * (10% level) or (NS) (insignificant). N is 604,766 for the full sample; 207,987 for the HS DO/HS graduate sample; 171,209 for the some college sample; and 202,432 for the 4 year college degree sample.

Appendix Table 3. Person-level Food Hardship Measures, NHIS and CPS-FSS

<i>Panel A. CPS-FSS (annual recall)</i>								
Food Insecurity		Food Just Didn't Last		3-Category Food Insufficiency		2-Category Food Insufficiency		
	Respondents Overall (1)	Respondents w/ Children (2)	Respondents Overall (3)	Respondents w/ Children (4)	Respondents Overall (5)	Respondents w/ Children (6)	Respondents Overall (7)	Respondents w/ Children (8)
2005	12.1%	15.5%	13.1%	16.1%	22.6%	26.5%	3.5%	4.0%
2006	12.1%	15.7%	13.1%	16.4%	22.7%	26.9%	3.8%	4.4%
2007	12.2%	15.8%	13.4%	16.8%	23.1%	27.7%	4.0%	4.8%
2008	16.4%	21.2%	17.0%	21.2%	28.3%	33.3%	5.4%	6.5%
2009	16.6%	21.8%	17.4%	21.9%	28.1%	33.6%	5.3%	6.3%
2010	16.1%	20.5%	16.8%	20.8%	27.6%	32.2%	5.1%	5.9%
2011	16.4%	20.8%	17.7%	21.7%	27.5%	32.1%	5.2%	5.9%
2012	15.9%	20.3%	17.1%	21.1%	26.9%	31.2%	5.2%	6.0%
2013	15.8%	20.1%	16.8%	20.7%	26.5%	31.3%	5.2%	6.0%
2014	15.4%	19.4%	16.8%	20.8%	25.9%	30.3%	5.4%	6.2%
2015	13.4%	16.7%	14.7%	17.7%	23.1%	27.1%	4.8%	5.3%
2016	12.9%	16.3%	13.8%	16.7%	21.7%	25.0%	4.3%	4.8%
2017	12.5%	15.7%	13.3%	15.9%	21.2%	24.3%	4.1%	4.5%
2018	11.5%	14.0%	12.5%	14.8%	20.4%	23.5%	3.8%	3.9%

<i>Panel B. NHIS (30-day recall)</i>				
	Respondents Overall (1)	Respondents w/ Children (2)	Respondents Overall (3)	Respondents w/ Children (4)
2011	13.3%	15.7%	16.3%	19.7%
2012	12.5%	14.9%	15.4%	18.8%
2013	11.3%	13.5%	14.2%	17.3%
2014	11.2%	13.2%	13.6%	16.4%
2015	9.9%	11.4%	12.2%	14.5%
2016	9.8%	11.5%	12.1%	14.4%
2017	9.2%	10.5%	11.4%	13.3%
2018	8.8%	9.6%	11.0%	12.5%

Notes: Panel A is authors' calculations from the Current Population Survey-Food Security Supplement (CPS-FSS), 2005-18; Panel B is authors' calculations from the National Health Interview Survey (NHIS), 2011-18. All columns are respondent-weighted, with odd columns representative of all adults and even columns representative of adults with children living in the same household. Columns (1)-(2) represent food insecurity status, coded from the full food security battery, following USDA guidelines to code a respondent as 1 if he or she answered yes (including "often", "sometimes," "almost every month," and "some months but not every month") to at least 3 of the 10 food security questions (3 of 18 questions if a child is in the household). Columns (3)-(4) indicate whether a respondent indicated that it was often/sometimes true that "the food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Columns (5)-(6) in Panel A are coded as one if the respondent described the food eaten in the household in the last 12 months as "enough but not always the kinds of food we want," "sometimes not enough" or "often not enough." Columns (7)-(8) of Panel A are coded as one if the respondent answered only sometimes/often enough to the question described in columns (5)-(6). The food sufficiency screener question is not collected in the NHIS. CPS-FSS asks about food hardship over prior 12 months, while NHIS asks about the prior 30 days.

Appendix Table 4. Share of Adults Reporting Mental Health Problems in the Past Week

	2017-2018	During COVID-19
	(1)	(2)
Panel A: Had little interest in doing things		
Overall	24.5%	53.4%
<= High School	28.6%	56.5%
Some College	26.3%	56.2%
College +	17.2%	47.0%
Panel B: Felt Down, Depressed, or Hopeless		
Overall	23.4%	50.3%
<= High School	26.0%	53.1%
Some College	26.4%	51.9%
College +	17.0%	45.3%
Panel C: Felt Nervous, Anxious, or Worried		
Overall	33.8%	59.8%
<= High School	34.3%	58.1%
Some College	35.5%	61.3%
College +	31.5%	60.4%

Notes: Authors' tabulations of National Health and Nutrition Examination Survey (NHANES) 2017-18 and Census Household Pulse Survey averaged across April 23 – May 26, 2020. The reference period for NHANES is the past two weeks for “little interest” and “feeling down” and the past week for “felt nervous”. The reference period for the Census Pulse is the prior week for all three questions. Statistics are weighted to be representative of adults in the United States.

Appendix Table 5. Confidence in Ability to Afford Food, Pay Rent/Mortgage During COVID-19

	Confidence in ability to pay for food in next 4 weeks		Confidence in ability to make next rent/mortgage payment	
	“Not at all confident” (1)	Not “very confident” (2)	“No confidence” (3)	Not “high confidence” (4)
Panel A. Households Overall				
Overall	9%	53%	9%	43%
<= High School	14%	66%	14%	57%
Some College	9%	58%	9%	47%
BA +	3%	31%	3%	24%
Panel B. Households with Children				
Overall	11%	61%	11%	51%
<= High School	17%	77%	18%	68%
Some College	11%	66%	11%	54%
BA +	4%	34%	4%	25%

Notes: Authors’ tabulations of the Census Household Pulse Survey averaged across April 23 – May 26, 2020. Respondents are asked to rate their confidence in their ability to afford food over the next four weeks, choosing an answer from the following options: not at all confident, somewhat confident, moderately confident, very confident. Respondents are separately asked to rate their confidence in their ability to pay the next month’s rent/mortgage payment on time, choosing an answer from the following options: no confidence, slight confidence, moderate confidence, high confidence, or the payment is/will be deferred. Statistics are weighted to be representative of adults in the United States.

