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Applying for and receiving unemployment insurance benefits during the coronavirus pandemic

During the coronavirus disease 2019 pandemic in the United States, claims for unemployment insurance (UI) benefits rose sharply because of the substantial job loss and the expansion of UI programs. To improve upon UI administrative data, in this article, we use the Household Pulse Survey to estimate the number of people who applied for UI benefits, the number of people who received benefits, and the success rate of UI applicants (the share of applicants who received benefits) during the first 9 months of the pandemic. We examine differences by demographic group, educational attainment, and prepandemic household income. In addition, we relate state-level estimates to UI recipiency before the pandemic, job loss during the pandemic, and the differential spread of the coronavirus across states. Compared with individuals who applied for UI benefits but did not receive them, we find that individuals who received benefits had greater well-being in a variety of domains, including household finances, food security, and mental health.

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The coronavirus disease 2019 (COVID-19) pandemic has greatly affected the U.S. labor market starting in March 2020. More than twice as many jobs were lost in the initial months of the pandemic than during the Great Recession (2007–09). In addition, only a third of those jobs were recovered in the subsequent 2 months.[1] The large number of job losses at the beginning of the pandemic caused the employment–population ratio to plummet from 61.1 percent in February 2020 to 51.3 percent in April 2020. By December 2020, it had partially recovered to 57.4 percent.[2]

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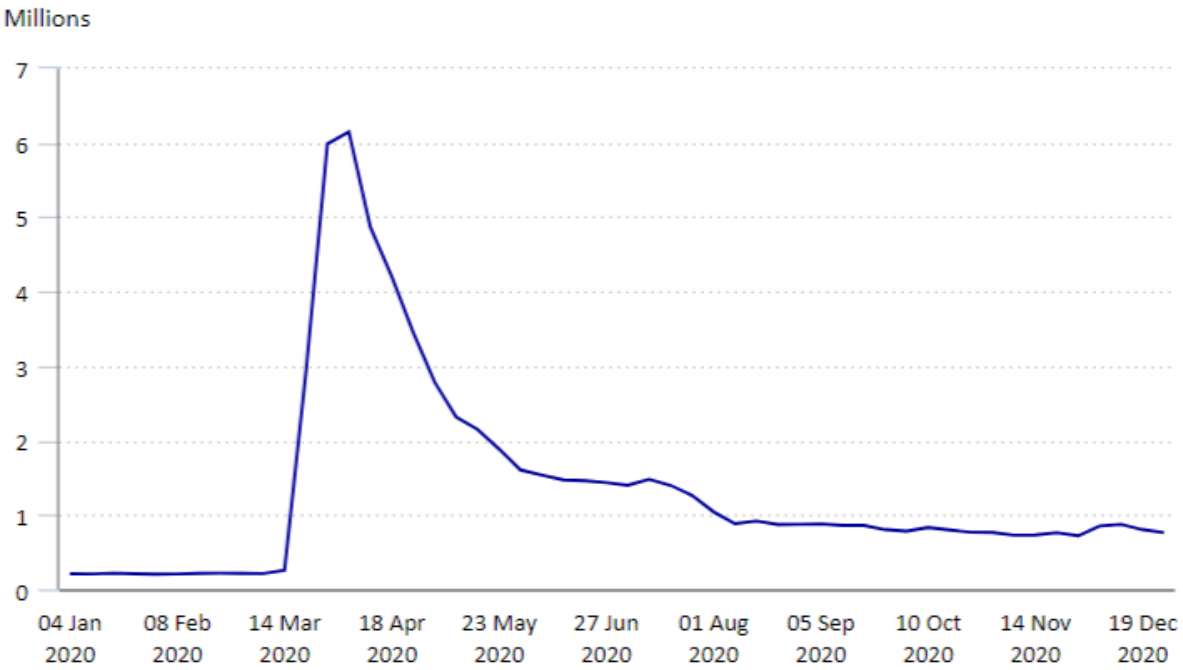
In the midst of the initial wave of job losses, the federal government made several major changes to the unemployment insurance (UI) program.[3] The Families First Coronavirus Response Act (FFCRA), enacted on March 18, 2020, allowed states to relax several conditions for applicants to receive UI benefits.[4] These conditions include the requirement that applicants be actively seeking work and the requirement that applicants left work because of an employer action, such as a layoff.[5] The Coronavirus Aid, Relief, and Economic Security (CARES) Act, enacted on March 27, 2020, created three federally funded temporary UI programs:[6]

1. The Pandemic Unemployment Assistance (PUA) program expanded eligibility for UI benefits to self-employed workers, independent contractors, and part-time workers.
2. The Pandemic Emergency Unemployment Compensation program extended benefits by 13 weeks for those persons who exhaust their regular UI benefits.
3. The Federal Pandemic Unemployment Compensation (FPUC) program provided a $600-a-week supplement to UI benefits through July 31, 2020.

After the FPUC program expired, on August 8, 2020, the President issued an executive order that allowed states to supplement UI benefits by $300 a week, funded by federal disaster relief aid (Lost Wages Assistance), for up to 6 weeks of unemployment.

Because of the expansion of UI programs and substantial job loss, the number of initial claims rose tremendously during the pandemic. When a person applies for UI benefits, an initial claim is the first claim filed by the person in determining eligibility for benefits. A state UI office reviews each initial claim and either accepts or rejects it. If the claim is accepted, benefits are paid. As shown in chart 1, initial claims for benefits under the regular UI program, which were around 200,000 a week before the pandemic, shot up to about 6 million a week in late March and early April 2020. After that time, initial claims fell as the pandemic progressed but remained above 2 million a week through mid-May and above 1 million a week through early August. By the end of December, initial claims were around 800,000 a week.

Chart 1. Number of initial claims (in millions) for unemployment insurance, regular unemployment insurance program, 2020



Hover over chart to view data.
Source: Employment and Training Administration, initial claims, seasonally adjusted, retrieved from Federal Reserve Economic Data, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/ICSA, April 27, 2021.

Estimates of the number of people who applied for UI benefits and the number of people who received benefits during the pandemic are useful for measuring the impact of the UI program. UI benefits are a key part of the federal government's policy response to the pandemic.[7] With individual-level UI estimates, analysts can precisely compare the extent of UI payments with the extent of stimulus payments and other less targeted government interventions that directly support individuals.

In this article, we use the Household Pulse Survey (HPS) to estimate the number of people (and share of the adult population) who applied for UI benefits and who received benefits during the first 9 months of the pandemic (March through December 2020). We also estimate a measure of the success rate of UI applicants in obtaining benefits: the share of applicants who received benefits. To show which groups were more or less likely to receive UI benefits during the pandemic, we examine differences by demographic group, education, and prepandemic household income. These estimates can be compared with the pattern of job losses during the pandemic, as documented in other research (as discussed later in this article).

States are important as program administrators in the federal–state UI system and as geographical areas capturing the spatial dimension of labor markets and the spread of the coronavirus. Given states' importance, we estimate for each state the percentage of the population who applied for UI benefits, the percentage of the population who received benefits, and the success rate of UI applicants. We relate these state-level estimates to UI recipiency before the pandemic, job loss during the pandemic, the differential spread of the coronavirus across states, and the differential use of COVID-19 restrictions by state governments. The relationship between these

state-level estimates and UI recipiency before the pandemic is intended to partially capture differences that existed in state UI programs before the pandemic.

Our analysis investigates some empirical consequences of the expanded eligibility for UI benefits to self-employed workers, low-wage workers, and other workers typically not covered in the regular UI program. The UI outcomes (application rate, receipt rate, and success rate) for workers with less education and lower prepandemic household income show the extent to which the UI program helped low-wage workers during the pandemic. Evaluating UI outcomes for the self-employed shows, in part, how successful the expansion of the UI program to self-employed individuals during the pandemic was. We also analyze UI outcomes for parents of school-age children who faced varying levels of disruption to their school routines, which is relevant for the expansion of the range of "good cause" exceptions for leaving work to include caring for a family member.

Finally, we go beyond measuring the receipt of UI benefits to examine whether receiving benefits improved the well-being of individuals and their households. This question is critically important during the pandemic, given the large number of people who received benefits and the expanded benefit amounts (because of the federal supplement). The survey data provide measures of well-being in a variety of domains, including household finances, food security, and mental health. To gauge the effect of receiving benefits on well-being, we compare those who received benefits with those who applied for benefits but did not receive them. Taken together, our analysis provides information relevant to evaluating how successful the targeted UI program was in mitigating the effects of the pandemic on individuals who were directly affected by it.

Household Pulse Survey

The Employment and Training Administration (ETA) publishes various reports that summarize UI administrative data at the state level.[8] It is not possible to use the data in these reports to gauge the number of people who applied for UI benefits and the number of people who received benefits across all UI programs during the pandemic.[9] The main reason we cannot use the ETA data is that over time, a person can apply for and receive benefits from more than one UI program. Thus, simply summing the claims for each program would result in an unknown degree of double counting.[10] The number of individuals included in more than one UI program may be substantial during the pandemic because many states have required individuals to exhaust or be denied regular state UI benefits to be eligible for benefits under the pandemic-related programs. Double counting of individuals during the pandemic can also occur within programs, particularly when one is trying to determine the number of people who have applied for benefits.[11]

Given these issues with the administrative data, we use the HPS to construct individual-level estimates. The HPS is an experimental rapid-response survey designed to measure how the coronavirus pandemic is affecting U.S. households from a social and economic perspective. The U.S. Census Bureau conducts the survey in partnership with other federal agencies, including the U.S. Bureau of Labor Statistics (BLS). The HPS is a 20-minute online survey conducted in 66 sample areas throughout the nation. The sample frame is based on the Census Bureau's Master Address File records and existing email and telephone records. The HPS started on April 23, 2020, and phase 1 lasted until July 21, 2020. The data for this article were collected during the period August 19–December 21, 2020, which covers all of phase 2 (August 19–October 26) and the first part of phase 3 (which started October 28).

Phase 2 was made up of five data collection periods (each was about 2 weeks), with a separate sample for each period. In each period, the sample size was about 1.03 million housing units. Households chosen for the sample were contacted by email and text message and asked to complete the survey online. Across periods, the number of respondents varied from 88,716 to 109,051, with corresponding response rates between 8.1 percent and 10.3 percent (see appendix table 1). Over the first four data collection periods of phase 3, the sample size was similar to that for phase 2, but the response rates were lower (5.3 percent to 6.7 percent). The sampling methods and questionnaire were the same in phase 2 and phase 3. Although the HPS data are timely and relevant, we caution that the data are labeled as experimental and do not necessarily meet the high standards of other Census Bureau and BLS data products. For example, how representative HPS respondents are of the entire U.S. population has not been fully explored.[12]

In households sampled for the HPS, one adult responds to the survey. These adults report individual experiences only for themselves, not other members of their household. Throughout our analysis, we use the person weights created by the Census Bureau.[13] The person weights were designed to produce biweekly estimates for the total number of persons age 18 and older living within housing units. The Census Bureau created these weights by adjusting the household-level-sampling base weights for various factors to account for nonresponse, adults per household, and coverage. In addition, the person weights are controlled to independent population controls by various demographics within each state. The demographic characteristics involved in this process are age, gender, race, Hispanic origin, and educational attainment.[14]

The HPS has several advantages for studying UI. It includes questions on whether individuals applied for UI benefits during the pandemic and, if so, whether they received benefits. The responses to these questions can be used to produce unduplicated estimates of the number of people who have applied for benefits and received benefits across all the UI programs in place during the pandemic. The HPS also collects information on demographics, educational attainment, total household income (from 2019), current work status, and the reason for not working. Various measures of household and individual well-being can be constructed from the HPS questions covering several domains, including household finances, food security, and mental health.

The information on who applied for UI benefits and who received benefits comes from two questions that BLS designed and tested.[15] The first question asks about applying for benefits: “Since March 13, 2020, have you applied for Unemployment Insurance (UI) benefits?” For those who answer “yes” to this question, a follow-up question asks, “Since March 13, 2020, did you receive Unemployment Insurance (UI) benefits?” March 13 is used to indicate the beginning of the pandemic in the United States. On this date, the President declared a National Emergency concerning COVID-19.[16] A third question asks about the receipt of benefits at the household level: “Including yourself, how many people in your household received Unemployment Insurance (UI) benefits since March 13, 2020?” We do not use responses to the third question in this article.[17] Because the questions refer to UI generically, we interpret the survey responses to encompass both the regular UI program and the pandemic UI programs.

