Suffering, the Safety Net, and Disparities During COVID-19

MARIANNE P. BITLER, HILARY W. HOYNES, AND
DIANE WHITMORE SCHANZENBACH

The economic and public health crisis caused by COVID-19 was devastating and disproportionately hurt Blacks and Hispanics and some other groups. Unemployment rates and other measures of material hardship were higher and increased more during the crisis among Blacks and Hispanics than among non-Hispanic Whites. Congress authorized a historic policy response, incorporating both targeted and universal supports, and expanding both the level and duration of benefits. This response yielded the remarkable result of an estimated decline in the Supplemental Poverty Measure between 2019 and 2020. We study administrative data to investigate the impact of the Supplemental Nutrition Assistance Program (SNAP) during the crisis. We find that participation in SNAP increased more in counties that experienced a larger employment shock. By contrast, the increase in total SNAP benefits was inversely related to the employment shock. The SNAP benefit increases were less generous to Black and Hispanic SNAP participants than to White.

Keywords: COVID-19, SNAP, Child Tax Credit; unemployment insurance, Economic Impact payments, racial-ethnic disparities, poverty, safety net

The COVID-19 crisis led to spiking unemployment rates and unprecedented levels of food hardship that fell disproportionately on low-income families and among non-Hispanic Black and Hispanic or Latino people. This occurred in addition to the large increases in mortality and morbidity from COVID, which also fell disproportionately on Blacks and Hispanics (Hill and Artiga 2022).[1] Food banks and food pantries reported spikes in need. The re-

Marianne P. Bitler is professor of economics at the University of California, Davis. **Hilary W. Hoynes** is Haas Distinguished Chair in Economic Disparities and professor of economics and public policy at the University of California, Berkeley. **Diane Whitmore Schanzenbach** is Margaret Walker Alexander Professor of Human Development and Social Policy and director of the Institute of Policy Research at Northwestern University.

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1. Members of several other racial and ethnic groups, such as Native Americans and Alaska Natives, Hawaiians, and Other Pacific Islanders, also suffered more than White and Asian Americans did. For example, after accounting for differences by age; adult persons who were Alaska Native or Native American or Hawaiian or Other

sponse to this crisis from the formal and informal safety net was robust (Bitler, Hoynes, and Schanzenbach 2020). Unemployment insurance (UI) participation soared as Congress expanded eligibility for the program, the length of time for which some UI benefits could be received, and payment levels via a series of top-up payments. Participation in the Supplemental Nutrition Assistance Program (SNAP) and benefit levels increased. A series of relief payments provided cash to qualifying individuals.

In this article, we examine the impact of the economic shock and the safety net response to the COVID-19 crisis, focusing on differences across race and ethnicity. We also investigate the relationship between safety net responses and the alleviation of suffering; attempting to better understand the extent to which different groups experienced hardship at different levels, the extent to which the safety net responded differently across groups, and who fell through the many holes in the safety net.

We start by analyzing the shock and levels of hardship overall and by race and ethnicity, using a combination of the monthly Current Population Survey (CPS) to measure the economic shock, the CPS Annual Social and Economic Supplement to measure poverty, and the December CPS Food Security Supplement (CPS-FSS) and the Census Household Pulse (Census Pulse) survey data to measure hardship. It is well known that even in strong labor markets, levels of unemployment and hardship are higher for some racial and ethnic groups than for others. We add to this by characterizing the incidence of the COVID economic shock by race and ethnicity. We then turn to examine the extraordinary safety net response, how it affected different groups, and who was left out. We characterize suffering with data from two sources. First, the Census Pulse provided frequent, real-time data on economic well-being that were not captured by our usual data collection approaches (much of which became available for the COVID period only with a long lag, or only provides an annual snapshot). For example, food insufficiency in the Pulse decreases in response to relief payments, including economic impact payments (EIPs) and pandemic electronic benefit transfer (EBT) payments (Bauer et al. 2020). Detecting these policy impacts would not be possible without the frequent, real-time data. We then examine the change in annual food insecurity between 2019 and 2020, using reported estimates from the CPS-FSS, the usual snapshot measure of annual food insecurity. The annual food insecurity data show that whereas non-Hispanic Whites (Whites) and White-headed families with children experienced a reduction in food insecurity from 2019 to 2020, non-Hispanic Black (Black) and Hispanic families and Black and Hispanic families with children faced substantial increases in food insecurity from 2019 to 2020, suggesting uneven impacts of both COVID and of the ability of the safety net to provide protection against shocks. Both sources of food hardship data show large disparities between Whites and Black or Hispanic families both before and during the pandemic.

Next, we turn to a discussion of what we would have expected from the safety net based on previous downturns, and contrast that with the COVID policy changes. The COVID response marked an unprecedented expansion in spending. We present changes in aggregate spending over time on UI, SNAP (EBT benefits for food for low-income persons), the Child Tax Credit (CTC) (expanded during COVID to provide most families with children with tax rebates), and the EIPs (the relatively universal stimulus payments offered to most families with low and moderate incomes); using Monthly Treasury Statement data tracking federal spending. We also discuss the policy responses in these programs. We turn to survey data from the CPS to investigate the incidence of economic hardship using the Supplemental Poverty Measure (SPM). We also document the individual contributions—holding other factors constant—of each of our key safety net programs to the reduction in SPM poverty experienced in 2020. We find that the EIPs, the Earned Income Tax Credit (EITC), and UI made

Hispanic Islanders had higher excess death rates due to COVID per hundred thousand in 2020 (relative to normal rates from 2015 to before COVID) than Whites or Asian Americans (Zalla et al. 2022). These groups are small in the general population and estimates of their characteristics in survey data are extremely noisy.

the largest contributions to the decline in poverty for all groups except Black children, who experienced a larger poverty reduction from SNAP than from UI. However, the SPM measures only annual poverty and has other limitations, such as underreporting safety net benefits and nonrandom declines in response rates during the pandemic (for a discussion of the challenges with CPS response rates during COVID, see Rothbaum and Bee 2021).

We conclude with a detailed examination of the responsiveness of SNAP participation and benefit payments over the COVID crisis for several reasons. First, various sources of administrative data on SNAP allow us more accurately to measure the role of SNAP than that of other programs that do not report such data. Through 2019, we can describe SNAP receipt by characteristics such as race, ethnicity, and presence of children. Further, through January 2021 we can track—using administrative data—participation and benefits received by county, allowing us to correlate county changes in SNAP with factors, including the magnitude of the labor-market shock and health shock as well as a variety of demographic and other characteristics. Second, SNAP is a relatively large program even in good times, so state-level implementation challenges in responding and adjusting to the crisis were likely less significant than for the UI program. Third, SNAP makes a particularly interesting case study because it was expanded during COVID to increase payment levels and to allow for some temporary waiving of other rules about program administration. We explore the extent to which these policy expansions have offset the economic shock and their likely impact on different demographic groups. Even though areas that experienced a greater economic shock generally experienced larger increases in SNAP participation levels, because of the unusual design of the benefits expansions, they also saw smaller increases in SNAP benefit payments.

This article contributes to a large literature examining the response of the social safety net to economic cycles (Bitler and Hoynes 2010, 2016; Bitler, Hoynes, and Iselin 2020; Hardy, Smeeding, and Ziliak 2018; Mueller, Rothstein, and von Wachter 2016; Ziliak 2015). In particular, it builds on work early in the COVID pandemic (Bitler, Hoynes, and Schanzenbach 2020). We make several contributions to this literature. First, we update this earlier work with a focus on the COVID crisis. Second, this is the first article to examine the response of the social safety net to economic downturns with a focus on examining the impacts across race and ethnicity groups. Third, we focus on families with children, a group characterized by high poverty rates and economic vulnerability. Finally, this article is the first to use county-level SNAP data to correlate changes in participation and benefit payments with county characteristics and the extent of the shock.

Economic Suffering During COVID-19, by Race and Ethnicity

Economic suffering was widespread and disparate during COVID-19. In this section we demonstrate large differences across race and ethnicity in the labor-market shock, as well as in material hardship as measured by food insecurity and related measures.

The Labor-Market Shock

COVID-19 hit the United States hard in March 2020 and President Trump declared a national emergency on March 13. After reaching a business cycle peak in February, the economy plunged as COVID spread, reaching a trough in April (and representing the shortest peak to trough period since 1957, the start of the National Bureau of Economic Research business cycle dates). The seasonally adjusted unemployment rate rose to 14.7 percent in April from 3.5 percent in February and 4.4 percent in March. By October 2021, the unemployment rate was back down to 4.6 percent, but still statistically elevated relative to February 2020.

Not only did traditional unemployment go up to extraordinary levels, but also the number of persons reporting they had a job but were not at work increased substantially. The Bureau of Labor Statistics concludes that most of the increase in reports of being employed but not at work are miscategorized and should be counted as unemployed—a miscategorization that occurred in part because of confusion in the early days of the pandemic on how workers who expected to experience only a temporary spell of joblessness due to pandemic shut-

downs would answer accurately labor-force status questions. In addition, millions left the labor force as schools closed and care responsibilities for children and others increased.

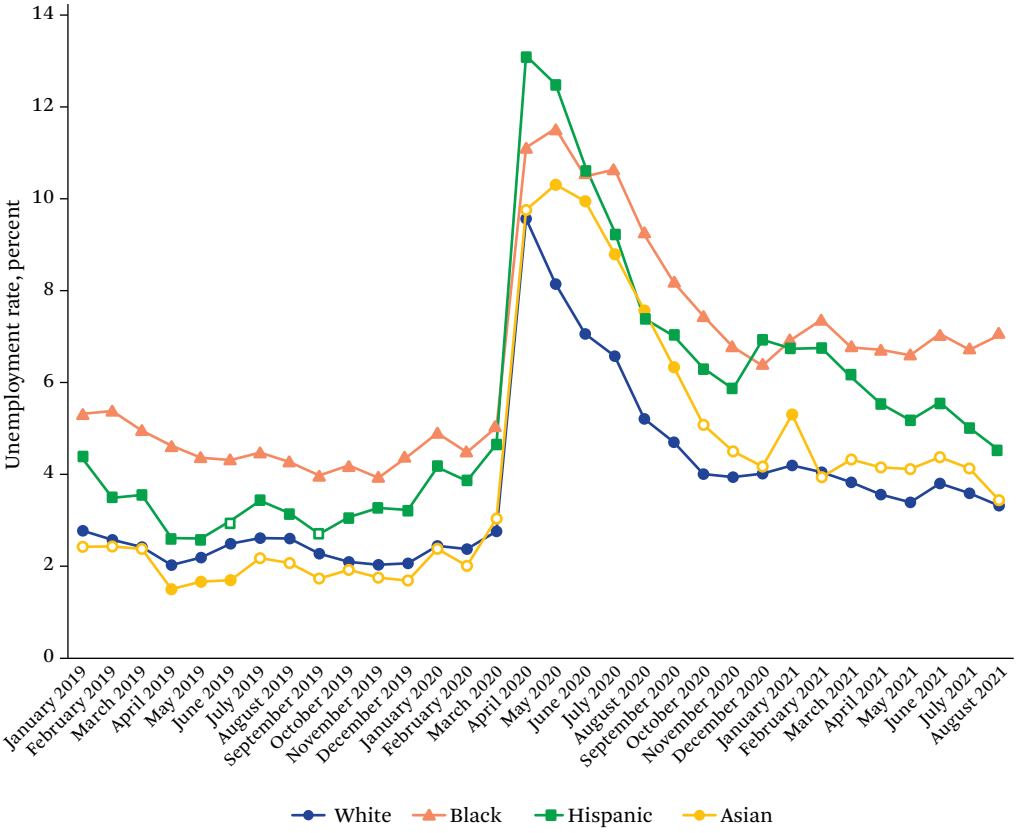
These unprecedented labor-market fluctuations mask large differences across race and ethnicity. Even in strong labor markets, differences across groups are clear, with Black and Hispanic Americans experiencing higher unemployment rates—and often nearly twice as high—than White Americans. We use monthly CPS micro data to compare unemployment outcomes for race-ethnicity groups over time (Flood et al. 2021). We compare four groups including those reporting they are Hispanic and of any race, and those who are non-Hispanic and reporting that they are only White, Black, or Asian. Based on the February 2020 CPS, 62 percent of the population reported being White, 15 percent reported being Hispanic, 12 percent reported being Black, and 6 percent reported being Asian.[2]