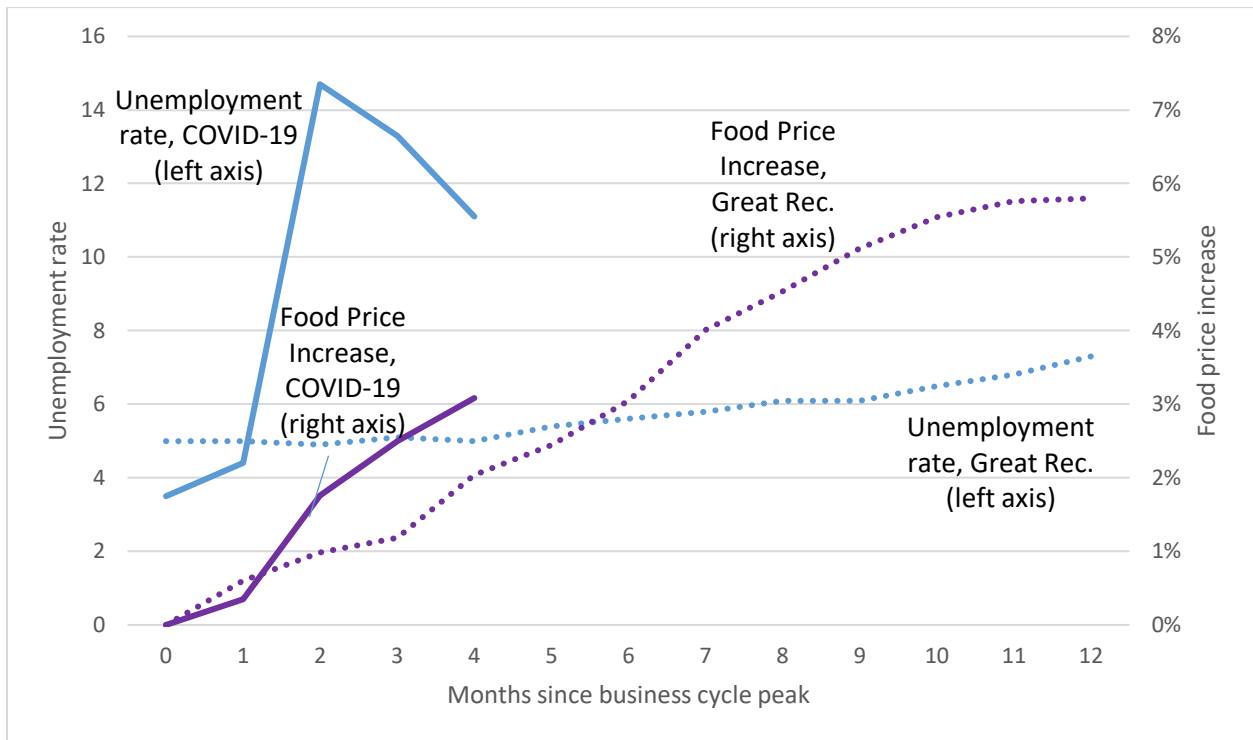
Appendix Table 6. UI First Payments as a Ratio of the Unemployed

	UI First Payments: Includes Regular State Payments and PUA	UI First Payments: Includes PUA
	(1)	(2)
Panel A: Ratio of Cumulative UI First Payments to Unemployed		
March 2020	0.064	0.000
April 2020	0.539	0.016
May 2020	0.849	0.110
Panel B. Cumulative UI First Payments		
March 2020	1,700,460	0
April 2020	14,210,795	416,911
May 2020	22,391,176	2,899,797
Panel C. Number of Unemployed		
Average March-May	26,365,418	Same as column 1

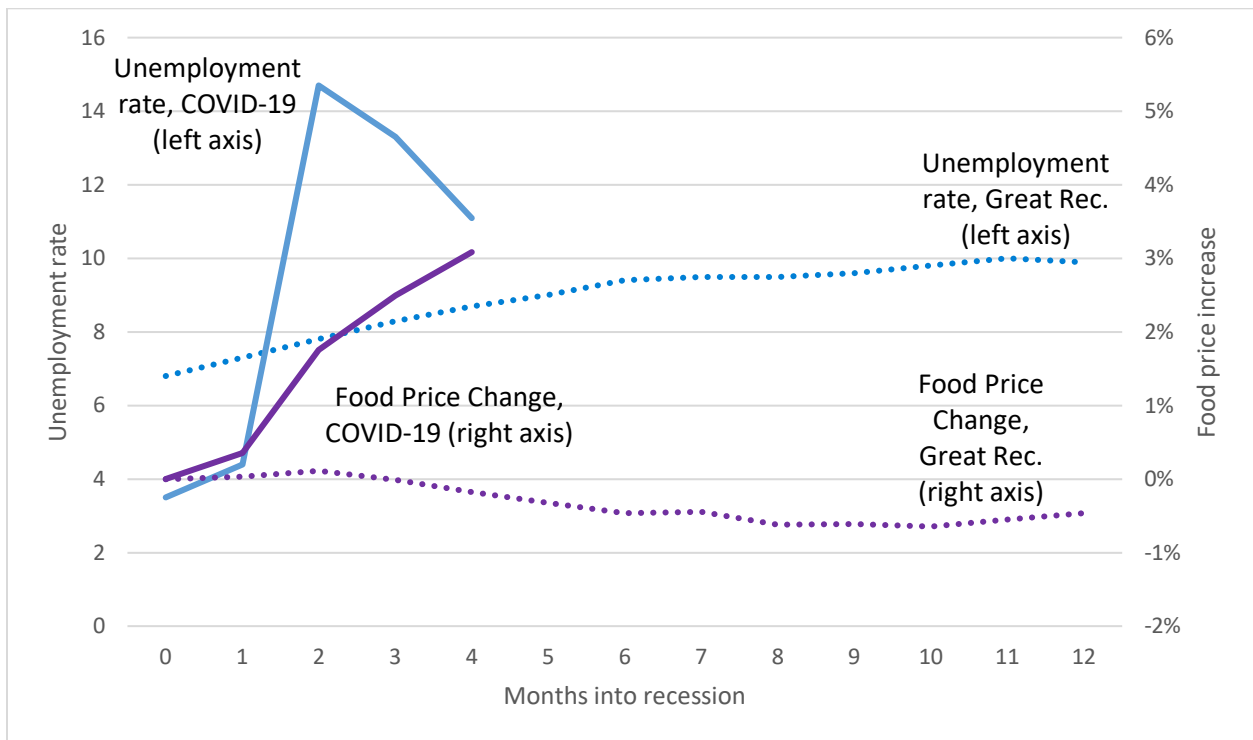
Notes: This table presents tabulations of the ratio of cumulative first monthly payments for unemployment insurance by month to the average stock of unemployed persons across March 2020-May 2020 (Panel A) as well as the numerator (Panel B) and denominator (Panel C) presented separately. The cumulative first payments represent the number of persons receiving a first UI payment. The numerator in column 1 is the sum of first payments for PUA (from the Department of Labor's (DOL) 902P report) and first payments for state UI (from DOL 5159 report). The numerator in column 2 is the PUA first payments. These are reported in the analogous columns of panel B. Panel C contains the denominator--the average number of those unemployed from the monthly CPS data adjusted to include the year over year change in those with a job and not at work and not in the labor force. CPS measures are averaged using population weights.