To measure employment at the time of the survey, the HPS asks, “In the last 7 days, did you do ANY work for either pay or profit?” For those who answer “yes,” a followup question is asked to determine whether the respondent is employed by government, a private company, or a nonprofit organization; self-employed; or working in a family business. For those who are not working, the HPS asks, “What is your main reason for not working for pay or profit?” The respondent is given a list of 13 potential reasons, and we classify the responses into three

categories: COVID-19-related reasons that are employer initiated, COVID-19-related reasons that are not employer initiated, and non-COVID-19-related reasons (see appendix table 2).

Note that the reference period (the last 7 days) for the employment questions is different from the reference period (between March 13 and the survey date) for the UI questions. The UI questions identify those people who have received benefits at some point during the pandemic but were not necessarily receiving benefits at the time of the survey. Similarly, those who were working at the time of the survey may have received benefits during the pandemic, although not necessarily while they were working. All respondents were asked the UI questions, regardless of whether they were currently working. The employment information reported in the HPS reflects the respondent's situation at the time of the survey but does not necessarily reflect the respondent's situation at other points during the pandemic. In addition, the HPS does not provide any information about the respondent's employment situation before the pandemic.

Aggregate estimates

We use the HPS responses together with the person weights to estimate the number of people who applied for UI benefits and the number of people who received benefits during the first 9 months of the pandemic (March 13 to December 21, 2020). Our estimates are based on the combined sample of 775,788 HPS respondents from August 19 to December 21, 2020. Our estimates refer to the population age 18 and older.

We estimate that 52 million people applied for UI benefits from March 13 to December 21, or 21.0 percent of the U.S. adult population of 249 million. We also estimate that 40 million people received UI benefits during the pandemic, or 16.0 percent of the adult population.[18] By way of comparison, 84 percent of the population age 18 and older received stimulus payments (i.e., Economic Impact Payments) that were authorized as part of the CARES Act.[19] This comparison demonstrates the extent to which UI benefits were more targeted toward those experiencing economic hardship than were stimulus payments.

We estimate that 77.2 percent of those who applied for UI benefits since March 13 had received benefits by the survey date (August 19 to December 21, 2020). This measure, which we refer to as the success rate, reflects both individual eligibility and the capability of state UI offices to process claims.[20] Given that some people applied for UI benefits before the survey date and started receiving benefits after the survey date, our estimated success rate is an underestimate of the share of applicants who ultimately received benefits. However, given the long reference period (back to March 13, 2020) and the time pattern of initial claims (the spike in initial claims was early in the pandemic), the extent of the understatement is likely not large.

Estimates by demographic characteristics, education, and household income

Our estimates by demographic characteristics are shown in table 1. In terms of the share of the population who applied for UI benefits or the share of the population who received benefits, no gender differences essentially exist: about 21 percent of men and women applied for UI benefits and about 16 percent received benefits. The lack of gender differences in these estimates makes the pandemic recession stand out from prior U.S. recessions. In prior recessions, the share of women who applied for (or received) UI benefits was lower than the corresponding share of men.[21] Therefore, our HPS estimates reflect a larger role for employment declines among women in the

pandemic recession (especially in the initial wave of job losses) than in prior U.S. recessions.[22] The success rate is the same for men and women. Regardless of gender, those with children present in the household were more likely to receive UI benefits than were those without children present in the household.

Table 1. Number and percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, by demographic characteristics, March 13–December 21, 2020

Characteristic	Total	Applied for UI		Received UI		Success rate
		Number	Percent	Number	Percent	
Total	249,170,916	52,430,773	21.0	39,984,667	16.0	77.2
Gender						
Male	120,531,610	25,133,339	20.9	19,190,162	15.9	77.2
Female	128,639,306	27,297,434	21.2	20,794,506	16.2	77.2
Race						
White	188,635,899	36,501,427	19.4	28,210,496	15.0	78.2
Black	31,020,064	8,835,766	28.5	6,341,967	20.4	72.8
Asian	14,019,197	3,078,922	22.0	2,527,595	18.0	82.9
Other	15,495,756	4,014,657	25.9	2,904,609	18.7	73.2
Ethnicity						
Hispanic	42,320,445	10,629,962	25.1	7,924,760	18.7	75.6
Not Hispanic	206,850,471	41,800,810	20.2	32,059,907	15.5	77.6
Marital status						
Married	136,555,176	24,102,096	17.7	18,986,647	13.9	79.9
Widowed	10,693,257	1,148,908	10.7	794,199	7.4	70.5
Divorced	29,263,521	6,715,409	22.9	5,099,306	17.4	77.0
Separated	5,528,055	1,670,992	30.2	1,134,385	20.5	68.5
Never married	64,821,419	18,515,480	28.6	13,743,083	21.2	74.8
Presence of children						
Children present	98,210,373	23,726,520	24.2	17,647,146	18.0	75.3
No children present	150,960,543	28,704,252	19.0	22,337,521	14.8	78.7
Age (years)						
18 to 24	26,929,445	6,903,784	25.6	4,902,683	18.2	71.4
25 to 34	45,731,131	12,879,612	28.2	9,558,623	20.9	74.8
35 to 44	43,318,164	10,694,413	24.7	8,260,628	19.1	78.1
45 to 54	41,184,810	9,621,711	23.4	7,496,943	18.2	79.1
55 to 64	43,852,105	8,352,029	19.0	6,673,140	15.2	81.2
65 to 74	35,693,575	3,322,848	9.3	2,651,893	7.4	81.5
75 and older	12,461,685	656,376	5.3	440,757	3.5	68.5

Note: Other race includes any other race alone and multiple races. Success rate excludes individuals who applied for UI benefits but did not answer the question about receiving benefits. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

Among racial groups, Blacks had the highest rates of applying for UI benefits (28.5 percent) and receiving benefits (20.4 percent). However, the success rate was lower among Blacks (72.8 percent) than among Asians (82.9 percent) and Whites (78.2 percent). Hispanics were more likely to have applied for and received UI benefits than were non-Hispanics. The success rate was somewhat lower among Hispanics (75.6 percent) than among non-Hispanics (77.6 percent). The higher rates of applying for UI benefits among Blacks and Hispanics are consistent

with Black and Hispanic workers being disproportionately affected by job losses, layoffs, and disruptions to small businesses during the pandemic.[23]

Estimates by educational attainment and household income are shown in table 2. Among individuals age 25 and older, those with bachelor's degree or higher were less likely to have applied for and received UI benefits than were those with a high school education or some college. The success rate generally increased with the level of education. However, the rate was lowest among those with less than a high school education (68.8 percent) and highest among those with a bachelor's degree (80.8 percent). People with lower household incomes in 2019 were more likely to have applied for and received UI benefits (see chart 2), which suggests that they had fewer nonwage income sources to draw on.[24] For example, among those with incomes of less than $25,000, 28.1 percent applied for benefits and 19.6 percent received benefits. By comparison, among those with incomes of $200,000 or more, 9.2 percent applied for benefits and 7.4 percent received benefits. As it did with education, the success rate generally increased with household income.

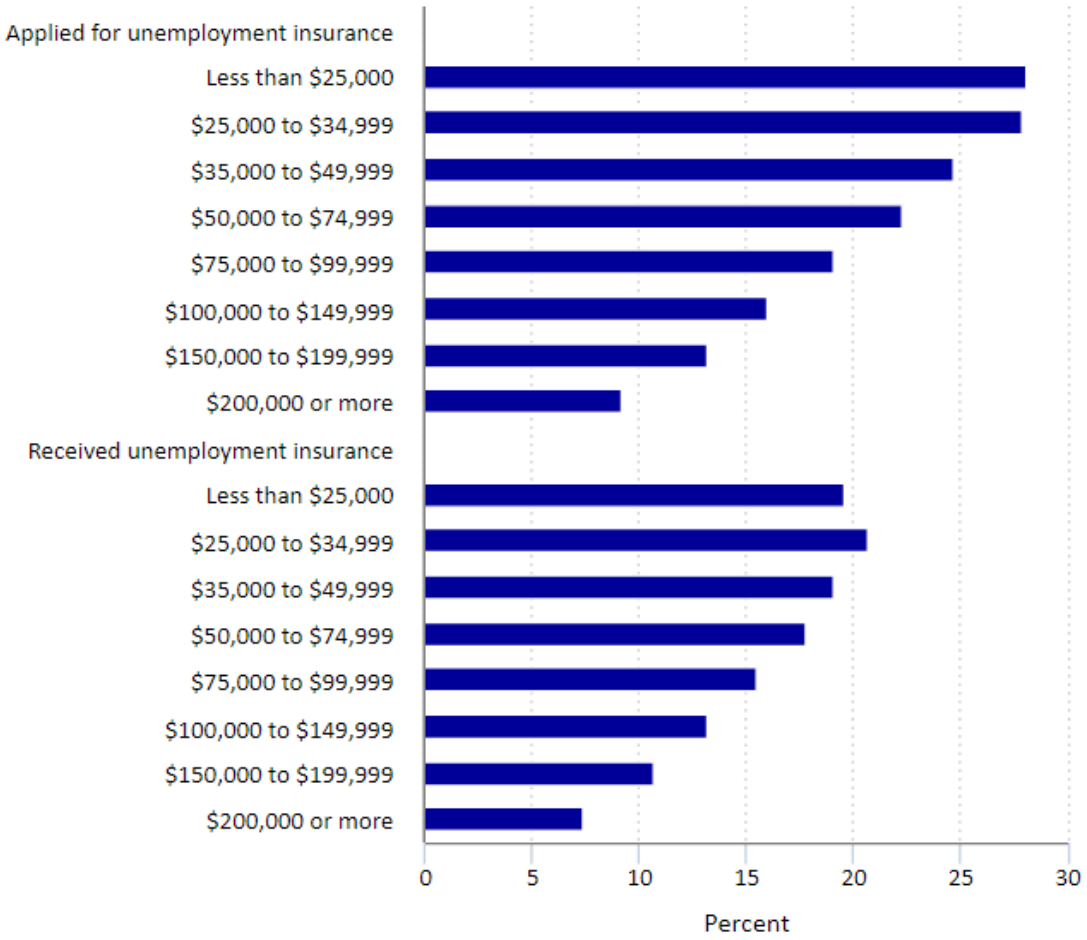
Table 2. Number and percentage of people who applied for UI benefits and received UI benefits, and success rate of UI applicants, by household income and education, March 13–December 21, 2020

Characteristic	Total	Applied for UI		Received UI		Success rate
		Number	Percent	Number	Percent	
People 18 years and older						
Total	249,170,916	52,430,773	21.0	39,984,667	16.0	77.2
Household income (2019)						
Less than $25,000	25,045,832	7,041,988	28.1	4,917,357	19.6	70.4
$25,000 to $34,999	19,757,039	5,504,916	27.9	4,095,912	20.7	75.1
$35,000 to $49,999	22,492,488	5,553,253	24.7	4,303,257	19.1	78.3
$50,000 to $74,999	31,800,675	7,108,964	22.4	5,653,248	17.8	80.4
$75,000 to $99,999	24,397,565	4,664,153	19.1	3,794,580	15.6	82.5
$100,000 to $149,999	27,519,310	4,401,837	16.0	3,621,543	13.2	83.1
$150,000 to $199,999	12,727,059	1,680,504	13.2	1,363,348	10.7	81.7
$200,000 or more	14,008,492	1,290,248	9.2	1,035,537	7.4	80.9
People 25 years and older						
Total	222,241,471	45,526,989	20.5	35,081,984	15.8	78.0
Education						
Less than high school	5,923,601	1,476,560	24.9	992,972	16.8	68.8
Some high school	12,457,370	3,133,863	25.2	2,300,340	18.5	74.4
High school graduate	68,430,320	15,925,149	23.3	12,187,372	17.8	77.7
Some college, no degree	42,223,238	10,179,117	24.1	7,967,355	18.9	79.0
Associate's degree	21,797,962	4,943,719	22.7	3,840,851	17.6	78.7
Bachelor's degree	38,969,438	6,552,662	16.8	5,239,601	13.4	80.8
Graduate degree	32,439,542	3,315,919	10.2	2,553,494	7.9	78.0

Note: Success rate excludes individuals who applied for UI benefits but did not answer the question about receiving benefits. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

Chart 2. Percentage of people who applied for unemployment insurance benefits and who received unemployment insurance benefits, by household income in 2019