We begin by showing trends in unemployment levels by race-ethnicity. Figure 1 shows the seasonally unadjusted monthly unemployment rate among adults ages eighteen through sixty-four for every month from January 2019 through August 2021, by race-ethnicity. We show these rates for White, Black, Hispanic, and Asian adults. The *x*-axis denotes calendar time, and the y-axis is the unemployment rate (in percentage points) for each group. The filled-in markers for Black, Hispanic, and Asian adults indicate the estimate is statistically significantly different from the value for Whites (for that month). Several facts are notable. First, Black and Hispanic adults have persistently higher unemployment rates than White adults, even in the booming labor market leading up to the COVID crisis. In March 2020, White adults experienced an unemployment rate of 2.8 percent, versus 5.0 percent for Black adults and 4.7 percent for Hispanic adults. Asian adults tended to have lower unemployment rates than White adults in the months leading up to COVID, but not statistically significantly so. Second, figure 1 also shows the enormous shock to unemployment rates after COVID hit in March 2020, with Hispanic and Black adults experiencing the largest impacts. Third, by the end of August 2021, Black adult unemployment rates remain the most elevated (relative to White or Asian adults), followed by Hispanic adult rates.

Many analysts conclude that this unemployment rate was understated in the early months of the COVID-19 pandemic (see, for example, Aaronson 2021). The share of workers reporting to be "employed, but not at work" increased dramatically, and many of these workers were likely affected by closures of their place of work due to COVID-19 and would have been more appropriately classified as unemployed (Bureau of Labor Statistics 2020). Furthermore, early in the pandemic, when stay-at-home orders were in place, the unemployed were less likely to search for a new job than is typical for a host of reasons, which led to a spike in the share of people reporting being not in the labor force (Bureau of Labor Statistics 2020). Further, some adults may have left the labor force to care for family members. All three of these data issues mean that the measured unemployment rate understates the true experience of COVID-inflicted labor-market shocks. Thus we also look at an alternative measure of the shock—changes over time in the share of adults who are unemployed, not in the labor force, or have a job and are not at work during the survey week, where we difference out the shares relative to the same calendar month during the twelve months before March 2020. In particular, for each race-ethnicity group we estimate a regression model with indicator variables for each month in the COVID period (March 2020 through August 2021) along with indicator variables for each calendar month. We adjust the standard errors for clustering at the state level. Figure 2 shows these estimated monthly shocks for each race-ethnicity group. As with figure 1, solid (hollow) symbols for Black, Hispanic, and Asian adults indicate that the coefficient is (is

2. Because of the small shares of the population, our analysis excludes those reporting non-Hispanic American Indian, Alaska Native, Hawaiian Native, or Pacific Islander (1 percent) and those reporting non-Hispanic multiple race (2 percent). We omit them and those who refused or did not know or did not answer (1.8 percent) from the graphs, but include them in all the regressions and comparisons.

Figure 1. Unemployment Rate, by Race and Ethnicity



Source: Authors' calculations from Current Population Survey, as compiled by IPUMS (Flood et al. 2021).

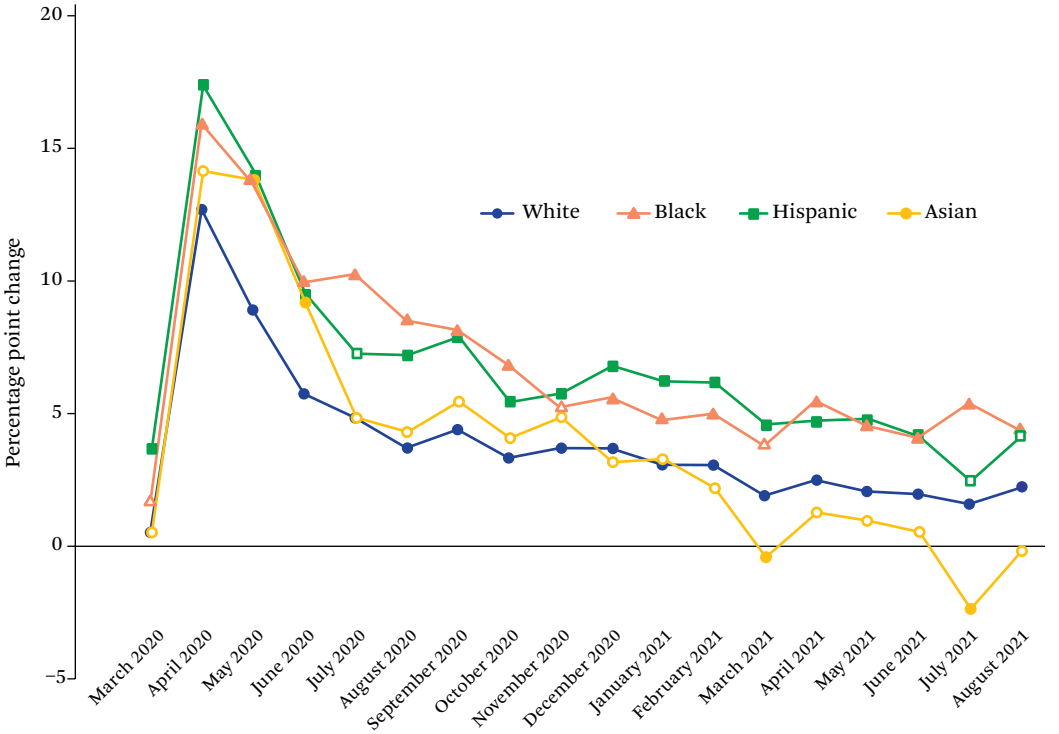
Note: Data for adults ages eighteen through sixty-four. Solid (hollow) symbols for Black adults, Hispanic adults, and Asian adults indicate that the coefficient is (is not) statistically significantly different from the unemployment rate among White adults in the same month. Calculations use sample weights and cluster the standard errors at the state level. Groups are mutually exclusive (with, for example, Black being short for non-Hispanic Black).

not) statistically significantly different from the unemployment rate among White adults in the same month.

Figure 2 shows that this broader shock hit Hispanic adults and Black adults even harder than White adults, who already experienced an enormous shock. In April 2020, the increase in the sum of those unemployed plus those reporting being not in the labor force plus those reporting having a job and not at work was 12.7 percentage points among White adults, 15.9 percentage points among Black adults, 17.4 percentage points among Hispanic adults, and 14.1 percentage points among Asian adults. A year later, in April 2021, the increase among White adults had fallen to 2.5 percentage points, versus 5.5 and 4.7 percentage points among Black and Hispanic adults, respectively. Asian adults generally returned to values no different from White adults by August 2020.[3]

3. American Indians, Alaska Natives, Hawaiian Natives, and Pacific Islanders generally had higher levels of unemployment pre-COVID and had had increases in unemployment (relative to pre-crisis monthly averages) that were statistically indistinguishable from Whites, and Multiple Race adults had higher levels pre-COVID and higher increases than Whites (not shown on graph).

Figure 2. Broader Labor Market Shock, by Race and Ethnicity



Source: Authors' calculations from Current Population Survey, as compiled by IPUMS (Flood et al. 2021).

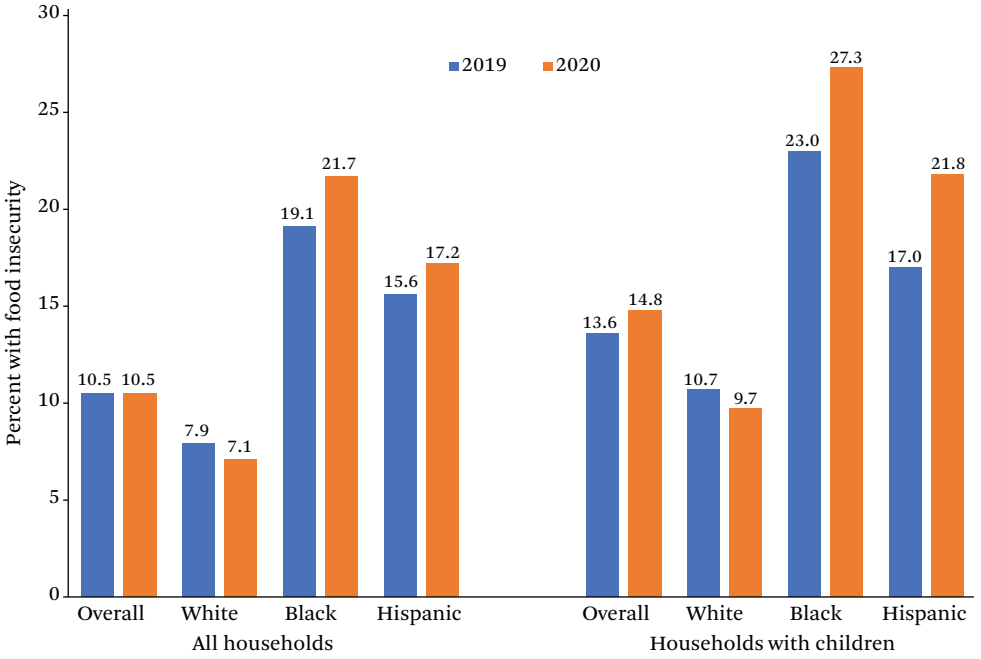
Note: Labor-market shock calculated as the change in the rates of "unemployment, not in labor force, and employed but not at work" relative to the same month in the year prior to March 2020. Data for adults ages eighteen through sixty-four. For White adults, solid (hollow) symbols indicate the change in the unemployment measure is statistically (not) different from zero. For the other groups, solid (hollow) symbols indicate that the coefficient is (is not) statistically significantly different from the unemployment measure among White adults in the same month. Calculations use sample weights and cluster the standard errors at the state level.

Measures of Material Hardship

In the early days of the pandemic, food banks reported dramatic surges in need for emergency relief. Within weeks, survey data became available to track food hardship over the course of the pandemic. One of the most important sources of real-time data on economic hardship is the Census Bureau's experimental Household Pulse Survey, which released new data first every week then subsequently every two weeks during the course of the pandemic. To be sure, the data are imperfect, characterized by low response rates (not atypical for online surveys) and imperfect sample designs and, in some cases, cannot be directly compared with other sources (U.S. Census Bureau 2020c). Nonetheless, the data—especially the food hardship data—have been shown to be sensitive to changes in economic conditions and receipt of relief payments. For example, Lauren Bauer and her colleagues (2020) show that reported food hardship declines among low-income families in the weeks after pandemic EBT payments for missed school meals are received across states.