Appendix Figure 1. Unemployment and Food Price Growth

Panel A. Great Recession vs. COVID-19



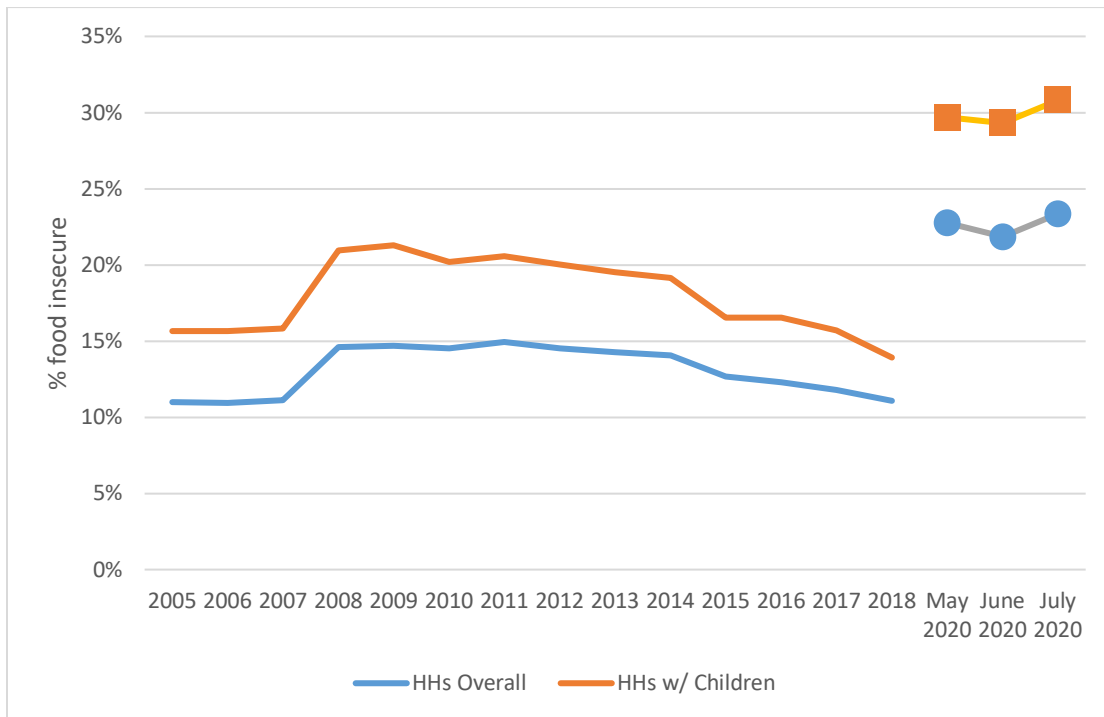
Panel B. Great Recession Peak vs. COVID-19 Start



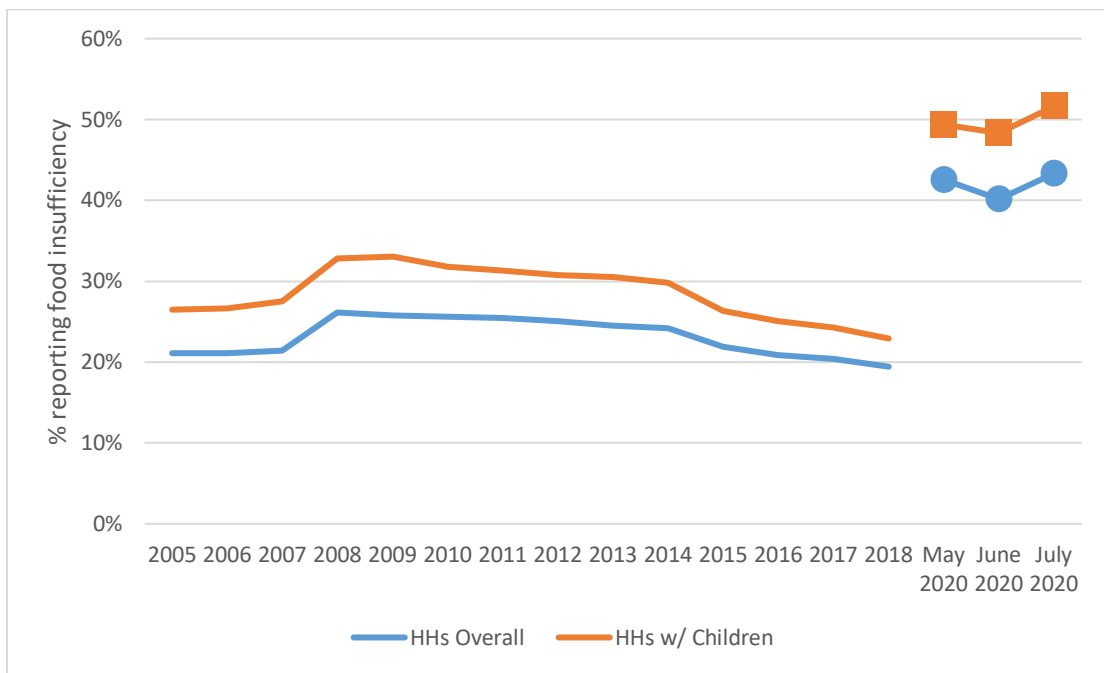
Notes: Authors' calculations of seasonally adjusted monthly unemployment rates (in blue) for the Great Recession (dotted lines) and COVID-19 crisis (solid lines). The figure also plots the change, relative to base period, in food prices (purple lines) for the two periods. COVID-19 plotted by month since the February 2020 economic peak. In Panel A, the Great Recession is plotted relative to the December 2007 economic peak; in panel B the data are plotted for the 12 months leading up to the November 2009 unemployment rate peak (November 2008-November 2009).