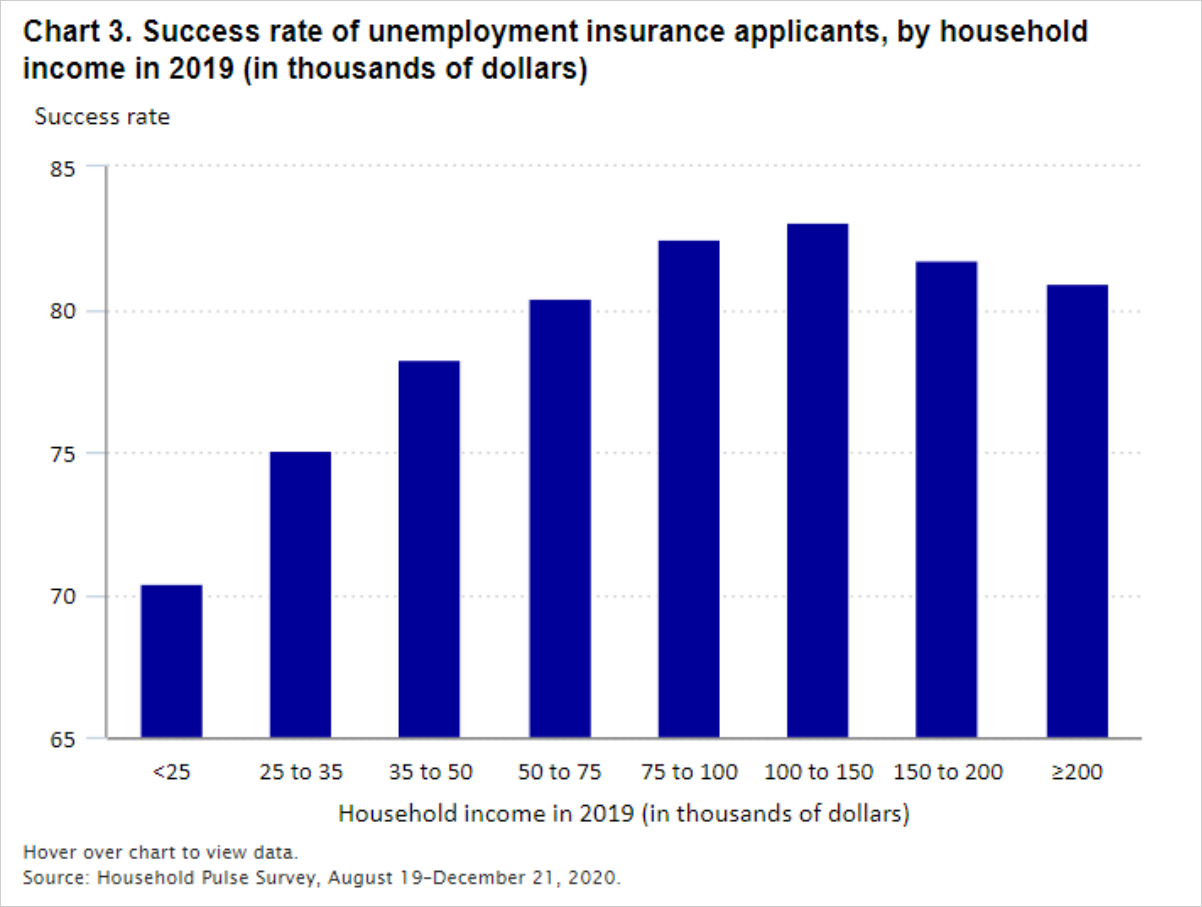


Hover over chart to view data.
Source: Household Pulse Survey, August 19–December 21, 2020.

The higher rates of applying for UI benefits and receiving benefits among those with less education and lower income are consistent with employment declines during the pandemic that were greater among low-wage workers.[25] This pattern may also reflect the higher replacement rates that arose from the $600-a-week federal supplement (available from April through July 2020), which was independent of a worker's prior wage and therefore had the largest effect on replacement rates for low-wage workers.[26] Most workers, especially low-wage workers, could receive more money from the enhanced UI benefits than they received in wages while working.[27]

Workers with less education and lower income had lower success rates (see chart 3). This finding could reflect that low-wage workers were less likely to be eligible for regular UI (in part, because of not meeting the minimum earnings requirement), although the PUA program expanded UI eligibility for individuals lacking sufficient work history and individuals working part-time hours.[28] The pattern of success rates by race may partly reflect the higher prevalence of low-wage work among Blacks compared with Whites and Asians. In 2019, according to data

from the Current Population Survey, median weekly earnings for full-time workers were $735 for Blacks, $945 for Whites, and $1,174 for Asians.[29]



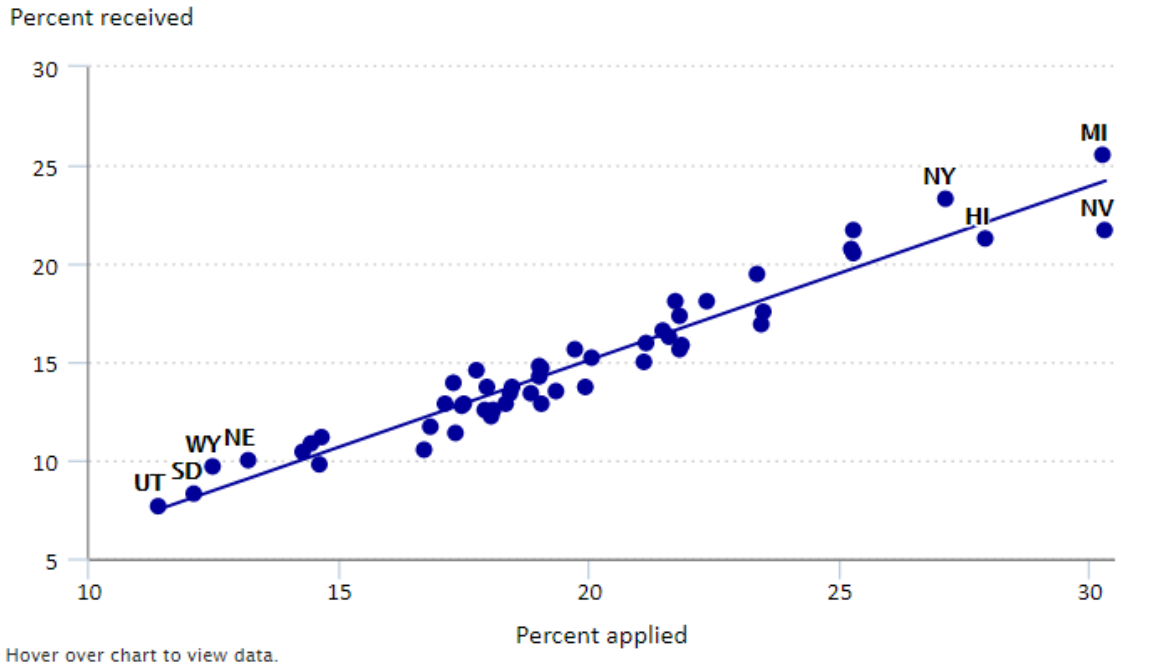
Estimates by state and relationship to state-level factors

The UI system is a federal–state partnership that is funded by federal and state taxes on employers and administered by states. States set eligibility, duration, and benefit levels within federal guidelines. Because of state differences within the UI system, we examine variation by state in the share of the population who applied for UI benefits, the share of the population who received benefits, and the success rate of UI applicants. In addition to their role in administering the UI program, states show the geographic dimension to labor markets, COVID-19 spread, and COVID-19 restrictions imposed by governments. During the pandemic, states and local areas have imposed a variety of restrictions on economic activity to slow the spread of COVID-19, including closing nonessential businesses, closing schools and daycare facilities, requiring residents to stay at home, canceling public events, and restricting the size of gatherings.

The estimated share of the population who applied for UI benefits varies substantially across states, ranging from 11.4 percent to 30.3 percent (see appendix table 3). Four states have more than 25 percent of their population who applied (Nevada, Michigan, Hawaii, and New York). Three states have less than 13 percent who applied (Utah, South Dakota, and Wyoming). The estimated share of a state's population who received benefits follows a similar pattern, ranging from 7.6 percent to 25.5 percent. States with a larger share of their population who applied for

benefits also have a larger share of their population who received benefits, and the relationship is very tight (see chart 4).

Chart 4. Percentage who received unemployment insurance benefits versus percentage who applied for unemployment insurance benefits, by state

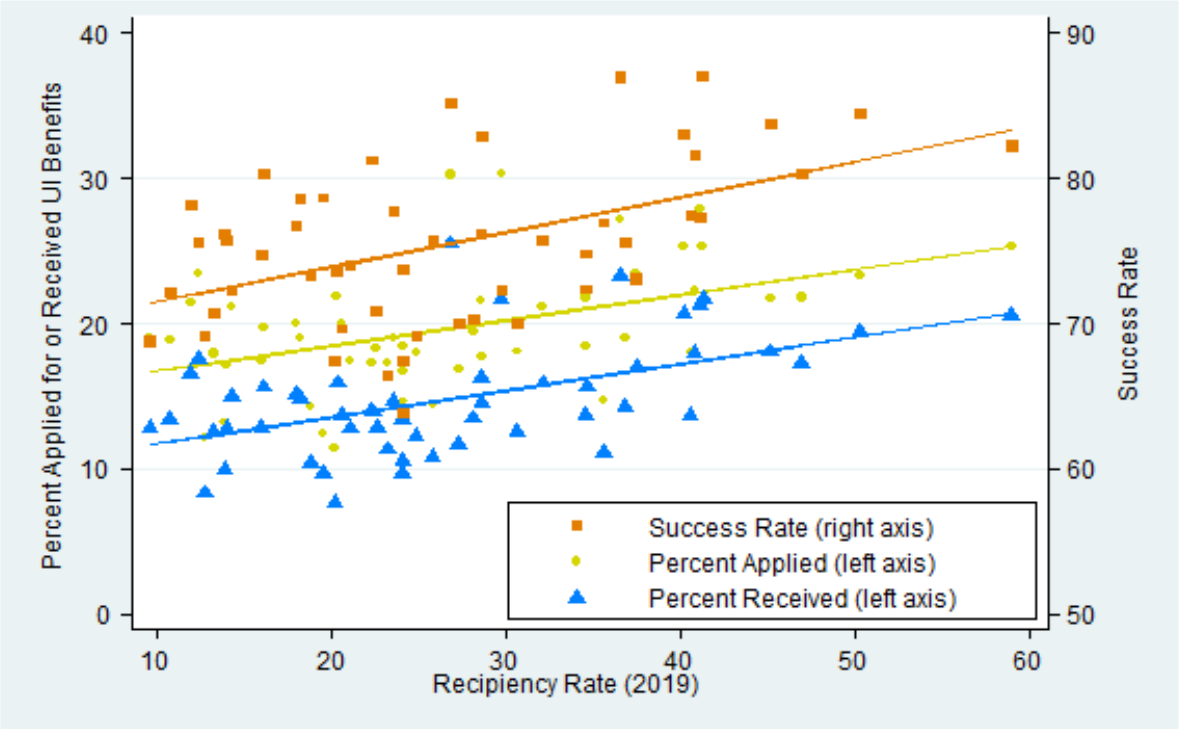


Hover over chart to view data.
Note: The chart contains 1 point per state (50 states and the District of Columbia). The regression line has a slope of 0.884 (standard error = 0.034) and *R*-squared = 0.93. The four states with the lowest percentage who applied are Utah (UT), South Dakota (SD), Wyoming (WY), and Nebraska (NE). The four states with the highest percentage who applied are Nevada (NV), Michigan (MI), Hawaii (HI), and New York (NY).
Source: Household Pulse Survey, August 19–December 21, 2020.

What accounts for this variation across states? To understand the variation, we examine how the HPS state-level estimates relate to the extent of UI coverage in a state before the pandemic, state-specific job loss during the pandemic, and the differential spread of the coronavirus across states. Each of these facets is discussed separately in the later paragraphs.

As a measure of the extent of UI coverage in a state before the pandemic, we use the UI recipiency rate in 2019. This measure, which is the share of unemployed workers who received UI benefits, varies widely across states: 7 states had recipiency rates of greater than 40 percent in 2019, whereas 17 states had recipiency rates of less than 20 percent.[30] Prior research indicates that variation in state recipiency rates reflects state laws (regarding who is covered by UI and for how long) and administrative practices, although labor market variables and other factors are also important.[31] States with higher recipiency rates before the pandemic had both a larger share of the population who applied for UI benefits and a larger share of the population who received benefits (see chart 5a).[32] This relationship suggests that despite the temporary expansions of UI coverage during the pandemic, preexisting aspects of a state's UI system still mattered for the number of people who received UI benefits during the pandemic.