The share of adult respondents with children, by race and ethnicity, and adult respondents, by race and ethnicity, who answered that they sometimes or often did not have enough to eat during the prior week from April 2020 through October 2021 are presented in the on-

Figure 3. Annual Food Insecurity, by Race, Ethnicity, and Presence of Children, 2019–2020



Source: Coleman-Jensen et al. 2020, 2021.

line appendix (see figures 1a and 1b).[4] Despite period-to-period variation, the share generally climbed during the fall of 2020 and fell—sometimes sharply when relief payments were paid—starting in January 2021. Rates of food hardship are generally twice as high among Black and Hispanic families with children as they are among White and Asian families with children. Food hardship rates among those with children are uniformly higher than for the overall population. Rates among Blacks and Hispanics in the general population are generally two to three times those among Whites and Asians.

Similar patterns across race and ethnicity are found in the Census Household Pulse data in other financial hardship domains. Relative to White and Asian respondents, Black and Hispanic respondents are substantially more likely to report that it was somewhat or very difficult to pay for their usual household expenses, and a higher share reported that they had only slight or no confidence in their ability to pay their next housing payment. Between 8 and 9 percent of Black and Hispanic respondents reported that they received food from a food pantry in the prior week, relative to around 2 percent of White and Asian respondents.

Annual food insecurity data have been collected in the December Current Population Survey for nearly twenty years and provide a consistently measured annual snapshot of food hardship. Rates by race and ethnicity, and by presence of children, in 2019 and 2020 are presented in figure 3. The overall household food insecurity rate was unchanged across the two years, but the average masks heterogeneous experiences across groups. Black and Hispanic persons experienced higher food insecurity in 2020 relative to 2019; Whites experienced a decline. Among households with children, the same pattern holds but the magnitudes of the increases among Black and Hispanic families is larger.[5]

4. See the online appendix (https://www.rsfjournal.org/content/9/3/32/tab-supplemental).

5. Jonathan Rothbaum and Adam Bee (2021) suggest disruptions to some CPS response rates, with those expected to have lower incomes having lower response rates.

SAFETY NET AND SOCIAL INSURANCE RESPONSE TO THE PANDEMIC

This section presents existing evidence on how our safety net responds in economic recessions and how the response has changed over time before discussing the relief bills implemented during the COVID crisis.

Programs and Evidence from Prior Recessions

The United States has many programs that help low-income families smooth their consumption in economic downturns and avoid hunger, poverty, or other negative outcomes. These include social insurance programs—with the most relevant such program being unemployment insurance. These social insurance programs are universal (not income targeted), are paid for using payroll taxes while working, and are triggered by an event, such as losing one's job through no fault of one's own for UI. Additionally, means-tested safety net programs such as SNAP, a program for low-income, low-asset individuals and families, provide benefits in the form of grocery vouchers, which are delivered by EBT card. It also includes tax credits such as the EITC or the CTC, which provide refundable (or partially refundable) tax credits to eligible families with earned income as well as cash benefits through Temporary Assistance for Needy Families (TANF).

In response to the massive economic shock and increase in material hardship associated with the COVID crisis, the pre-COVID U.S. safety net, under then-current law, would have provided some protection. In addition, in severe downturns, Congress often enhances the generosity of existing programs. For example, Congress can authorize emergency unemployment compensation (which tends to be fully federally funded), such as the program providing greatly extended duration for UI benefits during the Great Recession. During the Great Recession, Congress also temporarily raised maximum SNAP benefits. Congress has also authorized relatively universal tax credits or rebates, such as the Recovery Rebates in response to the Great Recession, which provided credits of $600 for individuals or $1,200 for joint filers.

Research documents whether the social safety net expands and contracts with economic recessions and expansions and the extent to which it does. In particular, the literature examines the extent to which safety net programs are countercyclical (spending and participation rise during recessions and fall during expansions) thereby providing needed assistance during economic downturns or procyclical (the opposite pattern). For example, Marianne Bitler and Hilary Hoynes (2016) use data through 2012 to explore how per capita real spending on various safety net programs responds to changes in local labor-market conditions measured by state-year unemployment rates. They find that UI, including the fully federally funded extensions and emergency programs as well as the usual state and state-federal program, is the most countercyclical program, although SNAP also has a strong countercyclical response. Bitler, Hoynes, and John Iselin (2020) extend that work and document the countercyclical nature of a host of programs pre-COVID using data through 2019. They find that since 2007, UI has shown a particularly robust countercyclical response, with a 1 percentage point increase in the unemployment rate leading to an 18 percent increase in UI spending. SNAP has a significant economically meaningful but weaker response, with a 1 percentage point increase in the unemployment rate leading to a 7 percent increase in SNAP spending. Interestingly, neither the work-conditioned tax credits (EITC) nor cash welfare for families with children (TANF) provide any countercyclical response to economic downturns, as might be expected given their eligibility rules and timing of EITC payout and the fact that TANF spending has been fixed in nominal terms since 1996.

To put these responses into context, we highlight how the U.S. social safety net has changed over time. In many cases, the programs have 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 reduced the generosity of their UI programs with the stated goal of reducing taxes for firms. In 2019, UI replacement rates—measured as the share of pre-unemployment earnings replaced by UI—averaged 45 percent, and many states had replacement rates below 40 percent including

Arkansas (31 percent), Arizona (37 percent), Indiana (37 percent), and Louisiana (34 percent).[6] Elira Kuka and Bryan Stuart (2021) document systematically lower UI replacement rates among Black than among White workers. Further, UI coverage is not complete and excludes unauthorized immigrants, those with inconsistent work histories, new labor-market entrants, and the self-employed.[7] More generally, the social safety net has shifted toward being more work conditioned, using earnings subsidies to increase incomes among workers with children but offering relatively little out-of-work assistance to those not elderly or disabled (Hoynes and Schanzenbach 2018). These changes were ushered in through the 1996 federal welfare reform law; expansions to the EITC; and, for some populations (notably able-bodied adults without dependents), work requirements for SNAP.[8] The result is a social safety net with a strong 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.

The EITC provides an important example of why these work-conditioned programs may not provide much protection. The EITC is the largest antipoverty program for children in the United States, but eligibility requires earned income. Bitler, Hoynes, and Kuka (2017) analyze Internal Revenue Service data on EITC payments and find no relationship between local unemployment rates and EITC spending. In fact, for single filers with children (the largest group of recipients), the point estimates suggest the EITC is pro-cyclical: spending per filer rises in economic expansions. Further, the EITC is paid out in a lump sum tax refund in February or March in the year after the earnings which qualify individuals are accrued, and thus unlikely to be responsive to current need. Thus, despite its important role in reducing poverty, the EITC is poorly suited to insure consumption against job loss. More generally, the authors show that the move from the previous out-of-work safety net (higher participation in Aid to Families with Dependent Children and limited tax credits for working) to the current in-work safety net (the EITC providing substantive tax credits for workers) led to a reduced overall cyclical response from the means-tested safety net.

In sum, the literature shows that before COVID-19, the safety net was providing uneven and incomplete protection during economic downturns. The EITC is not designed to provide insurance against job loss and TANF no longer responds to aggregate economic need and benefits are extended to few households. While UI is strongly countercyclical overall, its coverage is incomplete. SNAP expands during economic downturns, but SNAP benefits are more modest than UI, and because SNAP provides vouchers for food, benefits are only partially fungible and cannot be used for many other needs.

COVID-19 Pandemic Recession

To date, five federal laws responded directly to the COVID-19 economic crisis. These include the Families First Coronavirus Response Act

6. For data on replacement rates, see U.S. Department of Labor 2004.

7. Bitler, Hoynes, and Diane Schanzenbach (2020) use a UI calculator (Ganong, Noel, and Vavra 2020) and the 2019 CPS-ASEC and document that 4 percent of workers (14 percent of workers in poverty) would be ineligible for UI if they lost their jobs because they were likely unauthorized, 4 percent (7 percent of those in poverty) would be ineligible because they are self-employed, and 5 percent (17 percent of those in poverty) would be ineligible because of insufficient earnings. The latter two groups were covered by the PUA program but the unauthorized were left out of the UI expansions and are ineligible for SNAP. They are also ineligible for the economic impact payments and their citizen and authorized family members were excluded from the first EIP.

8. In addition, policy changes during the end of the Trump administration risked further reducing the protective effects of SNAP by imposing stricter work requirements and discouraging participation among immigrants and families with mixed immigration status with proposals to include SNAP in public charge rules about immigrants attempting to convert their immigration status. Many of these policies have been rescinded by the Biden administration.

(FFCRA), enacted March 18, 2020; the Coronavirus Aid, Relief, and Economic Security (CARES) Act, enacted March 27, 2020; the Continuing Appropriations Act 2021 and Other Extensions Act, enacted October 1, 2020; the Consolidated Appropriations Act 2021, enacted December 27, 2020; and the American Rescue Plan Act of 2021 (ARPA), enacted March 11, 2021).[9] As of August 31, 2021, these laws are reported to have resulted in $3.4 trillion in spending.[10] In this article, we focus on a subset of safety net programs for which the response to the COVID crisis was substantial and some administrative data are available. Four elements of this response are particularly important for lower-income families: expansions to SNAP, expansions to UI, the EIPs, and the refundable monthly CTC payments. As we show, these four policies account for almost $1.4 trillion in new spending from April 2020 through December 2021 and were the main sources of direct payments to households during COVID-19.[11] Wherever possible, we examine data on participation and benefits by race and ethnicity.

SNAP is structured to respond quickly to increased need because the program is an entitlement (not subject to annual funding limits), benefits are fully federally funded, and households that newly become eligible due to unemployment or other loss of income can apply and generally receive benefits with thirty days (Hoynes and Schanzenbach 2019). During the pandemic, Congress made temporary changes that increased both participation and (for many participants) benefit levels. Like those of most income support programs, SNAP benefits are typically reduced as a household's income increases—a maximum monthly benefit of about $170 per person is reduced by 30 cents for each additional dollar in income. The FFCRA authorized states to increase benefits for all SNAP participants to the maximum benefit, a provision known as the Emergency Allotment (EA), while state and federal health emergency declarations are in place. Notably, this expansion provides an increase in benefits to SNAP recipients who were not already receiving the maximum; these are the more "advantaged" of the SNAP population and include those with earned income and those with other income support (such as the elderly receiving Social Security). Therefore, even though SNAP's general structure is progressive (the highest benefits accrue to the lowest-income groups), the first COVID-era expansion of SNAP was regressive, at least within the SNAP population. Subsequent expansions to SNAP during COVID were not regressive, however. The Consolidated Appropriations Act (December 2020) increased maximum benefit amounts for all recipients by 15 percent from January through September 2021. Later, the previously enacted EA payments were revised upward to require that all recipients received a monthly benefit increase of at least $95, giving the lowest-income families who previously received no EA payments a boost in benefit levels. In addition, states were temporarily allowed to extend eligibility periods for currently participating households for six months (under normal circumstances, recipients are required to reapply for benefits every six to twelve months), allowing offices already stretched by health-related office closures and the need to socially distance to concentrate on screening new appli-

9. This section draws on Randy Aussenberg and Kara Billings (2021), Julia Whittaker and Katelin Isaacs (2021), and Margot Crandall-Hollick (2021).