Appendix Figure 2. Food Hardship Measures, Overall and Households with Children

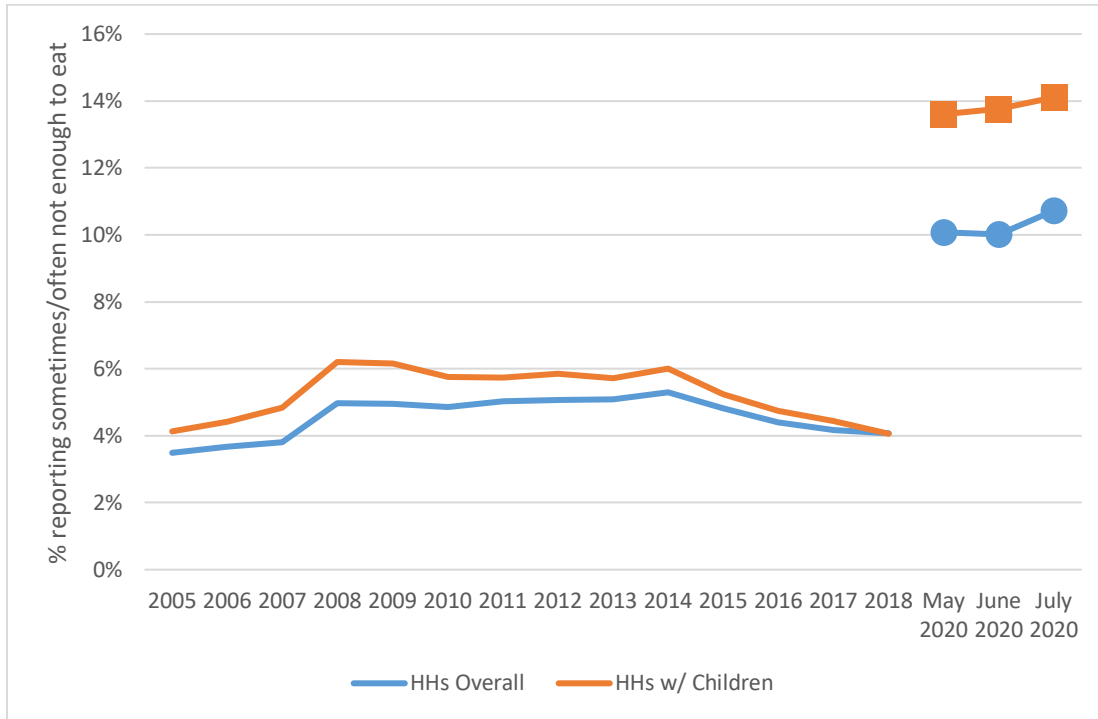
Panel A. Percent of Households Reporting Food Insecurity