Chart 5a. Relationship at the state level between recipiency rate (2019) and UI outcomes (percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants)

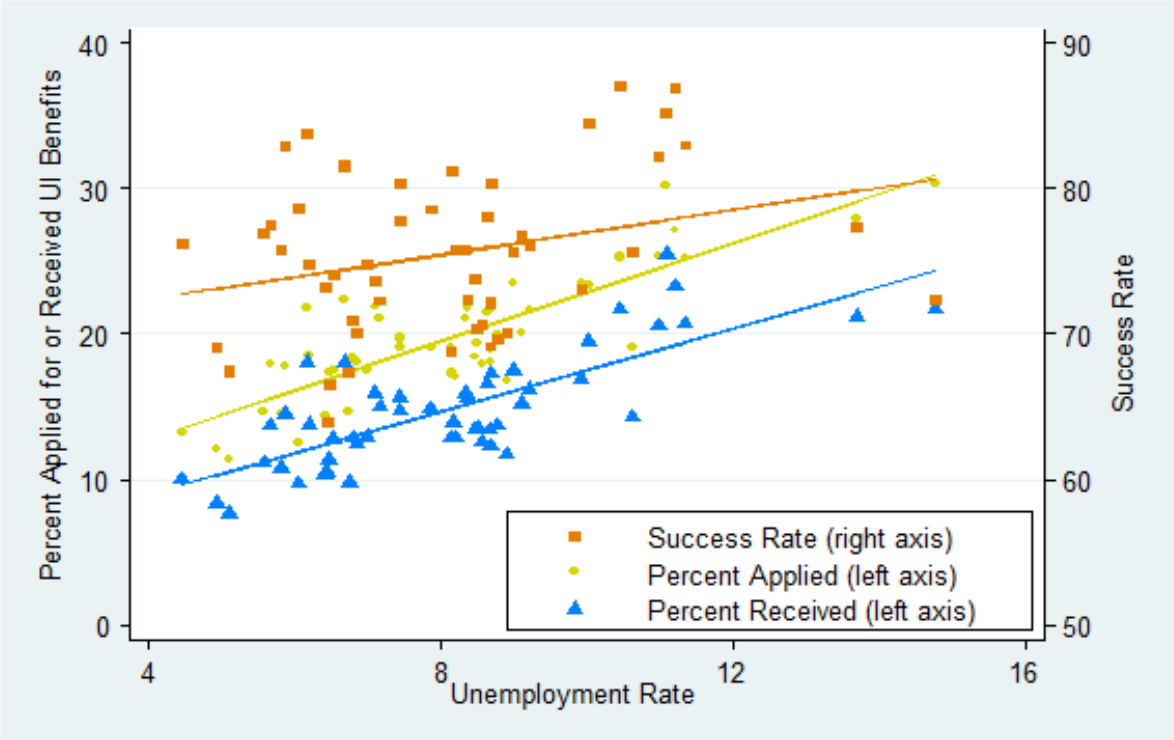


Note: Each UI outcome has a separate color, and for each UI outcome, each state (50 states and the District of Columbia) has one point. UI outcomes are based on the period March 13–December 21, 2020. Percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants are for people 18 years and older. Recipiency rate is the percentage of unemployed workers who received UI benefits, 2019. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020; Employment and Training Administration, "Recipiency rates, by state" (A.13), *Unemployment Insurance Chartbook*, https://oui.doleta.gov/unemploy/chartbook.asp.

States with a higher average unemployment rate between March and December 2020 had both a larger share of the population who applied for UI benefits and a larger share of the population who received benefits (see chart 5b). This relationship provides support for the HPS-based estimates, but it is not surprising because many people who are classified as unemployed receive UI benefits. However, receiving UI benefits and being unemployed are not the same.[33] For instance, some people who are unemployed do not qualify for UI benefits (e.g., new entrants to the labor force and those who do not have sufficient work experience), some people who are eligible for UI benefits do not apply for benefits, and some people who are receiving UI benefits are not considered unemployed (e.g., if they are not searching for work).[34] In addition, some people are classified as employed but still eligible for UI benefits (e.g., those whose hours were reduced by their employers or who were participating in a work-sharing program).

Chart 5b. Relationship at the state level between unemployment rate and UI outcomes (percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants)

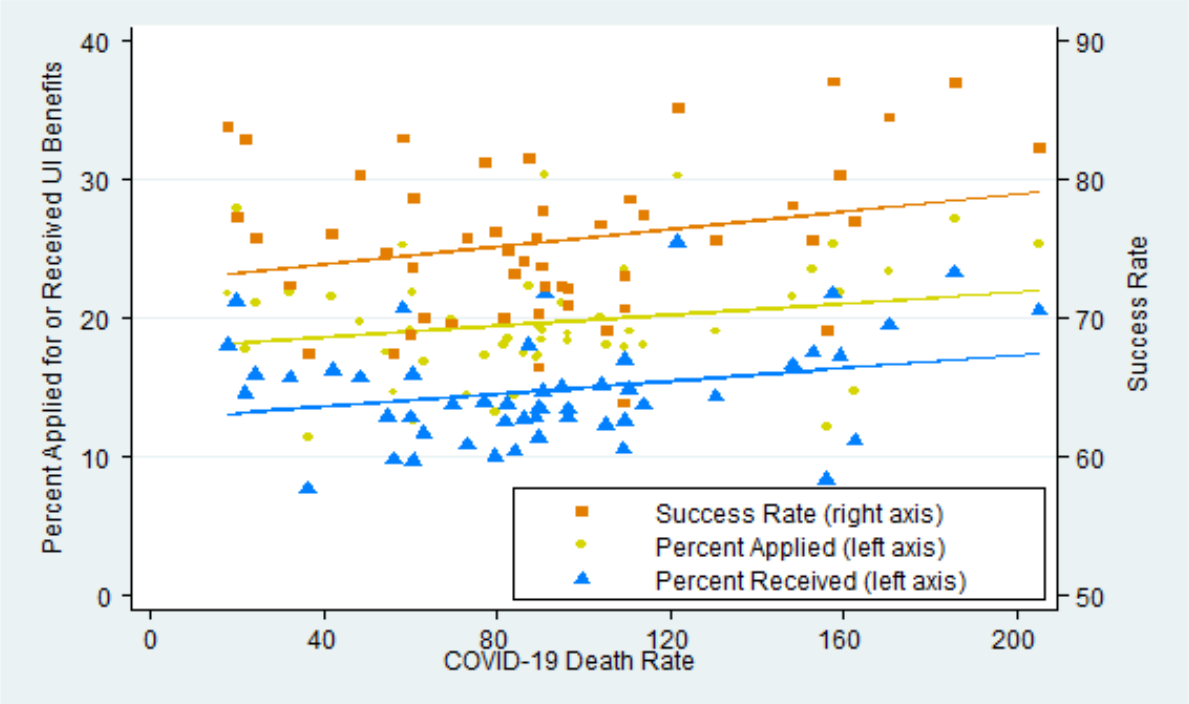


Note: Each UI outcome has a separate color, and for each UI outcome, each state (50 states and the District of Columbia) has one point. UI outcomes are based on the period March 13–December 21, 2020. Percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants are for people 18 years and older. Unemployment rate is the average unemployment rate for March through December 2020. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020; U.S. Bureau of Labor Statistics, "Employment status of the civilian noninstitutional population, not seasonally adjusted, statewide data," monthly series, https://www.bls.gov/web/laus/ststdnsadata.zip.

The share of the population who applied for UI benefits and the share of the population who received benefits are also positively correlated with the cumulative number of COVID-19 deaths per 100,000 population (see chart 5c). This effect presumably operates through the disruptions to the labor market caused by the coronavirus and by countermeasures taken by states and local areas to combat the virus's spread. Another COVID-19 measure that focuses on states' countermeasures is the Stringency Index compiled by the Oxford COVID-19 Government Response Tracker.[35] This index measures the strictness of states' closure and containment policies that primarily restrict people's behavior. This measure is also positively correlated with the shares of the population who applied for or received UI benefits during the pandemic, and the magnitude of the correlation is stronger than that for the COVID-19 death rate (see chart 5d).

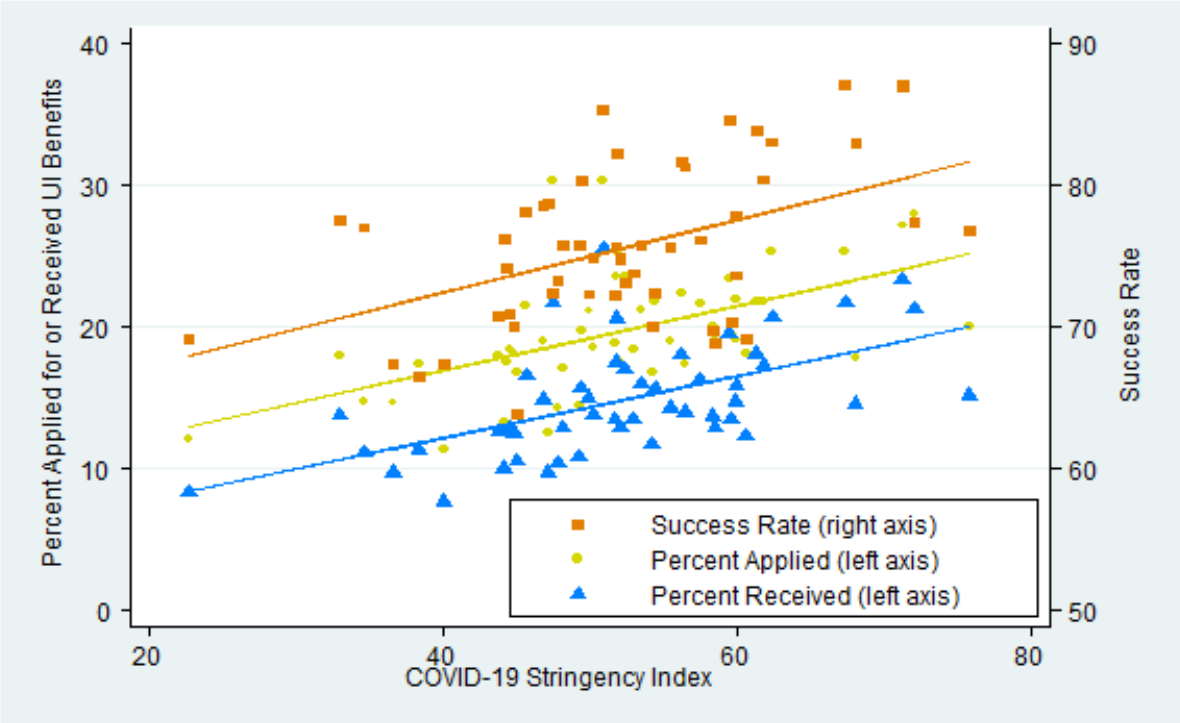
Chart 5c. Relationship at the state level between COVID-19 death rate and UI outcomes (percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants)



Note: Each UI outcome has a separate color, and for each UI outcome, each state (50 states and the District of Columbia) has one point. UI outcomes are based on the period March 13–December 21, 2020. Percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants are for people 18 years and older. COVID-19 death rate is cumulative deaths (through December 21, 2020) per 100,000 population, on the basis of reports from state and local health agencies, and U.S. Census Bureau population estimates for July 1, 2019. COVID-19 = coronavirus disease 2019. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020; *New York Times*, "Coronavirus (Covid-19) data in the United States," https://github.com/nytimes/covid-19-data; U.S. Census Bureau, "Annual population estimates, estimated components of resident population change, and rates of the components of resident population change for the United States, states, and Puerto Rico: April 1, 2010 to July 1, 2019," https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/national/totals/nst-est2019-alldata.csv.