10. Of the agencies whose programs we focus on, the Treasury had disbursed $1.4 trillion in new spending tied to the recovery by this point, the Department of Agriculture distributed $81 billion, and the Department of Labor distributed $650 billion. A large amount of SNAP and other Department of Agriculture and UI spending automatically increases in bad times, and much of this additional Treasury spending is the tax credits (USASpending 2021).

11. Other spending through nutrition programs included pandemic EBT (replacement payments for school meals while schools were closed), enhanced WIC benefits, directly provided school meals, and other meals. Eviction moratoria and housing spending also likely helped a host of families. Further, many of these safety net programs reduced or suspended recertification requirements temporarily, likely increasing participation.

cants. This temporary policy increased SNAP participation by reducing the flows out of the program during the pandemic.[12]

Congressional policy responses also included expansive changes to the joint state-federal UI program. The Federal Pandemic Unemployment Compensation (FPUC) program increased weekly benefits by $600 for weeks of unemployment through the end of July 2020. This was followed by the Lost Wages Assistance program, which allowed participating states to increase benefits by $300 to $400 per week for up to six additional weeks, for unemployment spells from the expiration of FPUC through early fall (weeks of unemployment ending September 5, 2020). After a period with no benefit top-ups, benefits were again increased by $300 per week for spells from December 26, 2020, through early September 2021.[13] All of these benefit increases were federally funded. The length of eligibility for UI was also extended, including an initial thirteen-week extension of fully federally funded benefits (Pandemic Emergency Unemployment Compensation) that was eventually expanded to provide up to thirty-nine additional weeks through early September 2021 for those exhausting other benefits. Overall, through October 1, 2022, total spending on UI from the federal government from the CARES Act and subsequent laws totaled $674 billion above and beyond the regular UI program spending (U.S. Department of Labor 2022).

Additionally, important expansions were made to the eligibility criteria for UI. The Pandemic Unemployment Assistance (PUA) program expanded UI eligibility to the self-employed and gig-economy workers and other workers who were previously excluded from eligibility on the basis of low earnings or insufficient work history.[14] Initial UI claims surged, rising from 221,000 for the week of March 14, 2020, to 5.9 million the week of March 28, 2020, and maxing out at 6.1 million the week of April 4, 2020. Ongoing claims went up nearly sevenfold, before returning to pre-pandemic levels by December 2021.

The largest and most universal of the relief efforts came through direct payments to families. The EIP included in the CARES Act provided $1,200 per adult ($2,400 for a married couple filing jointly) and $500 per dependent under age seventeen. 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 to those receiving payments through Social Security or Veteran's Affairs programs.[15] The initial payments were made to those with direct deposit information during the week of April 17, 2020, and paper checks followed more slowly after that. However, nonmilitary families that included any immigrant adult without a Social Security number were ineligible, thus excluding many citizen children and spouses.

A second round of direct payments went out as part of Consolidated Appropriations Act of 2021 (enacted December 27, 2020, payments starting in January 2021). This was a smaller payment of $600 for each eligible individual and $1,200 for joint married filers, and an ad-

12. A revised Thrifty Food Plan, on which SNAP benefits are based, was announced in the summer of 2021 and took effect on October 1. This increased regular SNAP benefits by about 27 percent relative to basic benefits without pandemic-related increases. Because the 15 percent pandemic increase ended at the same time, net benefits went up by a smaller amount.

13. States had to opt in to participate in the UI expansions and twenty-six ended some of these other programs before they expired in September 2021, citing concerns about work disincentives. Additionally, the Mixed Earner Unemployment Compensation program provided $100 additional per week for unemployed workers with self-employment and wage and salary income not getting UI for weeks of unemployment from December 27, 2020, to early September 2021.

14. The federal government also funded the waiting week for UI so that benefits would get out more quickly and most states suspended search requirements for obtaining UI during the health crisis through May 2020.

15. Some of the Social Security Administration groups had to submit forms to receive dependent payments.

ditional $600 per qualifying child under age seventeen. It also phased out for higher income individuals. A third round went out starting in March 2021 as part of the ARPA; phase-outs were similar but payments were higher, $1,400 per individual or dependent (and including all dependents, not just those under seventeen).

In addition, the ARPA included a considerable expansion of the CTC for tax year 2021. The National Academies (Duncan and Le Menestre 2019) and other researchers (Shaefer et al. 2018; Bitler, Hines, and Page 2018) have laid out evidence about the benefits of a child allowance in reducing poverty, and the CTC expansion was modeled after these proposals. The maximum CTC was expanded from $2,000 to $3,000 per year per child ($3,600 for children ages five and younger) and payments were made fully refundable so children in households with no or low earnings were eligible for the full benefit. ARPA also changed the timing of payments so half of the annual credit would be issued monthly starting in July (2021), and the rest would come when filing 2021 taxes in early 2022. Eligibility was also extended to seventeen-year-olds (who are usually ineligible). Real-time analysis has shown that these expansions substantially reduced child poverty and child food insufficiency (Parolin, Curran, et al. 2021; Parolin, Ananat, et al. 2021).

Figure 4 displays the timing and magnitude of new spending on these programs, reported monthly between April 2020 and December 2021. The information is drawn from Monthly Treasury Statements from the Department of the Treasury, which provide information on monthly receipts and outlays of the federal government (U.S. Department of the Treasury 2022). For SNAP and UI, we measure the change in spending relative to the programs' February 2020 levels, which were $4.9 billion and $2.8 billion, respectively.[16] Spending on the EIPs is reported directly, as are payments of the CTC that exceed tax liabilities (the refundable portion of the CTC). Cumulatively, throughout these twenty-one months, nearly 60 percent of the new spending came from the EIPs—the benefits least targeted to those who experienced a direct economic shock or who have low levels of income. More than 25 percent came from UI, 9 percent came from SNAP, and 7 percent came from the monthly CTC payments that started in July 2021.

As shown in figure 4, variation in new monthly spending is driven by the timing of the EIPs, and most new spending occurred in April 2020 and January and March 2021. Unemployment insurance payments are generally smooth across months, averaging $23 billion per month from April 2020 through March 2021 but increasing and decreasing somewhat in relation to the availability of federal top-up payments. From April through August 2021, UI payments averaged $13 billion per month, declining further in the months that followed with the expiration of COVID-era policies. SNAP payments, the program most targeted to the low-income population, grew over this period: spending increases were driven by an increase in participation levels in the first months of COVID, then by subsequent increases in benefits levels. The refundable monthly CTC payments were relatively stable across July to December 2021, and in magnitude were about three times the new monthly spending on SNAP and 80 percent of the monthly average new UI spending.

THE PANDEMIC, THE SOCIAL SAFETY NET, AND POVERTY

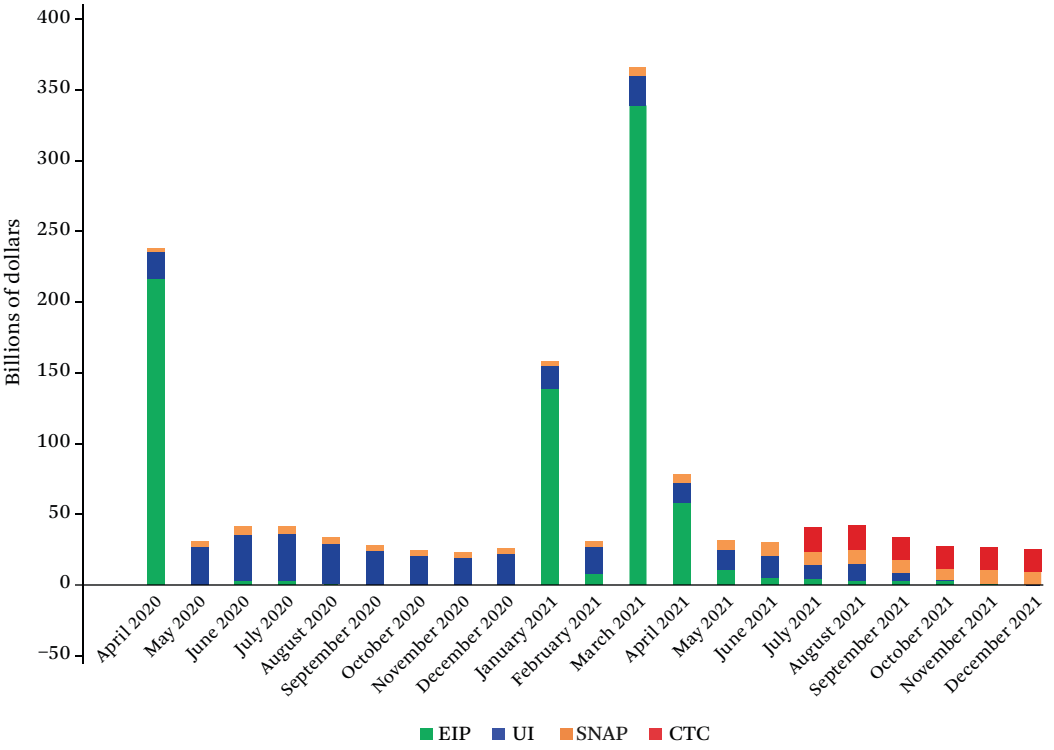
The Annual Social and Economic Supplement (ASEC) to the Current Population Survey is administered to most households in March every year and is an annual survey that collects labor market, income, and program participation information for individuals for the previous calendar year; as well as demographic information from the time of the survey.

We begin by examining poverty rates by race and ethnicity for calendar years 2019 and 2020.[17] We measure poverty using the SPM, which is available from the Census Bureau beginning in 2009 and is released alongside the official pov-

16. Payments to SNAP participants of the pandemic EBT benefits to replace missed school meals are also included in the Monthly Treasury Statements. Pandemic EBT payments to SNAP nonparticipants are not included.

17. The CPS faced challenges with interviewing in COVID. Rothbaum and Bee (2021) document nonresponse issues in the 2020 ASEC used for measuring 2019 poverty. Their adjusted 2020 measure adjusting for lagged

Figure 4. New Monthly Spending in Economic Impact Payments, Unemployment Insurance, SNAP, and the Child Tax Credit



Source: Authors' tabulations of Monthly Treasury Statements, February 2020 through December 2021 (U.S. Department of the Treasury 2022).
Note: We difference monthly expenditures relative to their February 2020 level to net out new payments.