Panel B. Percent of Households Reporting Food Insufficiency

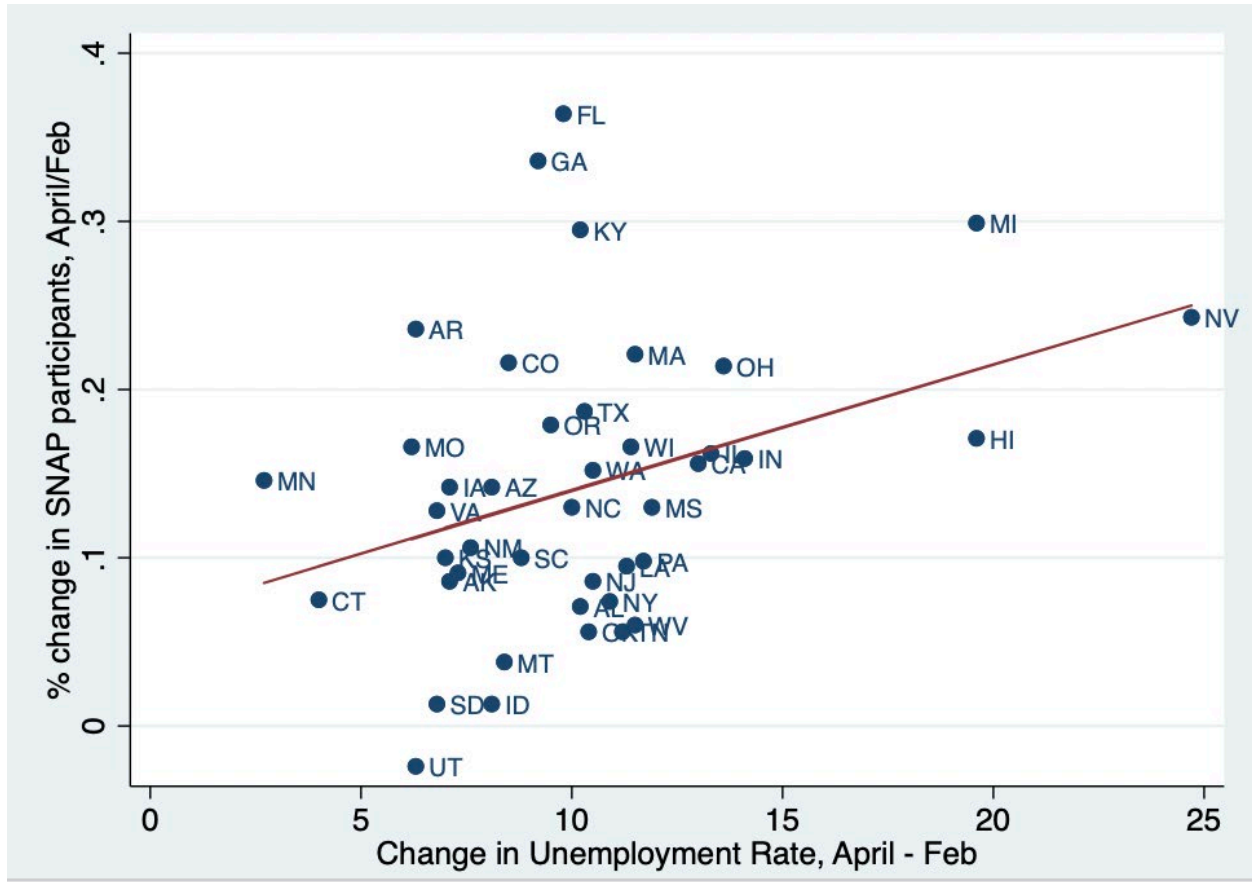


Panel C. Percent of Households Reporting Sometimes/Often Not Enough to Eat on Food Sufficiency Question



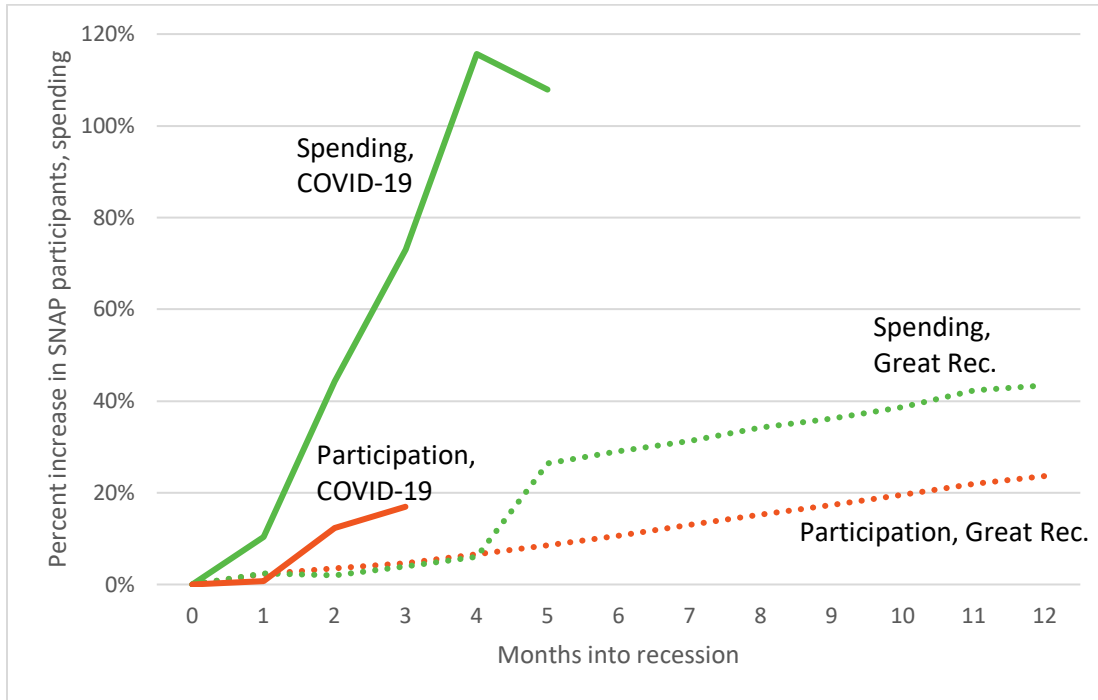
Notes: All panels are authors’ calculations from the Current Population Survey-Food Security Supplement (CPS-FSS), 2005-18, and the Census Household Pulse Survey averaged across 3 periods in 2020: 4/23-5/26; 5/28-6/30; 7/2-7/21. The CPS-FSS asks both about food sufficiency and administers the full food security questionnaire, asking about experiences over the previous 12 months. The Census Household Pulse Survey includes a single question on food sufficiency and asks about experiences over the past week. Panel A 2005-18 represent food insecurity status, coded from the full food security battery, as recommended by USDA and described in notes to Appendix Table 3. Panel A 2020 data points are food security projections based on food sufficiency responses and the usual relationship between food security and food sufficiency in the CPS-FSS. Panel B represents the share of households responding that the food eaten in the household was “enough but not always the kinds of food we want,” “sometimes not enough” or “often not enough.” Panel C represents the share of households responding that the food eaten in the household was sometimes/often enough. Statistics are weighted to be representative of all U.S. households, using household weights in the CPS-FSS and calculating pseudo-household weights in the Census Pulse Survey by dividing the respondent weight by the number of adults in the household.