Chart 5d. Relationship at the state level between COVID-19 Stringency Index and UI outcomes (percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants)



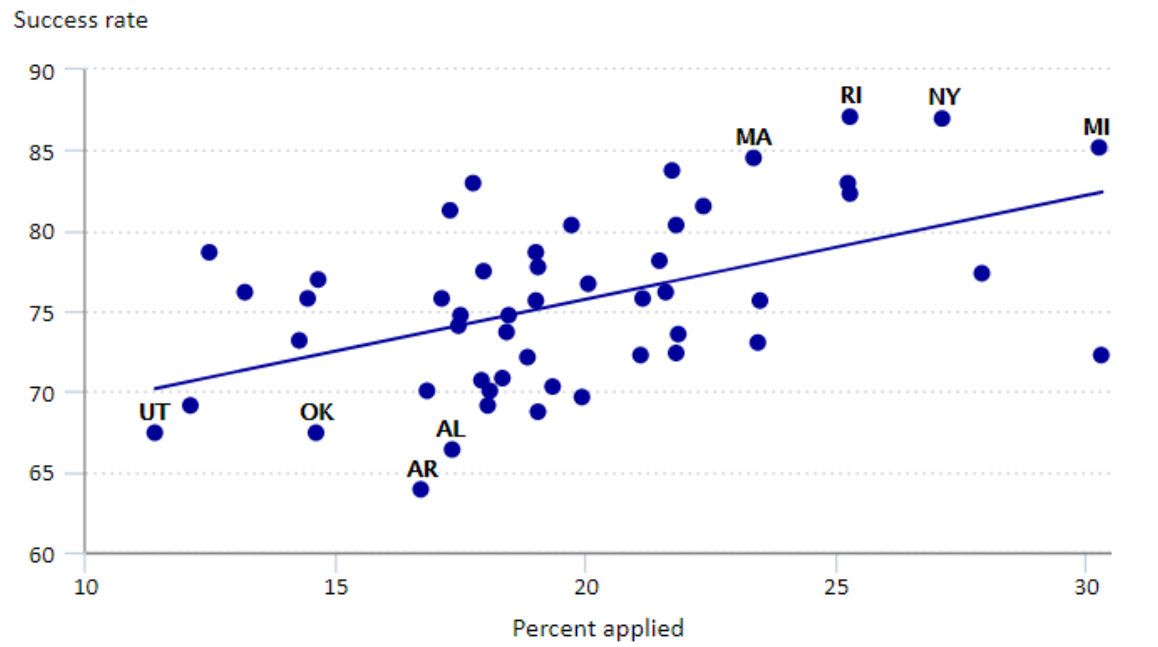
Note: Each UI outcome has a separate color, and for each UI outcome, each state (50 states and the District of Columbia) has one point. UI outcomes are based on the period March 13–December 21, 2020. Percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants are for people 18 years and older. COVID-19 Stringency Index is the average of daily values from March 13 through December 21, 2020. COVID-19 = coronavirus disease 2019. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020; Thomas Hale, Noam Angrist, Rafael Goldszmidt, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster, Emily Cameron-Blake, Laura Hallas, Saptarshi Majumdar, and Helen Tatlow, "A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)," *Nature Human Behaviour*, vol. 5, vol. 5, no. 4, April 2021, pp. 529–538, https://doi.org/10.1038/s41562-021-01079-8.

The success rate of UI applicants varies from 63.9 percent (Arkansas) to 87.1 percent (Rhode Island). States with higher recipiency rates before the pandemic have a higher success rate (see chart 5a). Beyond that, one concern is that states with a larger extent of job loss during the pandemic may have experienced "crowding effects" in their UI systems—whereby some applicants could not have their applications processed promptly—leading to declines in the success rate. If this crowding hypothesis were true, the success rate would be negatively correlated with demand for UI benefits. However, the scatter plots of the drivers of demand for UI benefits show the opposite pattern: if anything, the success rate is positively correlated with the unemployment rate, COVID-19 deaths per

capita, and the COVID-19 Stringency Index (see charts 5b–5d). As a complementary way of looking at the data, the success rate is positively correlated with the share of the population who applied for UI benefits (see chart 6). Although this evidence does not support the crowding hypothesis, our approach is not overly sensitive to crowding issues early in the pandemic because the HPS data we use were collected from August 19 to December 21, 2020, and the questions on applying for and receiving UI benefits have a reference period going back to March 13, 2020.

Chart 6. Success rate of unemployment insurance applicants versus percentage who applied for unemployment insurance benefits, by state



Hover over chart to view data.
Note: The chart contains 1 point per state (50 states and the District of Columbia). The regression line has a slope of 0.646 (standard error = 0.160) and *R*-squared = 0.25. The four states with the lowest success rate are Arkansas (AR), Alabama (AL), Oklahoma (OK), and Utah (UT). The four states with the highest success rate are Rhode Island (RI), New York (NY), Michigan (MI), and Massachusetts (MA).
Source: Household Pulse Survey, August 19–December 21, 2020.

Given the possibility of multiple factors driving the variation in HPS state-level estimates, we now turn to a multivariate approach that allows us to explore the effects of a given factor while controlling for one or more other factors. In the results reported in table 3, we estimate linear regressions with a given HPS state-level estimate as the dependent variable and different combinations of the factors as independent variables. Across regressions, a consistent finding is that the recipiency rate before the pandemic is positively correlated with the share of the population who applied for UI benefits, the share of the population who received benefits, and the success rate of UI applicants. When we hold the prepandemic recipiency rate constant, the unemployment rate is positively correlated with the share of the population who applied for UI benefits and the share of the population who received benefits but is not correlated with the success rate. These results suggest that, among states with a similar recipiency rate, when the unemployment rate increases, the increased number of people applying for UI benefits can be accommodated without reducing the success rate.

Table 3. Relationship of UI outcomes (percentage who applied for UI benefits, percentage who received UI benefits, and success rate of UI applicants) to state factors, regression results

Independent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable: percent who applied for UI benefits								
Recipiency rate (2019)	0.176[1]	—	—	—	0.073[2]	0.167[1]	0.125[1]	0.102[2]
	(0.047)	—	—	—	(0.030)	(0.049)	(0.044)	(0.045)
	[3.064]	—	—	—	[1.272]	[2.904]	[2.167]	[1.767]
Unemployment rate	—	1.685[1]	—	—	1.546[1]	—	—	—
	—	(0.157)	—	—	(0.160)	—	—	—
	—	[4.260]	—	—	[3.907]	—	—	—
COVID-19 death rate	—	—	0.020	—	—	0.011	—	0.020[3]
	—	—	(0.014)	—	—	(0.013)	—	(0.011)
	—	—	[1.012]	—	—	[0.528]	—	[1.012]
COVID-19 Stringency Index	—	—	—	0.228[1]	—	—	0.184[1]	0.203[1]
	—	—	—	(0.050)	—	—	(0.049)	(0.049)
	—	—	—	[3.148]	—	—	[2.550]	[2.812]
R^2	0.22	0.70	0.04	0.30	0.74	0.23	0.40	0.43
Dependent variable: percent who received UI benefits								
Recipiency rate (2019)	0.184[1]	—	—	—	0.102[1]	0.172[1]	0.135[1]	0.110[1]
	(0.041)	—	—	—	(0.030)	(0.042)	(0.038)	(0.038)
	[3.193]	—	—	—	[1.768]	[2.995]	[2.354]	[1.915]
Unemployment rate	—	1.423[1]	—	—	1.229[1]	—	—	—
	—	(0.166)	—	—	(0.162)	—	—	—
	—	[3.598]	—	—	[3.107]	—	—	—
COVID-19 death rate	—	—	0.023[3]	—	—	0.013	—	0.022[2]
	—	—	(0.012)	—	—	(0.011)	—	(0.009)
	—	—	[1.151]	—	—	[0.651]	—	[1.111]
COVID-19 Stringency Index	—	—	—	0.219[1]	—	—	0.172[1]	0.193[1]
	—	—	—	(0.045)	—	—	(0.042)	(0.041)
	—	—	—	[3.035]	—	—	[2.385]	[2.672]
R^2	0.29	0.60	0.07	0.33	0.68	0.31	0.47	0.53
Dependent variable: success rate of UI applicants								
Recipiency rate (2019)	0.240[1]	—	—	—	0.216[1]	0.224[1]	0.186[1]	0.153[2]
	(0.060)	—	—	—	(0.065)	(0.062)	(0.059)	(0.060)
	[4.177]	—	—	—	[3.758]	[3.895]	[3.239]	[2.665]
Unemployment rate	—	0.774[2]	—	—	0.362	—	—	—
	—	(0.355)	—	—	(0.345)	—	—	—
	—	[1.957]	—	—	[0.914]	—	—	—
COVID-19 death rate	—	—	0.032[3]	—	—	0.019	—	0.029[2]
	—	—	(0.017)	—	—	(0.016)	—	(0.015)
	—	—	[1.578]	—	—	[0.927]	—	[1.451]
COVID-19 Stringency Index	—	—	—	0.258[1]	—	—	0.193[1]	0.220[1]
	—	—	—	(0.068)	—	—	(0.066)	(0.065)
	—	—	—	[3.561]	—	—	[2.666]	[3.042]
R^2	0.24	0.09	0.06	0.23	0.26	0.27	0.36	0.41

[1] Statistically significant at the 0.01 level.

[2] Statistically significant at the 0.05 level.

[3] Statistically significant at the 0.10 level.

See footnotes at end of table.

Note: The number of observations for each regression is 51 (50 states and the District of Columbia). Standard errors are in parentheses. Numbers in brackets are the coefficients multiplied by ($p75 - p25$), where $p75$ and $p25$ are the 75th and 25th percentiles of the distribution (across states) of the relevant independent variable, respectively. UI outcomes are based on the period March 13–December 21, 2020. Percentage who applied for UI benefits, percentage who received UI benefits, and the success rate of UI applicants are for people 18 years and older. Recipiency rate is percentage of unemployed workers who received UI benefits, 2019. Unemployment rate is average unemployment rate from March through December 2020. COVID-19 death rate is cumulative deaths (through December 21, 2020) per 100,000 population, on the basis of reports from state and local health agencies, and U.S. Census Bureau population estimates for July 1, 2019. COVID-19 Stringency Index is average of daily values from March 13 through December 21, 2020. Dashes indicate no data. COVID-19 = coronavirus disease 2019. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020; Employment and Training Administration, "Recipiency rates, by state," Section A.13, *Unemployment Insurance Chartbook*, https://oui.doleta.gov/unemploy/chartbook.asp; U.S. Bureau of Labor Statistics, "Employment status of the civilian noninstitutional population, not seasonally adjusted, statewide data," monthly series, https://www.bls.gov/web/laus/ststdnsadata.zip; *The New York Times*, "Coronavirus (Covid-19) data in the United States," https://github.com/nytimes/covid-19-data; U.S. Census Bureau, "Annual population estimates, estimated components of resident population change, and rates of the components of resident population change for the United States, states, and Puerto Rico: April 1, 2010 to July 1, 2019," https://www2.census.gov/programs-surveys/popest/datasets/2010-2019/national/totals/nst-est2019-alldata.csv; and Thomas Hale, Noam Angrist, Rafael Goldszmidt, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster, Emily Cameron-Blake, Laura Hallas, Saptarshi Majumdar, and Helen Tatlow, "A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)," *Nature Human Behaviour*, vol. 5, no. 4, April 2021, pp. 529–538, https://doi.org/10.1038/s41562-021-01079-8.

Instead of looking at the effect of the unemployment rate, we look at the effects of the COVID-19 measures. Because the COVID-19 measures capture what might be causing the higher unemployment rates, we do not include the unemployment rate in the same model with the COVID-19 measures. When we consider both COVID-19 measures together and control for the recipiency rate, each COVID-19 measure is positively correlated with the share of the population who applied for UI benefits, the share of the population who received benefits, and the success rate of UI applicants. However, the magnitude of the effect is more than twice as large for the Stringency Index than the death rate.[36] This finding suggests that although both COVID-19 measures explain variation in the state-level HPS estimates, the Stringency Index contributes more than the death rate.

Estimates by employment income, work status, and children's school routines

A measure of whether an HPS respondent lives in a household where a member's labor earnings were negatively affected during the pandemic comes from the question, "Have you, or has anyone in your household experienced a loss of employment income since March 13, 2020?" In the HPS data for August 19 to December 21, 2020, 46.5 percent of individuals responded "yes." Those who responded "yes" did not necessarily lose their job during the pandemic or experience a reduction in hours at work. Respondents could have answered "yes" for several reasons, including that someone else in their household lost employment. However, the set of respondents who said "yes" likely includes people who experienced either job loss or a reduction in work hours during the pandemic. Among adults in households that lost employment income, 41.2 percent applied for UI benefits and 31.8 percent received benefits (see table 4).

Table 4. Number and percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, by current work status and whether household lost employment income during the pandemic

Characteristic	Total	Applied for UI		Received UI		Success rate
		Number	Percent	Number	Percent	

See footnotes at end of table.