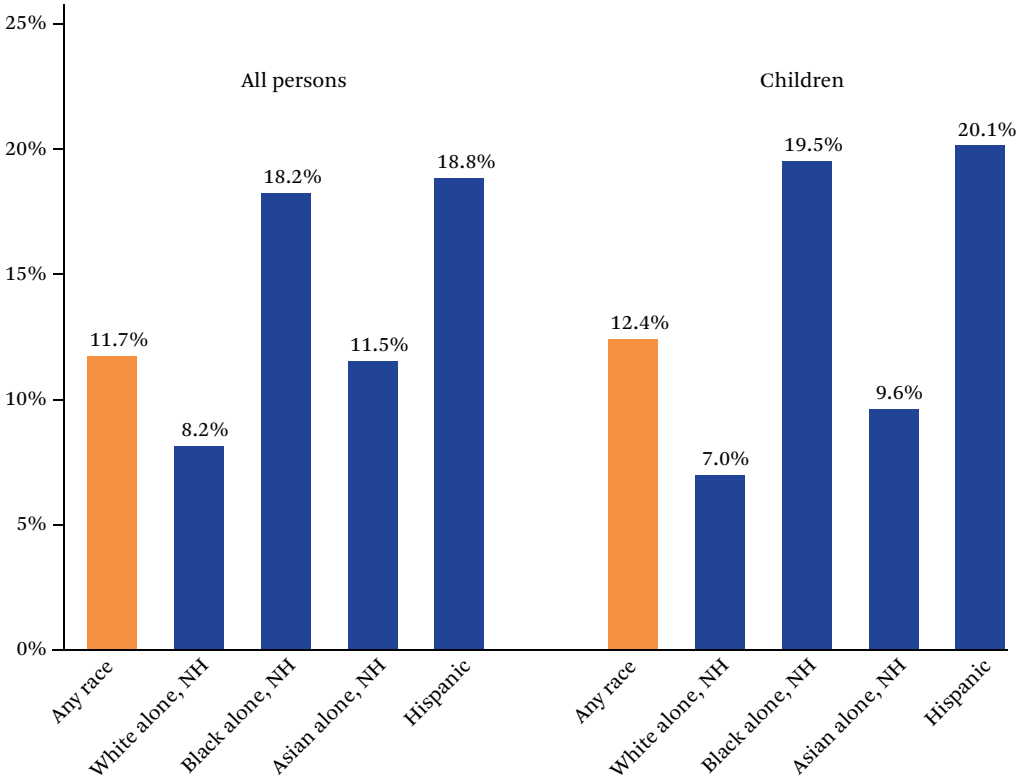
erty measure.[18] A person is in poverty if their family's SPM resources are below their SPM threshold. SPM resources include all cash income (earnings, pensions, cash transfers, Social Security Administration payments for disability, retirement and supplemental security income) plus the cash value of in-kind transfers (SNAP, the National School Lunch Program, housing subsidies, energy assistance, WIC [the Special Supplemental Nutrition Program for Women, Infants, and Children]) minus deductions (medical out-of-pocket expenditures, child support paid, work expenses, childcare) and taxes (payroll taxes, federal and state income taxes including the tax credits—EITC, CTC—and the EIPs). The Census Bureau's SPM Thresholds are the average between the 30th and 36th percentiles of the distribution of consumer expenditures on food, clothing, shelter, and utilities, plus an additional 20 percent to account for additional necessary expenditures. Additionally, the thresholds are adjusted to reflect family size, owner versus renter status, and geographic variation in housing costs (for more detail on the SPM, see Fox and Burns 2021).

Figure 5 presents the share in poverty for all persons (left) and for children (right), by race

administrative and historical responses suggests the nonrespondents were lower-income individuals (pre-pandemic), and thus that official poverty might have been underestimated.

18. The official poverty measure is of limited use to understand hardship because it is based only on cash pretax income, thus not inclusive of SNAP, EITC, CTC, or EIPs.

Figure 5. Supplemental Poverty Measure 2019, All Persons and Children



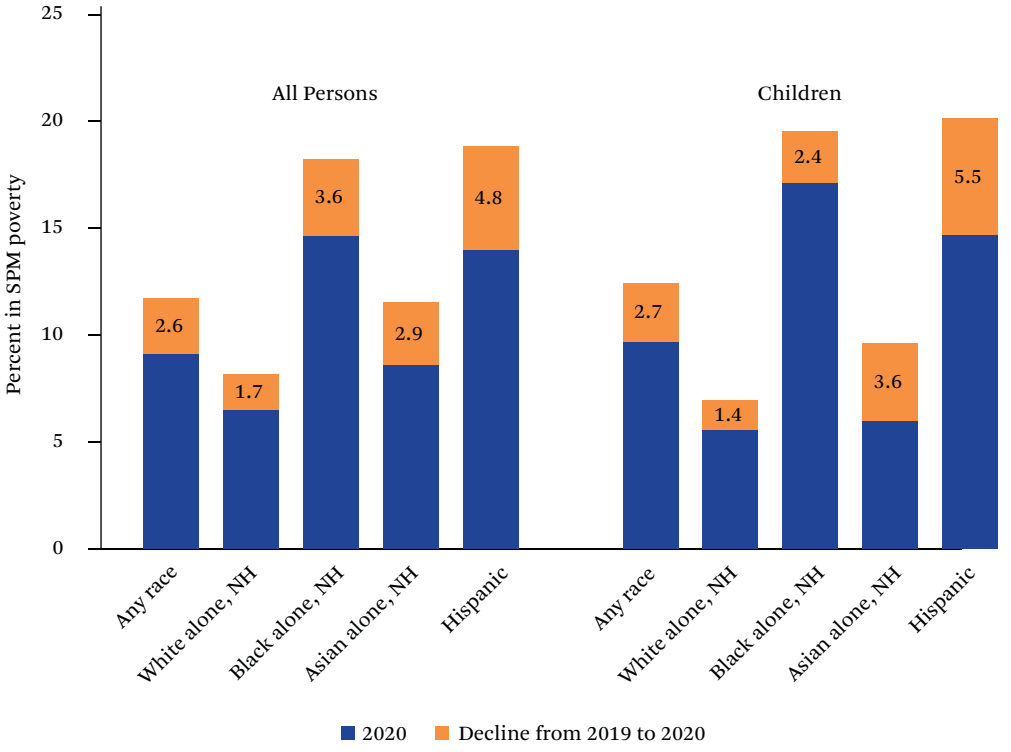
Source: Authors' tabulations using 2020 and 2021 Annual Social and Economic Supplement to the Current Population Survey (U.S. Census Bureau 2020b; U.S. Census Bureau 2021a).

and ethnicity, in the pre-pandemic baseline of calendar year 2019. Overall, in 2019, 11.7 percent of all persons, and 12.4 percent of children, were poor in the United States. The disparities across race and ethnicity are striking. For example, 19.5 percent of Black children and 20.1 percent of Hispanic children are poor, versus 7.0 percent of White children and 9.6 percent of Asian children.

Despite the dramatic increases in unemployment, between 2019 and 2020–2021, annual poverty rates across all groups declined (see figure 6); for a partial caveat related to differential nonresponse by income groups, see note 17. The overall poverty rate fell by 2.6 percentage points (from 11.7 to 9.1 percent) for all persons and by 2.7 percentage points for children. Declines in poverty rates were experienced across all race and ethnic groups. For example, the share of Black children in poverty fell by 2.4 percentage points, and for Hispanic children it fell by 5.5 points. Across all groups, these represent significant declines on the order of 20 to 25 percent of the pre-pandemic level (the lowest percentage decline was 12 percent for Black children).

Clearly, a decline in poverty in the midst of an economic crisis is not a typical finding. Although UI and SNAP are strong automatic stabilizers (Bitler and Hoynes 2010, 2016; Bitler, Hoynes, and Iselin 2020), poverty has consistently increased during recessions in the United States (Bitler and Hoynes 2010, 2015; Bitler, Hoynes, and Kuka 2017). The 2019 to 2020 decline in poverty is a direct result of the dramatic pandemic policy response. Figure 7 presents the effect of individual policies on SPM poverty rates in 2020 for all persons (panel A) and all children (panel B). To make these calculations, we zero out a given tax or transfer program and recalculate the poverty rate assuming no change in behavior. We also in-

Figure 6. Reduction in SPM Between 2019 and 2020 (Percentage Points)



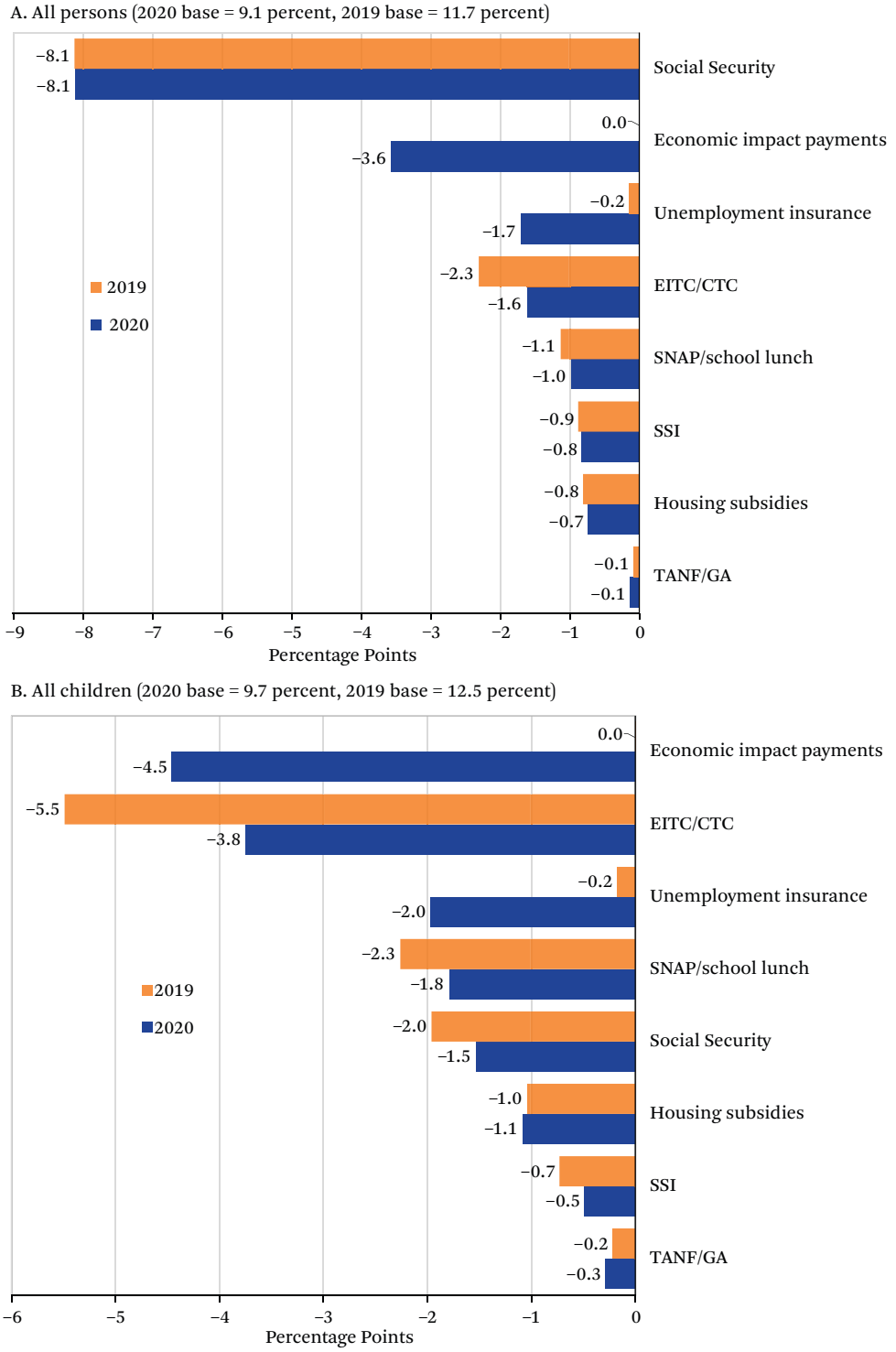
Source: Authors' calculations based on 2020 and 2021 Annual Social and Economic Supplement to the CPS (U.S. Census Bureau 2020b and U.S. Census Bureau 2021a).

clude the antipoverty effects for 2019 as a pre-pandemic baseline comparison.