Appendix Figure 3: Change in State Unemployment vs. SNAP Participation, February-April 2020



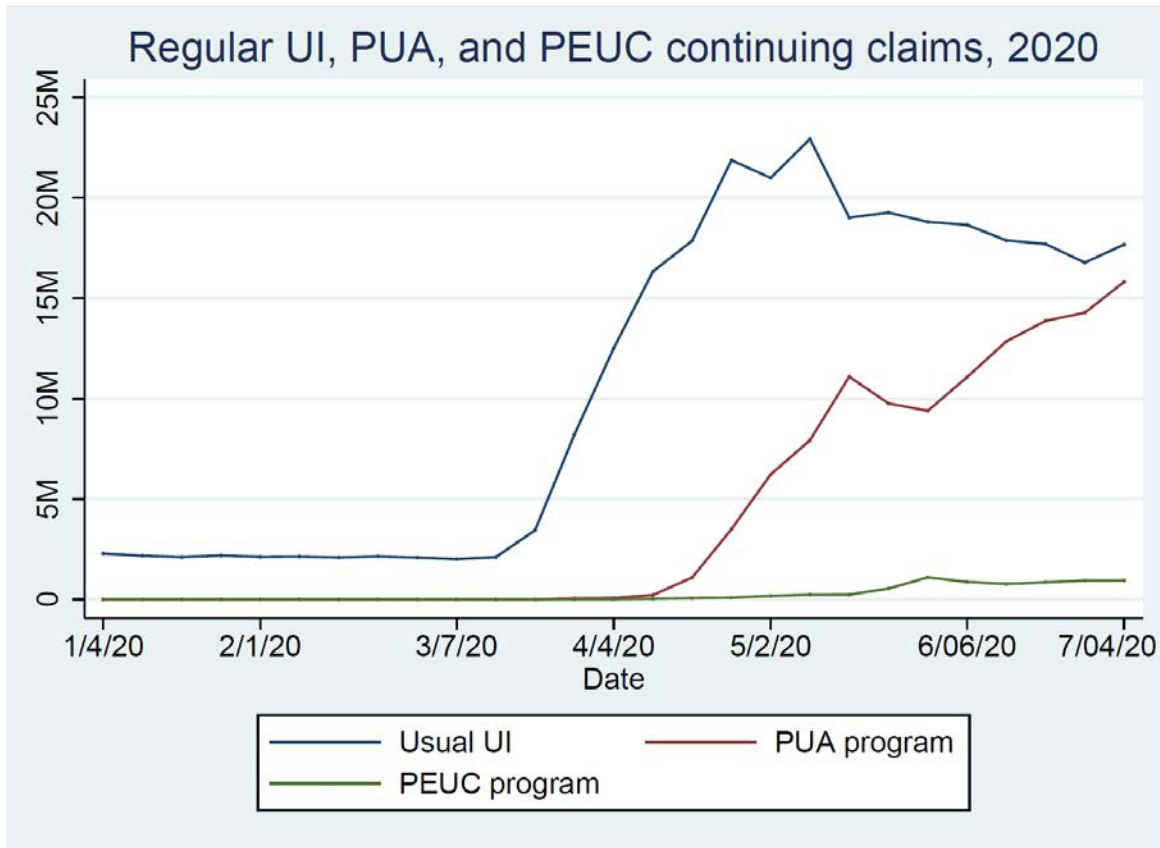
Notes: Plot of percent change in SNAP participation (y-axis) vs. change in seasonally adjusted unemployment rate (x-axis) by state. Percent change in SNAP caseloads from February to April 2020 calculated from 43 states that have reported caseload data as of July 31, 2020, covering 97% of all SNAP participation in February. Percentage point change in state unemployment rate covers February to April 2020 and comes from the BLS LAUS. The upward-sloping line represents the OLS regression line relating change in SNAP participation to change in unemployment rate.

Appendix Figure 4. Percentage Increase in SNAP Participation and Spending Since Business Cycle Peak: COVID-19 vs. Great Recession (Alternate Start Date)



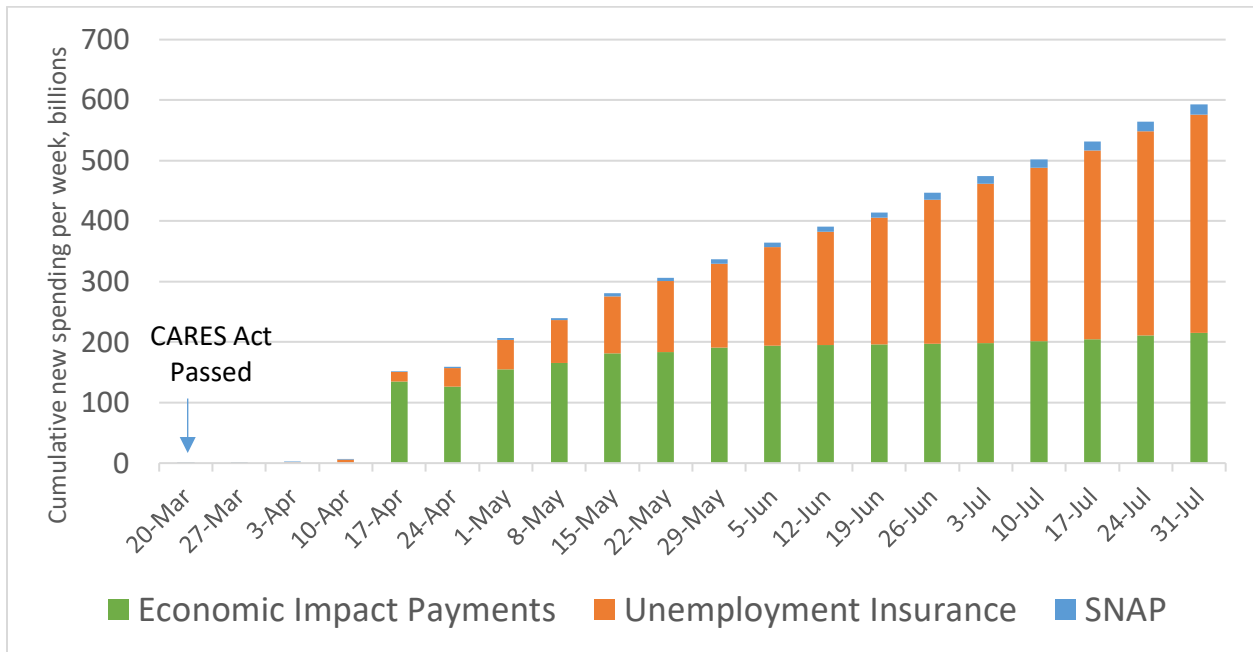
Notes: Authors' calculations of Great Recession spending and caseload data, and February 2020 caseload data, from USDA, Food & Nutrition Service, SNAP Data National Level Annual Summary. Growth in caseloads in March-May 2020 calculated from states that have reported caseload data as of July 31, 2020. 43 (42) states have released April (May) SNAP participation, and these states made up 97% (97%) of all SNAP participation in February. Growth in SNAP spending in 2020 is reported in Daily Treasury Statements through July 31, 2020. The COVID-19 series are plotted as growth by month since the February 2020 business cycle peak; the Great Recession data are plotted for the 12 months leading up to the November 2009 unemployment rate peak (November 2008-November 2009).