Table 4. Number and percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, by current work status and whether household lost employment income during the pandemic

Characteristic	Total	Applied for UI		Received UI		Success rate
		Number	Percent	Number	Percent	
Total	249,170,916	52,430,773	21.0	39,984,667	16.0	77.2
Household lost employment income	115,886,322	47,723,344	41.2	36,842,757	31.8	78.1
Household did not lose employment income	131,875,465	4,651,902	3.5	3,105,128	2.4	67.7
Total at work (last 7 days)	143,161,639	26,229,773	18.3	20,074,771	14.0	77.9
Private	85,114,321	17,716,946	20.8	14,029,861	16.5	80.5
Government	20,829,780	1,948,237	9.4	1,353,946	6.5	71.3
Self-employed	16,846,500	3,634,195	21.6	2,568,220	15.2	72.2
Nonprofit	13,359,379	1,570,867	11.8	1,132,450	8.5	73.2
Employed in family business	4,168,710	732,885	17.6	522,524	12.5	72.8

Note: Success rate excludes individuals who applied for UI benefits but did not answer the question about receiving benefits. “Total at work” includes those who did not answer the question about class of worker (private, government, etc.). UI information covers March 13–December 21, 2020. Current work status is based on 7 days before survey date (August 19–December 21, 2020). UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

We examine current work status using the question on whether the respondent was doing any work for pay or profit in the last 7 days. For this analysis, the “not working” category includes those who are not working for a variety of reasons, including stay-at-home parents and those who are retired. To focus the analysis on individuals for which usual employment rates are relatively high, we restrict the sample for this part of our analysis to prime-working-age (25–54) people. For those not working, we classify the main reasons for not working into three categories: COVID-19-related reasons that are employer initiated, COVID-19-related reasons that are not employer initiated, and non-COVID-19-related reasons (see appendix table 2 for a fuller explanation of this categorization).

Among prime-working-age persons who received UI benefits at some point during the pandemic, 51.3 percent were at work in the last 7 days, 30.9 percent were not working in the last 7 days because of a COVID-19-related reason initiated by their employer, and 4.4 percent were not working because of a COVID-19-related reason not associated with their employer (see table 5). By comparison, among all prime-working-age individuals regardless of whether UI benefits were received, 71.4 percent were at work. Thus, although more than half of UI recipients had either returned to work or never lost their jobs (e.g., had their hours reduced), the extent of job loss among UI recipients (on the basis of employment status at the time they were surveyed) was still substantial. Among prime-working-age individuals not working in the last 7 days because of a COVID-19-related reason initiated by the employer, 61.3 percent had received UI benefits. By contrast, only 26.6 percent of individuals not working because of other COVID-19-related reasons had received benefits.

Table 5. Current work status of those who were UI applicants and recipients, ages 25–54

Work status	Number			Percent within column			Percent within row		
	All	UI applicants	UI recipients	All	UI applicants	UI recipients	All	UI applicants	UI recipients
Total	130,234,105	33,195,736	25,316,195	100.0	100.0	100.0	100.0	25.5	19.4
At work (last 7 days)	92,006,883	17,032,532	13,115,441	71.4	50.8	51.3	100.0	18.5	14.3
Not working	37,466,674	16,128,139	12,179,149	28.0	49.0	48.6	100.0	43.0	32.5
COVID-19-related reason, employer initiated	12,344,361	9,347,643	7,563,091	9.3	28.9	30.9	100.0	75.7	61.3
COVID-19-related reason, not employer initiated	4,531,103	1,832,296	1,203,011	2.9	5.1	4.4	100.0	40.4	26.6
Non-COVID-19-related reason	19,693,323	4,881,467	3,368,860	15.1	14.8	13.1	100.0	24.8	17.1

Note: For classification of reasons for not working, see appendix table 2. UI information covers March 13–December 21, 2020. Current work status is based on 7 days before survey date (August 19–December 21, 2020). COVID-19 = coronavirus disease 2019. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

In the rest of this section, we look at people of all ages. Among those who were working in the last 7 days, 18.3 percent had applied for UI benefits and 14.0 percent had received benefits since March 13, 2020 (see table 4). There is wide variation by class of worker in the share of workers who had received UI benefits. This share is 6.5 percent among workers in government, 8.5 percent among workers in nonprofit organizations, 12.5 percent among those employed in a family business, 15.2 percent among the self-employed, and 16.5 percent among wage and salary workers in the private sector. One factor in this pattern is the success rate among UI applicants, which is higher among wage and salary workers in the private sector than among workers in the other classes.

The variation by class of worker in the share of workers who received UI benefits may also be related to differences by class of worker in the extent of employment disruption during the pandemic. Employment estimates from the Current Population Survey are broadly consistent with this explanation: employment losses during the first 9 months of the pandemic were greater for wage and salary workers in the private sector than for workers in government and the self-employed. From February to April 2020, employment fell 17.9 percent for wage and salary workers in the private sector but only 8.8 percent for workers in government and 7.8 percent for the self-employed. These differences persisted to some extent during the recovery: by December 2020, employment was down 5.9 percent (compared with February 2020) for wage and salary workers in the private sector but only 3.2 percent for workers in government and 4.2 percent for the self-employed.[37] Consistent with the pattern of employment losses, the share of wage and salary workers in the private sector who applied for UI benefits was more than double the share of workers in government who applied. For the self-employed, the share of people who applied for UI benefits was higher than is suggested by the employment losses. This finding might reflect that many of the self-employed continued to work during the pandemic but experienced reduced income from employment.

Our analysis of UI application and receipt by class of worker provides a perspective on the effect of UI expansions during the pandemic. The PUA program, created under the CARES Act, expanded eligibility for UI during the pandemic to self-employed workers, independent contractors, and part-time workers.[38] Among those who were working in the last 7 days and were self-employed, 21.6 percent had applied for UI benefits and 15.2 percent had received benefits (see table 4). These rates are similar to those for wage and salary workers in the private sector who worked in the last 7 days. However, the success rate was much lower for self-employed workers (72.2 percent) than for private wage and salary workers (80.5 percent). This finding suggests that the PUA program expanded UI coverage for self-employed workers during the pandemic, but a gap in coverage remained, compared with private wage and salary workers.

With another policy change that broadened eligibility for UI benefits during the pandemic, the FFCRA allowed states the flexibility to expand the range of "good cause" exceptions for leaving work to include caring for a child, parent, or spouse/partner.[39] This change is relevant for parents of school-age children who contended with the shift to remote learning during the pandemic. With children at home instead of in school buildings during the day, some parents had to stop working or reduce their hours of work to supervise and support their children with remote learning and care.[40] From the perspective of the UI system, it is of interest whether the changes to school routines affected parents' use of UI benefits during the pandemic. For households with any children enrolled in a public or private school in kindergarten through 12th grade, the HPS asked, "How has the coronavirus pandemic affected how the children in this household received education for the 2020–2021 school year?"[41]

The responses to this question show that parents whose children experienced more disruptions to their school routine were more likely to have applied for UI benefits and more likely to have received benefits during the pandemic (see table 6). Among parents of students whose classes normally taught in person at the school were canceled, 21.5 percent received benefits. Among parents of students whose classes normally taught in person at the school were moved to a distance-learning format (using either online resources or article materials), 19.2 percent received benefits. Among parents of students who did not experience any change in their school routine (that is, their classes were taught in person at the school), 14.1 percent received benefits.

Table 6. Number and percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, parents with children enrolled in school (K–12), by school routine change of children

School routine change	Total	Applied for UI		Received UI		Success rate
		Number	Percent	Number	Percent	
Total	52,469,508	12,825,212	24.4	9,774,425	18.6	76.9
Classes canceled	13,521,499	3,902,190	28.9	2,908,652	21.5	75.4
Classes moved to distance learning	37,140,865	9,290,310	25.0	7,135,603	19.2	77.4
Classes changed in some other way	6,567,109	1,411,664	21.5	1,067,410	16.3	76.3
No change	5,535,674	1,031,502	18.6	781,418	14.1	76.4

Note: Success rate excludes individuals who applied for UI benefits but did not answer the question about receiving benefits. UI information covers March 13–December 21, 2020. School routine change is based on 2020–21 school year. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

We also look at the current work status of parents of children enrolled in school (see table 7). Parents whose children experienced more disruptions to their school routine were less likely to be at work in the last 7 days. Among parents of students whose classes normally taught in person at the school were canceled, 63.0 percent were at work. By contrast, among parents of students who did not experience any change in their school routine, 72.6 percent were at work. Furthermore, among parents who were not working, those whose children experienced more disruptions to their school routine were more likely to choose “I am/was caring for children not in school or daycare” as their main reason for not working.

Several possible reasons exist for the correlations among disruption to school routines, parental employment, and parents receiving UI benefits. One reason is that changes to school routines caused parents to leave their jobs and apply for UI benefits. Another is that a third factor (the coronavirus or responses to it at the local level) caused both school disruptions and parental job losses. Our analysis does not allow us to distinguish between these two explanations.

Table 7. Number and percentage of parents with children enrolled in school (K–12), by current work status and school routine change of children

School routine change	Total	At work		Not working		Reason for not working = caring for children not in school or daycare	
		Number	Percent	Number	Percent	Number	Percent
Total	52,469,508	35,549,640	67.8	16,857,027	32.1	3,349,141	6.4
Classes canceled	13,521,499	8,523,813	63.0	4,973,892	36.8	1,092,927	8.1
Classes moved to distance learning	37,140,865	25,179,183	67.8	11,931,002	32.1	2,534,912	6.8
Classes changed in some other way	6,567,109	4,575,905	69.7	1,985,016	30.2	377,821	5.8
No change	5,535,674	4,017,586	72.6	1,509,538	27.3	224,462	4.1

Note: Current work status is based on 7 days before survey date (August 19–December 21, 2020). School routine change based on 2020–2021 school year.

Source: Household Pulse Survey, August 19–December 21, 2020.

Effect of receiving UI benefits on well-being

What is the impact of UI benefits on the well-being of recipients and their households? One of the fundamental goals of the UI system is to provide a source of income to workers during periods of unemployment. Research using prepandemic data shows that UI benefits support unemployed workers by replacing lost income, increasing spending, and increasing food consumption.[42] Furthermore, more generous UI benefits increase health insurance coverage and use, and reduce mortgage defaults.[43] Before the pandemic, some adults were so financially vulnerable that they would have struggled to pay for an emergency expense as small as $400 or cover expenses if they lost their job.[44] During the pandemic, the effects of receiving UI benefits on well-being might be stronger because of the federal supplement of $600 a week. During the period when the supplement was available, Peter Ganong and colleagues found that spending of the unemployed after job loss rose substantially above prepandemic levels. Spending of unemployed households also rose compared with the spending of employed households, which is opposite of the normal pattern.[45]

We use the HPS data to construct six measures of the well-being for individuals and households. Each measure is an indicator for whether the individual or household experienced distress in a particular domain (see appendix table 4 for details):

1. In the last 7 days, the household had difficulty paying for usual household expenses.
2. In the last 7 days, the household had experienced food insecurity.
3. The household is not current on mortgage or rent payments.
4. The household is not confident in being able to pay its next mortgage or rent payment.
5. Over the last 7 days, the individual experienced symptoms of anxiety.
6. Over the last 7 days, the individual experienced symptoms of depression.

The anxiety and depression measures are designed to match concepts in surveys sponsored by the National Center for Health Statistics.[46]

Prior research that used the HPS and other data indicates that in the population overall, levels of distress during the pandemic were much higher than before the pandemic. Using data from the COVID Impact Survey and comparable data from the National Health Interview Survey (NHIS), Marianne P. Bitler, Hilary W. Hoynes, and Diane Whitmore Schanzenbach estimated that food insecurity increased sharply from 11 percent in 2018 to 23 percent in April 2020.[47] HPS data for May 14–19, 2020, indicate that 28.2 percent of adults had symptoms of anxiety disorder and 24.4 percent had symptoms of depressive disorder.[48] These estimates are 3 to 4 times larger than comparable estimates for January–June 2019 from the NHIS, which indicated 8.2 percent of adults had symptoms of anxiety disorder and 6.6 percent had symptoms of depressive disorder.

To gauge the effect of receiving UI benefits on well-being, we compare those who had received benefits (at some point during the pandemic) with those who applied for benefits but did not receive them.[49] In our HPS data for August 19 to December 21, 2020, the well-being measures show substantially less distress among UI recipients than among unsuccessful applicants (see table 8 and chart 7). For instance, 18.9 percent of UI recipients were experiencing food insecurity, compared with 29.1 percent of unsuccessful applicants. In addition, 45.2 percent of UI recipients were experiencing anxiety symptoms, compared with 53.2 percent of unsuccessful applicants. The well-being measures for UI applicants (both successful and unsuccessful) are substantially higher (indicating more distress) than for the general population, consistent with the higher incidence of job loss among UI applicants.[50]

Table 8. Household and individual well-being of UI applicants, by whether they received UI benefits (in percent)

Characteristic	All	Applied for UI benefits		Difference
		Received	Not received	
Well-being measure				
Having difficulty with household expenses	33.7	55.9	66.6	–10.7
Experiencing food insecurity	11.4	18.9	29.1	–10.2
Not current on mortgage or rent	12.7	20.1	27.4	–7.3
Not confident on upcoming mortgage or rent payment	18.7	31.7	40.4	–8.7
Having symptoms of anxiety	34.1	45.2	53.2	–8.0
Having symptoms of depression	26.7	36.7	45.5	–8.8

See footnotes at end of table.