For all persons, Social Security leads to the largest poverty reduction at a staggering 8.1 percentage points (the same poverty reduction for both 2019 and 2020). Focusing on 2020, we see the EIPs reduced poverty by 3.6 percentage points, followed by UI at 1.7 percentage points, the combined effect of the EITC and the CTC at 1.6 percentage points and the combination of SNAP and school lunch at 1 percentage point. Among children, the largest poverty reduction resulted from the EIPs at 4.5 percentage points, followed by the combined impact of the EITC and CTC at 3.8 percentage points, UI at 2.0 percentage points and SNAP and school lunch at 1.8 percentage points. Social Security plays a smaller role in poverty reduction among children. Comparing these poverty reductions to 2019, we note several findings. First, the effects of the EITC-CTC are smaller in 2020 than in 2019 (consistent with Bitler, Hoynes, and Kuka 2017), illustrating that the EITC is pro-cyclical (decreases during recessions) for single-parent families. (Importantly, the ARPA-expanded CTC did not take place until July 2021 and thus is not reflected in these calculations.) Second, in 2019 UI played a very small role in poverty reduction whereas in 2020 it was the third largest antipoverty program for all persons and for children.[19] This highlights the significance of the COVID-era UI expansions, particularly the benefit top-ups. These calculations make it very clear that without the increase in pandemic aid, poverty rates in 2020 would have increased dramatically. Of course, these are static comparisons, limited because they simply compare poverty calculated with and without

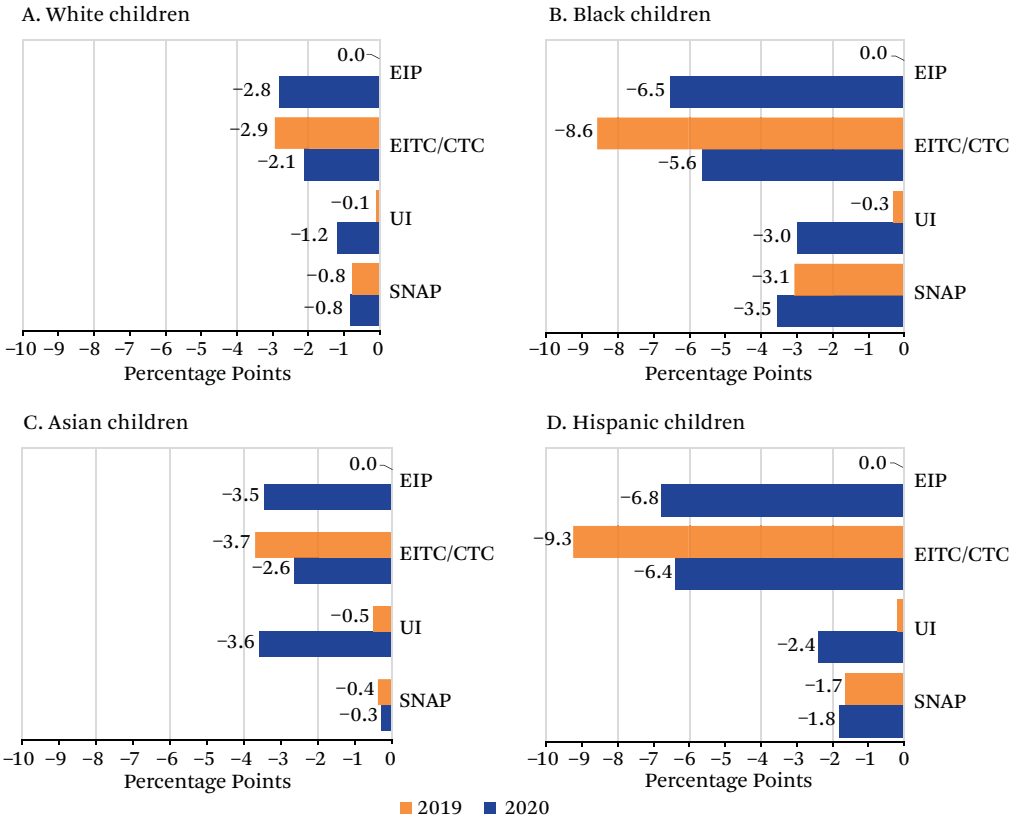
19. The CPS greatly understated receipt of UI, suggesting an even larger role of UI during COVID (Larrimore, Mortensen, and Splinter 2022).

Figure 7. Effect of Individual Elements of Social Safety Net on 2020 Versus 2019, Percentage Point Change in SPM Rate



Source: Authors' calculations based on Fox 2020; Fox and Burns 2021.
Note: We suppress very small changes in poverty rates for LIHEAP, worker's compensation, and WIC.

Figure 8. Effect of Individual Elements of Social Safety Net on the 2019 and 2020 Child SPM Rates, by Race and Ethnicity



Source: Authors' calculations based on 2020 and 2021 Annual Social and Economic Supplement to the CPS (U.S. Census Bureau 2020b; U.S. Census Bureau 2021a).

various income components but do not include any behavioral responses were the programs to be removed.[20]

The program-driven reductions in poverty are experienced across all groups. Figure 8 shows the effects of individual policies on child poverty, separately for White, Black, Asian, and Hispanic children. We include estimates for 2019 and 2020, as before, to highlight the effects of the COVID era policies. Focusing on the data for 2020, among Black children, the EIPs reduced poverty by 6.5 percentage points, followed by EITC-CTC at 5.6 percentage points, SNAP at 3.5 percentage points, and UI at 3 percentage points (we have suppressed the other safety net policies for clarity). EIPs had the largest impact on poverty for White, Black, and Hispanic children; UI had the largest impact for Asian children. The effects of SNAP and UI are lower for Hispanic than for Black children despite their similar baseline poverty rates. This is likely a result of incomplete eligibility or lower take-up of these programs among families with unauthorized members.[21] Overall, these results show that universal policies, such as the uniform $300 to $600 UI top-up and the

20. Zachary Parolin, Meghan Curran, and colleagues (2022) present an approach to calculating a monthly SPM and use it to explore well-being through the beginning of COVID. Parolin, Elizabeth Ananat, and colleagues (2021) and Parolin, Sophie Collyer, and colleagues (2021) explore the effects of the CTC.

21. The EIPs and EITC-CTC are not measured directly in the ASEC and are imputed by the census. This may generate somewhat higher antipoverty effects than are realized if true participation is not 100 percent.

relatively universal EIPs, can reduce disparities across groups.

A CLOSER LOOK AT SNAP'S RESPONSE TO COVID-19

The ASEC is useful given the ability to measure family resources and to identify race and ethnic groups, but has disadvantages in regard to survey measures of poverty and well-being. One concern is the well-documented misreporting (typically underreporting) of various programs (such as Meyer, Mok, and Sullivan 2015) as well as earnings (Bollinger et al. 2019). The Census Pulse data were extremely valuable by providing real-time information about hardship but are not comparable to pre-COVID measures. Further, all survey measures may have differential nonresponse (Rothbaum and Bee 2021). This leads us to examine administrative data, which do not suffer from this underreporting issue and do not require individuals to report program use. Ideally, we would look at all sources of administrative data, but this is not possible. In the case of SNAP, we use administrative data on county-level participation and benefits, as well as case-level data that includes information on benefits, income sources, and demographic characteristics such as race-ethnicity; some data extend to January 2021. SNAP is also an important case study because of its central role in the social safety net and the many policy changes made in response to COVID.

Thus we more closely investigate SNAP's response to the COVID-19 crisis, paying special attention to impacts across racial and ethnic groups (overall and among children) and by geographic area. As shown in figure 9, administrative data from the Department of Agriculture shows that SNAP participation increased sharply after COVID's onset, likely a function of both increased need and the policy change that temporarily allowed states to automatically recertify existing SNAP cases so their administrators could concentrate on serving those made newly eligible due to the economic shock. Participation increased by 11 percent in April 2020 and through December 2021 remained elevated by an average of 13 percent relative to the February 2020 level.[22]

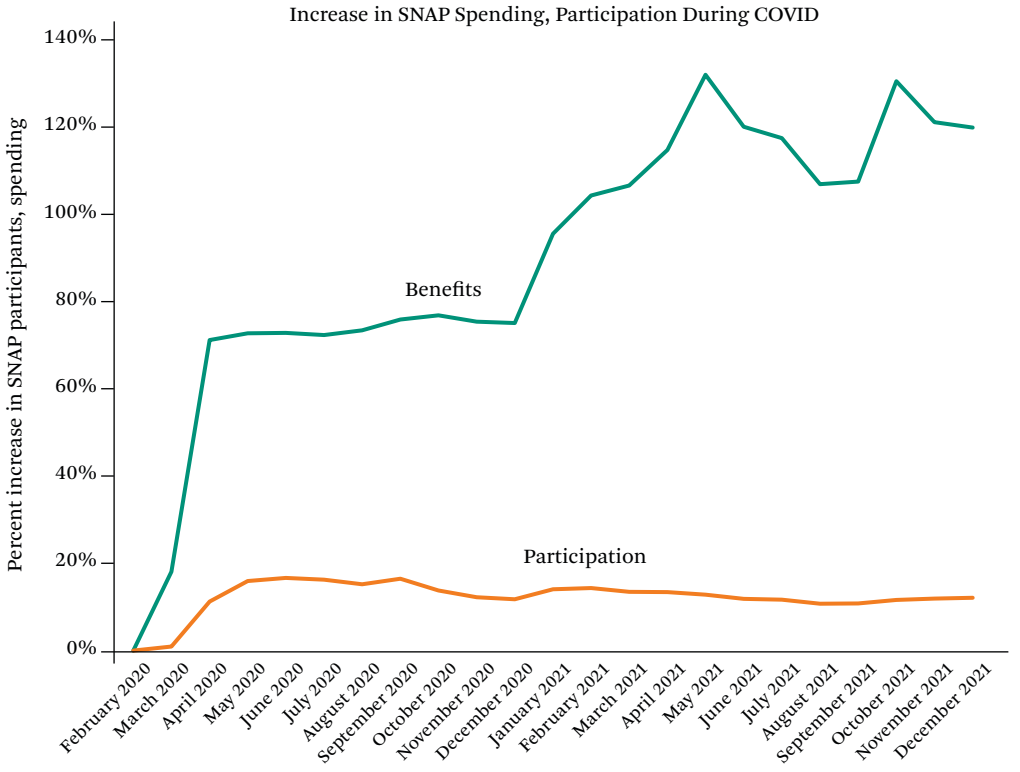
In addition to the increase in SNAP participation, total SNAP expenditures increased due to legislated increases in benefit payments, as described in more detail above. First, all participants were awarded the maximum SNAP benefit through the EA payments starting in April 2020. Next, there was an across-the-board 15 percent increase in maximum benefits in January 2021. This was followed by action that set minimum EA payments equal to $95 per month, awarding these additional EA payments for the first time to those who had previously been receiving maximum SNAP benefits, rolled out in April and May 2021. Each of these increases can be seen clearly in the time series of total benefits, which peaked at a 130 percent increase relative to February 2020 spending.[23] Some states opted to terminate their EA payments in the summer months in 2021, reducing benefit payments in those months. The 15 percent increase in maximum benefits ended in October 2021, coinciding with the increase in maximum benefits resulting from a recalibration of the Thrifty Food Plan (Food and Nutrition Service 2021c).