Appendix Figure 5. Continuing UI Claims, by Source



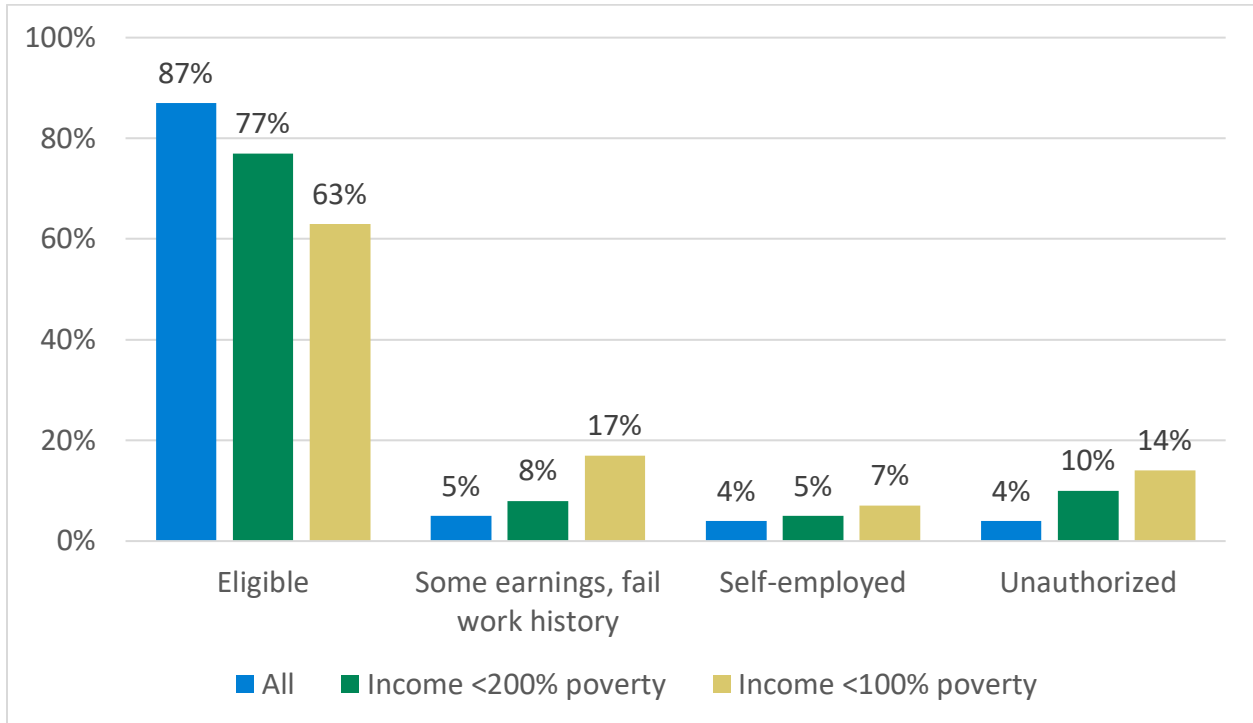
Notes: Data from Department of Labor and report not seasonally adjusted continuing claims by week of the claim for the United States. Usual UI represents the state and Federal-state extended benefit programs as well as Federal UI for federal employees and veterans, STC job sharing, and very small state programs which provide coverage after other benefits are exhausted (never exceed 5000 persons). The Pandemic programs include PUA and PEUC.

Appendix Figure 6. Cumulative New Spending on UI, Relief Rebates, and SNAP by Week (Billions of 2020\$)



Notes: Authors' tabulations of Daily Treasury Statements through July 31 for SNAP, Unemployment Insurance Benefits, and IRS Tax Refunds to Individuals. We difference expenditures from the inflation-adjusted same-week payments in 2019 to net out the seasonality in payments and to separate Economic Impact Payments from usual tax refunds. We censor Economic Impact Payments at zero prior to the week of April 17.

Appendix Figure 7. Eligibility for Unemployment Insurance Among Workers, and Reasons for Ineligibility, by Income

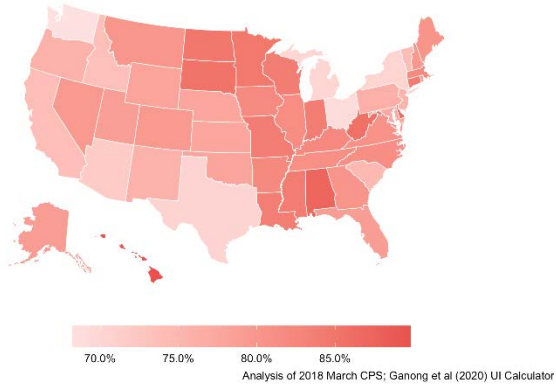


Notes: Authors' calculations use the 2019 CPS-ASEC and the UI calculator in Ganong et al. (2020). Sample includes individuals 20-59 who had any earned income in calendar year 2018. The blue bars are for the full sample, green bars are for the sample income under 200% of poverty, and yellow bars are for the sample under 100% of poverty. The first set of bars, labeled “Eligible”, plot the share of workers predicted to be eligible for UI benefits if the workers lost their jobs, based on earnings during the previous year and immigration status. The three sets of additional bars (right 9 bars) show the reasons the worker would be ineligible for UI. If a worker fell into multiple categories, we assigned based on the following hierarchy: 1) categorize as unauthorized if they are Hispanic, non-citizens, arrived in the United States after 1986, have a high school degree or less, and are 15 years of age or older; 2) categorize as some earnings, fail work history if not categorized as unauthorized and have some earnings; 3) had self-employment income, no wage and salary earnings. The CPI-U is used to inflate calendar year 2018 earnings to 2020 values for use with the 2020 UI calculator. Statistics are weighted to be population representative.