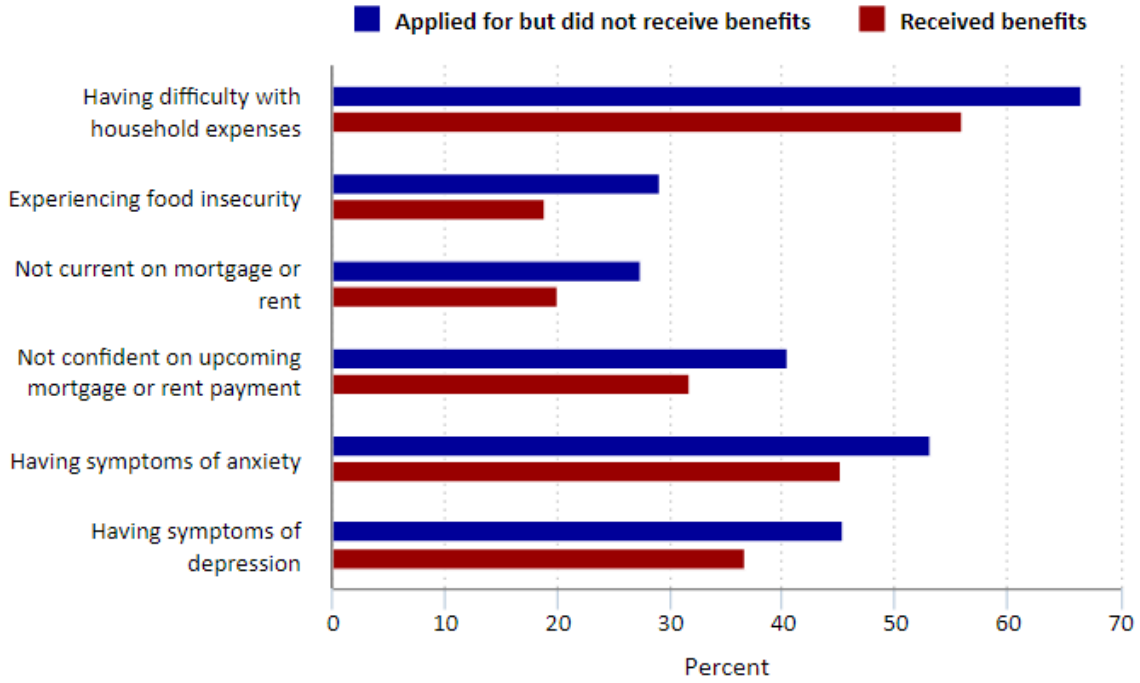
Table 8. Household and individual well-being of UI applicants, by whether they received UI benefits (in percent)

Characteristic	All	Applied for UI benefits		Difference
		Received	Not received	
Household income (2019)				
No answer	28.7	28.0	31.6	–3.6
Less than $25,000	10.1	12.3	17.4	–5.1
$25,000 to $34,999	7.9	10.2	11.5	–1.2
$35,000 to $49,999	9.0	10.8	10.1	0.7
$50,000 to $74,999	12.8	14.1	11.6	2.5
$75,000 to 99,999	9.8	9.5	6.8	2.7
$100,000 to $149,999	11.0	9.1	6.2	2.8
$150,000 to $199,999	5.1	3.4	2.6	0.8
$200,000 or more	5.6	2.6	2.1	0.5
Education (age 18+)				
Less than high school	2.5	2.7	4.1	–1.4
Some high school	5.7	6.3	7.8	–1.6
High school graduate or equivalent	30.9	34.6	35.8	–1.3
Some college, but degree not received	21.1	24.6	23.9	0.8
Associate's degree	9.4	10.5	9.8	0.7
Bachelor's degree	17.1	14.8	12.3	2.5
Graduate degree	13.2	6.5	6.3	0.2

Note: UI information covers March 13–December 21, 2020. Difference = received minus not received. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

Chart 7. Percentage of UI applicants with distress, for those who received UI benefits and those who applied for but did not receive UI benefits



Click legend items to change data display. Hover over chart to view data.
Note: UI = unemployment insurance.
Source: Household Pulse Survey, August 19, 2013–December 21, 2020.

The difference in well-being between UI recipients and unsuccessful applicants may not necessarily be the causal effect of receiving UI benefits on well-being. Prepandemic differences could exist between those who received UI benefits and unsuccessful applicants. For instance, differences in prepandemic earnings patterns may be associated with eligibility for UI during the pandemic. As a result, those who received UI benefits may have had higher incomes and higher savings before the pandemic than did unsuccessful applicants. As such, they may have been in a better position to weather losing their job, apart from the UI benefits they received. We find that UI recipients had higher household incomes in 2019 and more education than unsuccessful applicants (see table 8).

To assess the causal effect of receiving UI benefits on well-being, we estimate linear regressions with controls for variables that might differ between UI recipients and unsuccessful applicants. In each regression, the dependent variable is one of the well-being measures and the key independent variable is an indicator for receiving UI benefits. The sample is limited to those who had applied for benefits, so the estimated coefficient on the indicator for having received benefits distinguishes between UI recipients and unsuccessful applicants. Without any controls, the estimated coefficients in column 1 of table 9 match the differences between groups in table 8. As controls for household income (in 2019), education, and demographics (gender, race, and ethnicity) are added, the estimated coefficients on the indicator fall in magnitude—indicating that some of the differences in well-being between the groups in table 8 are due to prepandemic differences rather than receipt of UI benefits.[51]

Controlling for household income, education, and demographics reduces the differences between groups by 15 percent to 30 percent, depending on the well-being measure. However, when we control for prepandemic differences in these factors, the differences in well-being between UI recipients and unsuccessful applicants are still large. This finding suggests that receiving UI benefits during the pandemic substantially improved the well-being (reduced the distress) of individuals and households. Using our preferred estimates in table 9 (column 4), one can see that receiving UI benefits reduces the probability of having difficulty with household expenses by 7.8 percentage points and reduces the probability of experiencing food insecurity by 7.5 percentage points. For the housing measures, receiving UI benefits reduces the probability of an applicant not being current on mortgage or rent by 5.6 percentage points and reduces the probability of not being confident on paying the upcoming mortgage or rent payment by 5.8 percentage points. For the mental health measures, receiving UI benefits reduces the probability of an applicant having symptoms of anxiety by 7.2 percentage points and reduces the probability of having symptoms of depression by 7.5 percentage points. These effects are large in relation to the mean among unsuccessful applicants (see table 9).

Table 9. Effect on well-being of applicants receiving UI benefits

Well-being measure and controls	Effect of receiving UI benefits				Mean	*N*
	(1)	(2)	(3)	(4)		
Controls						
Household income (2019)	—	X	X	X	—	—
Education	—	—	X	X	—	—
Demographics (gender, race, ethnicity)	—	—	—	X	—	—
Well-being measure						
Having difficulty with household expenses	–0 .107[1]	–0 .084[1]	–0 .083[1]	–0 .078[1]	0.666	126,553
	(0.003)	(0.003)	(0.003)	(0.003)	—	—
Experiencing food insecurity	–0.102[1]	–0.081[1]	–0.079[1]	–0.075[1]	0.291	117,535
	(0.003)	(0.003)	(0.003)	(0.003)	—	—
Not current on mortgage or rent	–0.073[1]	–0.060[1]	–0.059[1]	–0.056[1]	0.274	86,951
	(0.003)	(0.003)	(0.003)	(0.003)	—	—
Not confident on upcoming mortgage or rent payment	–0.087[1]	–0.063[1]	–0.061[1]	–0.058[1]	0.404	86,779
	(0.004)	(0.004)	(0.004)	(0.004)	—	—
Having symptoms of anxiety	–0.080[1]	–0.072[1]	–0.072[1]	–0.072[1]	0.532	109,106
	(0.004)	(0.004)	(0.004)	(0.004)	—	—
Having symptoms of depression	–0.088[1]	–0.075[1]	–0.075[1]	–0.075[1]	0.455	109,014
	(0.004)	(0.004)	(0.004)	(0.004)	—	—

[1] Statistically significant at the 0.01 level.

[2] Statistically significant at the 0.05 level.

[3] Statistically significant at the 0.10 level.

Note: UI information covers March 13–December 21, 2020. Standard errors are in parentheses. Each estimated effect comes from a linear regression with a given well-being measure as the dependent variable; the independent variables are an indicator for successful applicants and the variables for the controls indicated. Regressions are weighted by the Household Pulse Survey person weight. X = control included in the regression. *N* = number of observations used in the regression, which is 129,901 (102,303 successful applicants and 27,598 unsuccessful applicants) minus observations not in the universe for the particular well-being measure. Dashes indicate no data. Mean = mean among unsuccessful applicants. UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

Conclusion

In this article, we explored who applied for UI benefits and who received benefits during the pandemic, whether state factors and worker characteristics could explain differences in the success rate of UI applicants, and the effect of receiving benefits on applicants' well-being. We estimate that, through the first 9 months of the pandemic (March through December 2020) in the United States, 21.0 percent of adults applied for UI benefits and 16.0 percent of adults received UI benefits. Among adults in households that lost employment income during the pandemic, 41.2 percent applied for UI benefits and 31.8 percent received benefits. By way of comparison, 84 percent of adults received stimulus payments that were authorized as part of the CARES Act. This comparison shows the extent to which UI benefits are more targeted than stimulus payments.

We found that demographic groups disproportionately affected by job loss during the pandemic, as shown by other sources, were more likely to receive UI benefits. These groups include Blacks, Hispanics, and women. Although similar to the share of men who received UI benefits, the share of women who received benefits was higher than in prior recessions, when women were less likely than men to receive benefits. We also found that states with higher unemployment rates during the pandemic had a larger share of their population who received UI benefits.

Overall, among those who applied for UI benefits, 77.2 percent received benefits. Although workers with less education and lower income were more likely to apply for UI benefits, the success rate of UI applicants was lower among those with less education and lower income. This finding could reflect that low-wage workers were less likely to be eligible for regular UI (because of minimum earnings requirements). Success rates were similar for women and men but varied by race. Among racial groups, Blacks had the lowest success rate and Asians the highest, with a difference of 10 percentage points. This pattern could be due, in part, to Blacks being more likely to work in low-wage jobs and Asians being less likely.

In addition to illustrating differences in economic hardship across demographic groups, we found that success rates are also relevant for understanding the extent to which the expansions of the UI program during the pandemic were successful. The PUA program expanded UI eligibility during the pandemic to cover self-employed workers, low-wage workers, and other workers typically not covered in the regular UI program. Despite the expanded eligibility for individuals lacking sufficient work history, workers with less education and lower income had lower success rates than workers with more education and higher income. A similar pattern emerged for self-employed workers: the success rate for self-employed workers was lower than for private wage and salary workers. These patterns suggest the expansions of UI eligibility under the PUA program, while beneficial to workers not normally covered by the regular UI program, did not eliminate gaps in coverage.

The persistence of differences in UI coverage also emerged from our cross-state analysis. Across states, the success rate is positively correlated with the prepandemic UI recipiency rate, even when we controlled for pandemic factors such as the unemployment rate and COVID-19 measures. Moreover, the prepandemic recipiency rate is positively correlated with the share of the population who applied for UI benefits and the share of the population who received benefits. Taken together, these findings imply that differences in UI recipiency across states before the pandemic contributed to differences in UI recipiency across states during the pandemic.

Despite the persistence of state differences in UI recipiency from before the pandemic, we found that the UI program provided benefits to individuals who were directly affected by the pandemic in the labor market. In addition to providing income support, the UI program improved the well-being of individuals and households.

Compared with individuals who applied for UI benefits but did not receive them, individuals who received UI benefits had greater well-being in a variety of domains, including household finances, food security, and mental health.

ACKNOWLEDGMENT: We are grateful to Elizabeth Handwerker and Mark Loewenstein for their helpful comments. We have also benefited from the comments of seminar participants at the Department of Labor's Chief Evaluation Office.