We rely primarily on two sources of SNAP administrative data. The first source is the quality control (QC) data, which for a sample of cases have detailed administrative information on benefits, resources, and household composition (including race-ethnicity). At the time of this analysis, the QC data are available only during the pre-COVID era through 2019. The second source is the Department of Agriculture's Bi-Annual State Project Area and County Level Participation and Issuance data, reported for January and July of each year and available through January 2021 (Food and Nutrition Service 2021a). This source provides county-level data from most states but a few states report only state-level data. Together, we use these data sources to both see how spend-

22. Average monthly participation in SNAP in calendar year 2019 was thirty-five million persons, and benefits spending was $4.57 billion.

23. Unlike the monthly Treasury statement data in figure 4, which include P-EBT payments to SNAP participants in SNAP spending, Department of Agriculture benefits data in figure 9 include only SNAP benefits.

Figure 9. Percentage Increase in SNAP Participation and Spending Relative to February 2020, February 2020–July 2021



Source: Authors' calculations from USDA, Food and Nutrition Service, SNAP National Level Monthly Data (Food and Nutrition Service 2021b).

ing and participation vary with the characteristics of areas and simulate who obtained more generous increases to their average benefit by race/ethnicity.

We start by investigating the change in SNAP participation during COVID-19. Participation can grow from two sources: those who are eligible but not participating in SNAP can enroll, and more people can become eligible to participate due to income losses. Table 1 shows baseline participation rates (where the denominator is households with incomes below 150 percent of poverty), averaged across calendar years 2017 through 2019, by race-ethnicity and presence of children, to demonstrate variation in room to grow through increased participation rates. We take two approaches to calculating the numerator in this rate: calculating the number of SNAP participants by race-ethnicity in the nationally representative QC data and in the CPS ASEC. For both calculations, the denominator is based on population counts by race-ethnicity in the CPS-ASEC, limited to those with incomes below 150 percent of the federal poverty line to proxy the number of persons likely eligible for SNAP.

Using the QC data as the numerator, the SNAP participation rate overall is 62 percent. Variation in participation across racial and ethnic groups is wide: averages are 77 percent among Blacks, 52 percent among Whites, and 35 percent among Hispanics. Estimated participation rates are substantially lower across the board when the CPS is used for the numerator, as expected given the known underreporting of SNAP participation in the data. We present this to highlight the drawbacks to relying on CPS survey data (as we did earlier) and the

Table 1. SNAP Participation Rates, by Group (2017–2019)

	Overall (1)	White (2)	Black (3)	Hispanic (4)
Panel A. All participants				
SNAP admin data	61.6	51.6	76.5	35.3
CPS survey data	31.9	27.3	44.7	30.6
Panel B. Participants in families with children				
SNAP admin data	77.6	76.7	93.6	38.2
CPS survey data	39.2	37.4	53.5	32.9

Source: Authors' calculations based on 2017–2019 CPS-ASEC (U.S. Census Bureau 2018, 2019, and 2020b) and SNAP Quality Control data (Mathematica Policy Research, 2018, 2019, and 2020).
Note: Participation is calculated relative to a denominator of population counts in households with incomes below 150 percent of the poverty threshold calculated from the CPS-ASEC. The first row in each pair calculates the numerator (SNAP participation) from SNAP administrative data, and the second row in each pair calculates it from the CPS-ASEC.

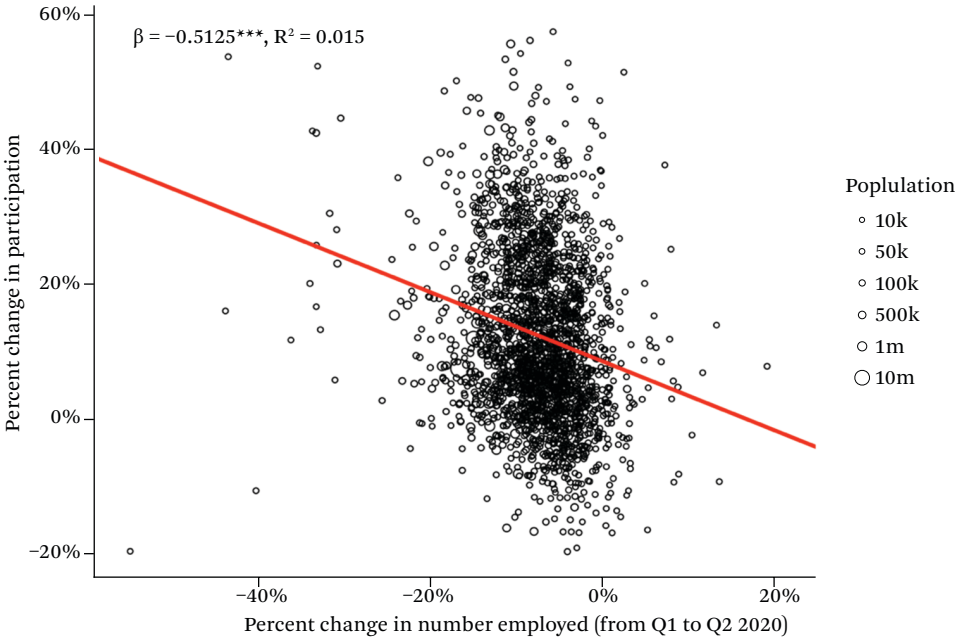
desirability of using administrative data when possible to understand program spending. Panel B repeats the exercise for families with children. Participation rates are higher across the board among those with children: an estimated 78 percent overall and nearly 94 percent among Black families with children. All else equal, then, the opportunity for participation to grow was higher among childless families, and among Whites and Hispanics relative to Blacks.

We next explore determinants of the magnitude of participation changes from January 2020 to January 2021. We first test the correlation between the state-level increase in SNAP participation and state-level participation rates among eligible persons from 2017 (the most recent available) calculated by Mathematica Policy Research (Cunnyngham 2020). The hypothesized relationship could go in either direction. We may expect the increase in participation to be larger in states that previously had lower participation rates among eligibles, given more room to grow. On the other hand, if high participation rates in part reflect an efficient and inclusive state administrative system, we may expect participation to increase more in these states as they are better equipped to process applications among those newly eligible due to the economic shock. We find evidence consistent with the latter hypothesis (see online appendix figure 2), with a weak but positive relationship between baseline participation rates among eligibles and percentage growth during COVID.

We also measure the relationship between the magnitude of the COVID economic shock and changes in SNAP participation, using county-level data, as shown in figure 10. The *x*-axis shows the percentage change in number of people employed from quarter 1 to quarter 2, 2020 and the *y*-axis shows the percentage change in SNAP participation from January 2020 to January 2021. As we would expect, we find counties that experienced a larger employment loss also had a larger increase in SNAP participation.

We next analyze changes in total SNAP benefit payments, exploring by how much, when, and for whom benefits increased. Because data were at the time of our writing available only through January 2021, we observed only the period for which the original EA payments were in place—a policy that paid everyone the maximum benefit but provided no additional benefits to those who had already been receiving the maximum benefit. But we can model the likely impacts of the series of payment changes using participant characteristics from the 2017–19 SNAP QC data. The first two rows of table 2 show the average benefit amount (as a share of the maximum benefit) and the share of house-

Figure 10. Percent Change in SNAP Participation (January 2020–January 2021) Versus Number Employed (2020, Quarter 1 to 2020, Quarter 2)



Source: Authors' calculations based on USDA's Bi-Annual State Project Area and County Level Participation and Issuance data and the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (U.S. BLS 2021).

Note: The figure indicates the ordinary least squares estimate of the effect of the county employment shock on SNAP participation (β) and the fit of that regression (R^2), and *** indicates that beta is statistically significant at the 1 percent level.

holds receiving the maximum benefit (who did not receive a payment increase under the original EA policy).[24] Under the regular SNAP benefits schedule, benefits are awarded as the difference between the maximum benefit and 30 percent of a household's net income after a series of deductions including a portion of earnings and some expenses such as dependent care and excess shelter cost (Center on Budget and Policy Priorities 2022). Those with zero net income receive the maximum SNAP benefit. Understanding benefits receipt at baseline clarifies who received extra resources, and how many, during the COVID policy changes to SNAP.

As shown in table 2, 32 percent of households and 29 percent of those with children were already receiving the maximum SNAP benefit at baseline, and therefore would not have received any benefit increase under the original EA policy implemented in March 2020.[25] Black recipients were more likely to be receiving the maximum benefit at baseline, meaning that more of this population would not have received a benefit increase under the original EA policy. Within each racial-ethnic group, households with children were less likely to be receiving the maximum benefit at baseline.

The original EA policy increased benefits by 44 percent overall and by 39 percent for those with children. We project that White recipients received larger percentage increases than

24. Maximum benefits depend on family size, and in 2019 were $192 per month for a household of 1, increasing by approximately $142 per month for each additional household member (Center on Budget and Policy Priorities 2019).

25. Some states implemented EAs in April 2020.

Table 2. SNAP Benefits and COVID-Era Increases, by Race and Ethnicity and Presence of Children

	Overall (1)	White (2)	Black (3)	Hispanic (4)
Panel A. All participants				
Baseline receiving max benefit	31.6	31.0	34.3	31.6
Baseline benefits, maximum	69.3	66.9	71.0	73.1
Benefit increase, EA only	44.4	49.4	40.8	36.7
Increase, all policy changes	87.5	94.5	84.0	78.1
Panel B. Participants in families with children				
Baseline receiving maximum benefit	28.9	28.3	31.4	27.8
Baseline benefits, maximum	72.0	70.4	73.2	73.8
Benefit increase, EA only	39.0	42.0	36.6	35.6
Increase, all policy changes	71.7	74.8	69.2	69.2