Appendix Figure 8: UI Eligibility and Replacement Rates in 2020, Workers in Families below 200 Percent of Poverty

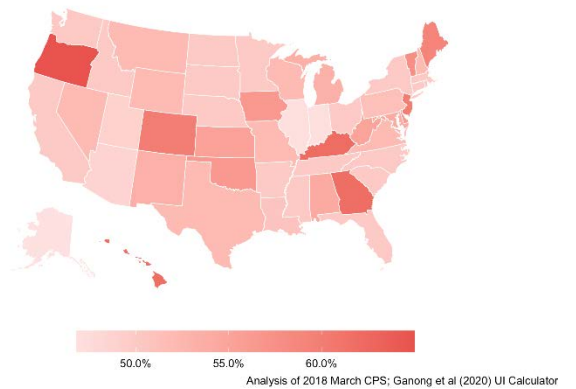
Panel A. Eligibility Rate

UI Eligibility Rate Among All Workers, by State
Below 200% SPM poverty line



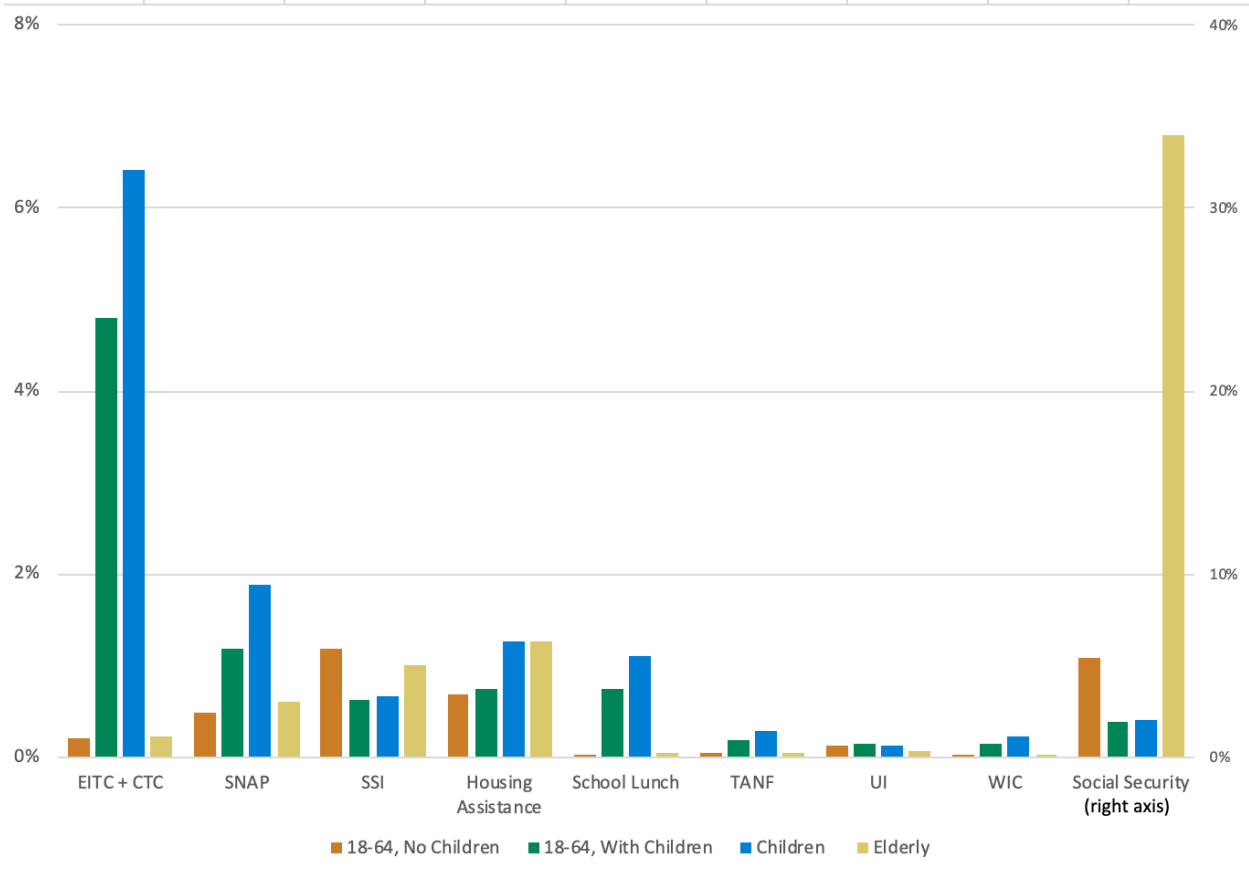
Panel B. Median Replacement Rate

Replacement Ratio Among Eligible Workers, by State
Below 200% SPM poverty line



Notes: Authors' calculations use the 2019 CPS ASEC and the UI calculator in Ganong et al. (2020). Sample includes workers ages 20-59 living in families with income below 200 percent of the Supplemental Poverty Measure. The figures show the share eligible (left) and the median replacement rate (right) by state. Calculations use all workers (for eligibility) and all eligible workers (for the replacement rate) and simulate UI benefits in the event that they are unemployed. The CPI-U is used to inflate calendar year 2018 earnings to 2020 for use with the 2020 UI calculator. Statistics are weighted to be population representative.

Appendix Figure 9. Anti-Poverty Effects of the Social Safety Net, by Group (2018)



Notes: Calculations based on authors' tabulations of 2019 CPS ASEC, covering annual data for calendar 2018. Poverty is calculated using the Supplemental Poverty Measure following Fox (2019), with no adjustment for underreporting of income. Each data point shows the impact on poverty rates of zeroing out a given income source. Statistics are weighted to be population representative. Bars represent the percentage-point reduction in SPM poverty in 2018, separately for children, adults 18-64 living with children, adults 18-64 not living with children, and the elderly age 65+.