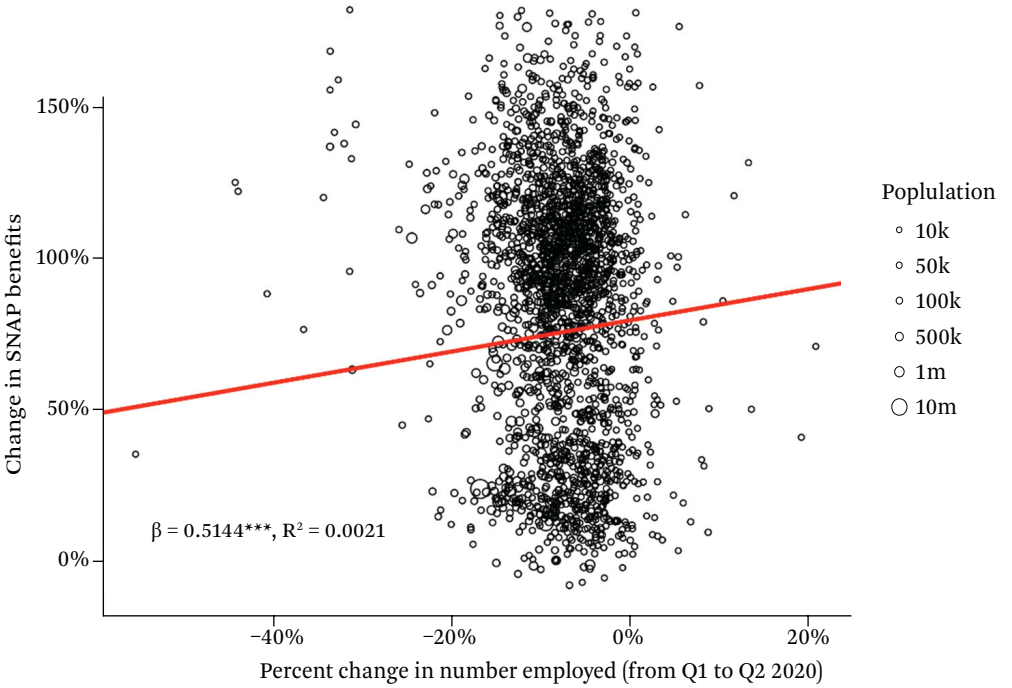
Source: Authors' calculations based on SNAP quality control data (Mathematica Policy Research, 2018, 2019, and 2020) corresponding to years 2017 to 2019.
Note: All figures in percentages. The first row in each panel is average pre-pandemic benefits as a share of the maximum benefit. The second row calculates the share of participants receiving the maximum benefit. The third row predicts the benefit increase from the original Emergency Assistance policy change enacted in March–April 2020 that moved all participants to the maximum benefit. The final row predicts benefit increases from additional COVID-era policy changes (original EA, 15 percent maximum benefit increase, and new EA requiring a $95 monthly minimum enacted in March–April 2020, January 2021, and March–April 2021, respectively).

Black or Hispanic recipients did, a direct result of their lower baseline SNAP benefits (relative to the maximum benefit, shown in row 2).[26] Subsequently, benefits were increased across the board in January 2021 and the EA payments were reformed so that all households received a minimum of a $95 payment starting (depending on the state of residence) in April or May 2021. Together, these policy changes boosted benefits relative to their pre-pandemic levels by 88 percent overall and 72 percent for households with children, and for the first time provided additional resources to those previously receiving the maximum benefit allotment. Cumulatively, under all of the policy changes, White participants still saw a larger percentage increase in their benefits than Black and Hispanic participants did, in part because a larger share of Black and Hispanic participants were already receiving the maximum allotment before the EA. Overall, the SNAP policy changes were regressive within the SNAP population, providing larger increases for those who were already better off.

Given this background, figure 11 shows the relationship between the county-level employment shock (change in number employed from Q1 to Q2 2020) and county-level change in SNAP benefits (from January 2020 to January 2021, and only includes the EA expansion). Recall that the measure of SNAP benefits includes additional resources from both increased participation and the EA benefits, and we previously demonstrated in figure 10 that participation increased more in counties with larger employment shocks. The relationship between the employment shock and change in SNAP benefits is the inverse of what is expected—that is, counties that experienced a smaller drop in employment received larger increases in SNAP benefits. In other words, the policy-induced benefit increases were more generous to counties less affected by the economic shock. Unfortunately, at the time of this writing the SNAP

26. As a check, we compare our predictions of SNAP benefit increases based on pre-pandemic SNAP caseload characteristics with actual benefit increases from January 2020 to January 2021 at the state level in appendix figure 3. We predict benefit increases from EAs only and do not model increases due to higher enrollment. We find that the actual benefit increase is positively correlated with our prediction.

Figure 11. Percent Change in SNAP Benefits (January 2020–January 2021) Versus Number Employed (2020, Quarter 1 to 2020, Quarter 2)



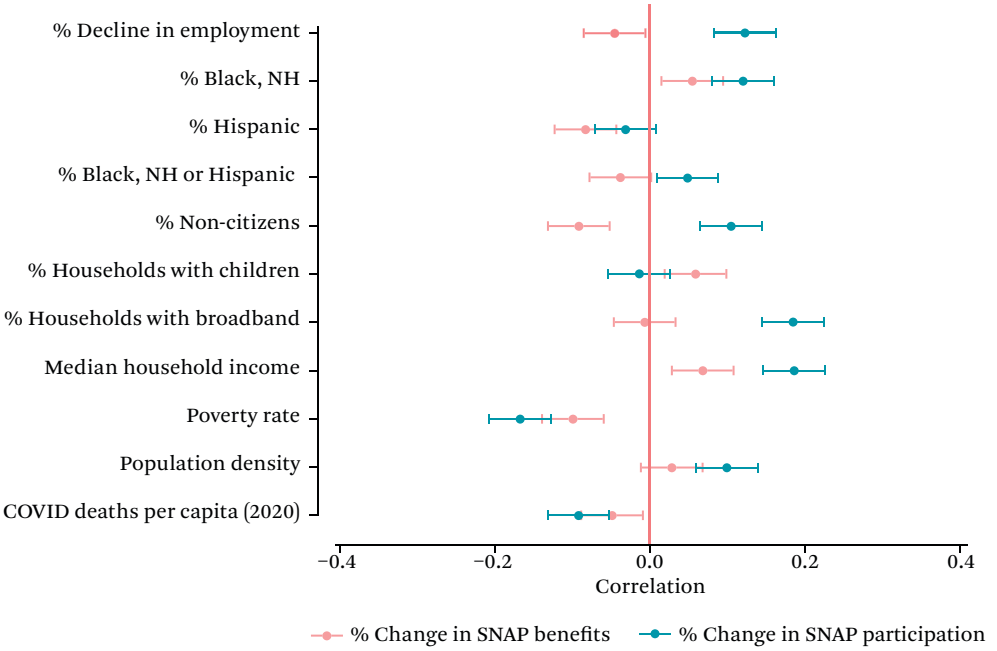
Source: Authors' calculations based on USDA (Food and Nutrition Service 2021a) and the U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (U.S. BLS 2021).
Note: The figure indicates the ordinary least squares estimate of the effect of the county employment shock on the SNAP benefits (β) and the fit of that regression (R^2), and *** indicates that β is statistically significant at the 1 percent level.

data do not yet extend to the later and more progressive SNAP increases.

We estimate population-weighted bivariate correlations to further explore how SNAP participation and benefit changes from January 2020 to January 2021 are related to county characteristics. Figure 12 reports point estimates and 95 percent confidence intervals from these bivariate regressions. As shown in figure 10, the top row indicates that counties that experienced larger declines in employment had larger increases in SNAP participation. Counties with a higher share of the population identifying as Black also saw larger increases in participation. The Hispanic population share is weakly negatively related to increases in SNAP participation, as is the share of households with children. More advantaged counties—measured as higher median household incomes or lower poverty rates—saw larger increases in SNAP participation. The share of households with broadband, which may be a proxy for the ability to sign up online for SNAP during COVID, is positively correlated with the increase in SNAP participation. Places with higher population density also had more SNAP participation growth. Places with more COVID deaths per capita experienced less SNAP participation growth.

The increase in county-level SNAP benefits is often less strongly correlated with characteristics than the increase in participation, likely because of the policy changes that made the program more generous to those among the SNAP population who were somewhat better off. As shown in figure 11, counties that experienced larger declines in employment had smaller increases in SNAP benefits. Although the change in SNAP benefits is positively related to the Black share of the population, it is

Figure 12. Correlations Between County Characteristics and Percent Changes in SNAP Outcomes



Source: Authors' calculations based on USDA (Food and Nutrition Service 2021a), Bureau of the Census American Community Survey 2015–2019 5-Year Data Release (U.S. Census Bureau 2020a), Census Bureau 2020 Census Population Density (U.S. Census Bureau 2021b), and 2020 Covid Deaths from USAFacts (USAFacts 2022).

negatively related to the Hispanic share, the combined Black and Hispanic share, and the share of noncitizens. Counties with higher median incomes, lower poverty rates, and lower COVID death rates saw larger SNAP benefit increases.

In summary, the response from SNAP—in terms of participation and monthly payments—was sizable. While data are not yet available to know whether participation increased disproportionately across racial and ethnic groups, we find that participation increased more in counties with a higher share of the population that is Black but is unrelated to the population's Hispanic share. We also find that because the design of the EA payment increases was more generous to those who were already better off (among a disadvantaged SNAP population), these increases provided less assistance to places with larger shares of Blacks and Hispanics and larger shares of children. Further, counties that received larger increases in SNAP benefits during COVID experienced smaller employment shocks. Future work can extend this analysis through the full COVID policy response period.

SUMMARY AND CONCLUSIONS

The economic and public health crisis caused by COVID-19 was devastating and disproportionately hurt Blacks and Hispanics. We show that unemployment rates were higher and increased more during the crisis among Blacks and Hispanics than among Whites. Other measures of material hardship, including lack of access to adequate food, being behind on housing payments, and use of food banks, were two to three times as prevalent among Blacks and Hispanics as among Whites and Asians.

Without policy intervention, the U.S. safety net is not well designed for an economic downturn, let alone a crisis of this magnitude. The replacement rates and duration of state unemployment insurance benefits are on the decline, and our means-tested social safety net

has grown increasingly conditional on work. The result is less insurance against job loss. Congress authorized a historic policy response, incorporating both targeted and universal supports and expanding the reach, duration, and level of benefits. This response yielded the unusual outcome of a decline in the poverty rate between 2019 and 2020 (measured using the Supplemental Poverty Measure) amid an historic recession.

This article also examines changes in these poverty rates across groups as well as the poverty-alleviating impacts of the array of social safety net benefits. We find that in 2020 the near-universal economic impact payments reduced overall poverty by 3.6 percentage points and the children's poverty rate by 4.5 percentage points. The EIPs reduced poverty among children by more than any other targeted program for Whites, Blacks, and Hispanics; for Asians, UI had a slightly larger impact. This suggests that universal programs can reduce disparities between groups. The increases in unemployment insurance protected millions of families from falling into poverty.

We augment the findings, based on survey data, with detailed administrative data on SNAP participation and benefit payments. SNAP is of particular interest for several reasons. First, it is the only program that is quite large when times are good; UI is small outside recessions and the other programs did not exist in the form they took during COVID. Second, SNAP had both more targeted and less targeted expansions during COVID. The more targeted expansion resulted from suspending temporarily rules that require participants to recertify for the program regularly—a feature of the program shown to decrease participation (Homonoff and Somerville 2021; Gray 2019). The less targeted expansion involved paying everyone the maximum benefit for much of the pandemic, which increased benefits for the participants who were relatively better off but did not change them for the worst off. We find that participation in SNAP increased more in counties that experienced a larger employment shock, consistent with the standard countercyclical role of SNAP. By contrast, the increase in total SNAP benefits received was inversely related to the employment shock. This likely occurred because the less-targeted SNAP benefit increases were more generous to SNAP participants who were already better off. Simulating the benefits increases from pre-COVID administrative data, we predict that Black and Hispanic SNAP participants received a smaller percentage increase in their benefits than White participants, as families with children across the board did. Overall, this suggests that the targeting in SNAP may not have been ideal.

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