Appendix: Additional documentation of the Household Pulse Survey and results regarding unemployment insurance applicants and recipients during the coronavirus pandemic

Appendix table 1. Household Pulse Survey sample size, number of respondents, and response rate, August 19–December 21, 2020

Phase	Week	Start date	End date	Sample size	Number of respondents	Response rate (percent)
2	13	August 19, 2020	August 31, 2020	1,032,959	109,051	10.3
2	14	September 2, 2020	September 14, 2020	1,033,494	110,019	10.3
2	15	September 16, 2020	September 28, 2020	1,034,047	99,302	9.2
2	16	September 30, 2020	October 12, 2020	1,034,605	95,604	8.8
2	17	October 14, 2020	October 26, 2020	1,035,186	88,716	8.1
3	18	October 28, 2020	November 9, 2020	1,035,752	58,729	5.3
3	19	November 11, 2020	November 23, 2020	1,036,354	71,939	6.6
3	20	November 25, 2020	December 7, 2020	1,036,968	72,484	6.7
3	21	December 9, 2020	December 21, 2020	1,037,606	69,944	6.5

Source: U.S. Census Bureau, "Source of the data and accuracy of the estimates for the 2020 Household Pulse Survey—phase 2," week 17, October 14–26, 2020; and phase 3, week 21, December 9–21, 2020.

Appendix table 2. Classification of reasons for not working

COVID-19-related reason: employer initiated

- My employer experienced a reduction in business (including furlough) due to coronavirus pandemic.
- I am/was laid off due to coronavirus pandemic.
- My employer closed temporarily due to the coronavirus pandemic.
- My employer went out of business due to the coronavirus pandemic.

COVID-19-related reason: not employer initiated

- I am/was sick with coronavirus symptoms.
- I am/was caring for someone with coronavirus symptoms.

- I was concerned about getting or spreading the coronavirus.

Non-COVID-19-related reason

- I did not want to be employed at this time.
- I am/was caring for children not in school or daycare.
- I am/was caring for an elderly person.
- I am/was sick (not coronavirus related) or disabled.
- I am retired.
- Other reason, please specify.

Note: We considered classifying the reason “I am/was caring for children not in school or daycare” as COVID-19-related because parents of children enrolled in school may have had to stop working because their children were learning from home during the pandemic and required supervision during the school day. However, this reason could also be used by parents of children who are younger than school age, including parents who choose to stay at home for reasons unrelated to COVID-19. As a result, we classified the reason as non-COVID-19-related. COVID-19 = coronavirus disease 2019.

Source: Household Pulse Survey, August 19–December 21, 2020.

Appendix table 3. Percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, by state, March 13–December 21, 2020

State	Percent applied for UI benefits	Percent received UI benefits	Success rate
Alabama	17.33	11.37	66.45
Alaska	21.13	15.94	75.72
Arizona	17.93	12.57	70.70
Arkansas	16.73	10.55	63.87
California	25.26	20.70	82.99
Colorado	17.30	13.97	81.26
Connecticut	21.80	17.29	80.37
Delaware	19.37	13.47	70.31
District of Columbia	18.04	12.28	69.14
Florida	18.84	13.44	72.15
Georgia	21.09	15.01	72.29
Hawaii	27.93	21.24	77.31
Idaho	14.47	10.80	75.73
Illinois	19.03	14.27	75.63
Indiana	19.02	14.83	78.59
Iowa	17.97	13.74	77.46
Kansas	14.30	10.38	73.22
Kentucky	21.86	15.90	73.60
Louisiana	23.50	17.53	75.64

See footnotes at end of table.

Appendix table 3. Percentage of people 18 years and older who applied for UI benefits and received UI benefits, and success rate of UI applicants, by state, March 13–December 21, 2020

State	Percent applied for UI benefits	Percent received UI benefits	Success rate
Maine	17.76	14.53	82.94
Maryland	19.06	14.71	77.79
Massachusetts	23.36	19.52	84.51
Michigan	30.25	25.51	85.23
Minnesota	22.36	18.04	81.57
Mississippi	21.47	16.56	78.11
Missouri	17.46	12.75	74.05
Montana	18.48	13.75	74.80
Nebraska	13.19	10.01	76.20
Nevada	30.31	21.71	72.31
New Hampshire	19.73	15.65	80.34
New Jersey	25.31	20.57	82.25
New Mexico	20.06	15.19	76.75
New York	27.14	23.29	86.97
North Carolina	19.05	12.85	68.79
North Dakota	14.66	11.13	76.96
Ohio	19.95	13.71	69.66
Oklahoma	14.64	9.76	67.38
Oregon	21.80	15.63	72.37
Pennsylvania	23.46	16.96	73.07
Rhode Island	25.28	21.72	87.08
South Carolina	18.34	12.86	70.89
South Dakota	12.11	8.33	69.11
Tennessee	17.12	12.83	75.78
Texas	18.43	13.44	73.73
Utah	11.39	7.63	67.42
Vermont	21.74	18.08	83.79
Virginia	17.51	12.89	74.78
Washington	21.59	16.23	76.11
West Virginia	16.82	11.68	70.03
Wisconsin	18.09	12.55	70.05
Wyoming	12.47	9.70	78.66

Note: UI = unemployment insurance.

Source: Household Pulse Survey, August 19–December 21, 2020.

Appendix table 4. Construction of well-being measures

Well-being measure
Having difficulty with household expenses
Response is coded as “yes” if response is “Somewhat difficult” or “Very difficult.”

See footnotes at end of table.

Appendix table 4. Construction of well-being measures

Well-being measure	
Q19a: “In the LAST 7 DAYS, how difficult has it been for your household to pay for usual household expenses, including but not limited to food, rent or mortgage, car payments, medical expenses, student loans, and so on?”	1. Not at all difficult
	2. A little difficult
	3. Somewhat difficult
	4. Very difficult
Experiencing food insecurity	
Response is coded as “yes” if response is “Sometimes not enough to eat” or “Often not enough to eat.”	
Q24: “In the LAST 7 DAYS, which of these statements best describes the food eaten in your household?”	1. Enough of the kinds of food (I/we) wanted to eat
	2. Enough, but not always the kinds of food (I/we) wanted to eat
	3. Sometimes not enough to eat
	4. Often not enough to eat
Not current on mortgage or rent	
Response is coded as “yes” if Q40c = “no” (when home is owned, with mortgage) or Q40b = “no” (when home is rented).	
Q40c: “Is this household CURRENTLY caught up on mortgage payments?”	1. Yes
	2. No
Q40b: Is this household CURRENTLY caught up on rent payments?	1. Yes
	2. No
Q39: “Is your house or apartment . . . ?”	1. Owned free and clear
	2. Owned with a mortgage or loan (including home equity loans)
	3. Rented
	4. Occupied without payment of rent

See footnotes at end of table.

Appendix table 4. Construction of well-being measures

Well-being measure	
Not confident on upcoming mortgage or rent payment	
Response is coded as “yes” if “No confidence” or “Slight confidence” when home is owned, with mortgage, or rented.	
Q41: “How confident are you that your household will be able to pay your NEXT RENT OR MORTGAGE PAYMENT on time?”	1. No confidence
	2. Slight confidence
	3. Moderate confidence
	4. High confidence
	5. Payment is/will be deferred
Having symptoms of anxiety	
Response is coded as “yes” if the sum of Q32 and Q33 is 5 or more (where the numerical value for a question is the number associated with the response category).	
Q32: “Over the LAST 7 DAYS, how often have you been bothered by the following problems . . . Feeling nervous, anxious, or on edge? Would you say not at all, several days, more than half the days, or nearly every day?”	1. Not at all
	2. Several days
	3. More than half the days
	4. Nearly every day
Q33: “Over the LAST 7 DAYS, how often have you been bothered by the following problems . . . Not being able to stop or control worrying? Would you say not at all, several days, more than half the days, or nearly every day?”	1. Not at all
	2. Several days
	3. More than half the days
	4. Nearly every day
Having symptoms of depression	
Response is coded as “yes” if the sum of Q34 and Q35 is 5 or more (where the numerical value for a question is the number associated with the response category).	
Q34: “Over the LAST 7 DAYS, how often have you been bothered by . . . Having little interest or pleasure in doing things? Would you say not at all, several days, more than half the days, or nearly every day?”	1. Not at all
	2. Several days
	3. More than half the days
	4. Nearly every day
Q35: “Over the LAST 7 DAYS, how often have you been bothered by . . . Feeling down, depressed, or hopeless? Would you say not at all, several days, more than half the days, or nearly every day?”	1. Not at all
	2. Several days
	3. More than half the days
	4. Nearly every day
Source: Household Pulse Survey, August 19–December 21, 2020.	

SUGGESTED CITATION

Patrick Carey, Jeffrey A. Groen, Bradley A. Jensen, Anne E. Polivka, and Thomas J. Krolik, "Applying for and receiving unemployment insurance benefits during the coronavirus pandemic," *Monthly Labor Review,* U.S. Bureau of Labor Statistics, September 2021, https://doi.org/10.21916/mlr.2021.19.

NOTES

1 Elizabeth Weber Handwerker, Peter B. Meyer, Joseph Piacentini, Michael Schultz, and Leo Sveikauskas, "Employment recovery in the wake of the COVID-19 pandemic," *Monthly Labor Review*, December 2020, https://doi.org/10.21916/mlr.2020.27.

2 *The Employment Situation—December 2020*, USDL-21-0002 (U.S. Bureau of Labor Statistics, January 8, 2021), https://www.bls.gov/news.release/archives/empsit_01082021.pdf.

3 The unemployment insurance (UI) system is a federal–state partnership that is funded by federal and state taxes on employers and administered by states. States set eligibility, duration, and benefit levels within federal guidelines.

4 Families First Coronavirus Response Act, Pub. L. No. 116–127 (March 2020).

5 Maurice Emsellem and Michele Evermore, "Understanding the unemployment provisions of the Families First Coronavirus Response Act," policy brief (National Employment Law Project, March 2020), https://www.nelp.org/publication/understanding-the-unemployment-provisions-of-the-families-first-coronavirus-response-act/.

6 "COVID-19: urgent actions needed to better ensure an effective federal response," GAO-21-191 (Government Accountability Office, November 30, 2020), https://www.gao.gov/products/gao-21-191.

7 "The effects of pandemic-related legislation on output" (Congressional Budget Office, September 18, 2020), https://www.cbo.gov/publication/56537; and Krista Ruffini and Abigail Wozniak, "Supporting workers and families in the pandemic recession: results in 2020 and suggestions for 2021," *Brookings Papers on Economic Activity*, Spring 2021, BPEA conference draft, March 25, 2021.

8 The Employment and Training Administration (ETA) publishes these data reports, which are based on summary information reported by states, and accompanying documentation. For more information, see https://oui.doleta.gov/unemploy/DataDownloads.asp. These ETA reports contain information by UI program (e.g., regular UI, extended benefits, and pandemic-related programs).

9 Alex Bell, Thomas J. Hedin, Geoffrey Schnorr, and Till von Wachter, "An analysis of unemployment insurance claims in California during the COVID-19 pandemic," policy brief (California Policy Lab, November 19, 2020), https://www.capolicylab.org/wp-content/uploads/2020/11/Nov-19th-Analysis-of-CA-UI-Claims-During-the-COVID-19-Pandemic.pdf; Tomaz Cajner, Andrew Figura, Brendan M. Price, David Ratner, and Alison Weingarden, "Reconciling unemployment claims with job losses in the first months of the COVID-19 crisis," Finance and Economics Discussion Series 2020-055 (Washington, DC: Board of Governors of the Federal Reserve System, July 13, 2020); and "COVID-19: urgent actions needed to better ensure an effective federal response," GAO-21-191.

10 With access to individual-level microdata of the UI claims and benefits records, one could uniquely identify individuals and avoid double counting. However, these microdata are not widely available to researchers. The California Policy Lab has used this approach to analyze UI claims in California during the pandemic. See Bell et al., "An analysis of unemployment insurance claims in California during the COVID-19 pandemic."

11 In addition, reports of fraud also occurred in applications for UI during the pandemic, which could lead to inflation in the number of claims. See "COVID-19: urgent actions needed to better ensure an effective federal response," GAO-21-191.

12 The U.S. Census Bureau conducted an initial investigation into the potential for nonresponse bias by using 2020 Household Pulse Survey (HPS) data and American Community Survey estimates. See Sandra Peterson, Norilsa Toribio, James Farber, and David

Hornick, "Nonresponse bias report for the 2020 Household Pulse Survey" (Demographic Statistical Methods Division), Sample Design and Estimation, version 1.0 (U.S. Census Bureau, March 24, 2021).

[13] "Source of the data and accuracy of the estimates for the 2020 Household Pulse Survey—Phase 2," week 17 (U.S. Census Bureau, October 14–26, 2020), https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase2_Source_and_Accuracy_Week_17.pdf. For consistency, we use the person weights even when tabulating responses to questions about the household.

[14] Although weighting addresses some of the issues surrounding the potential of respondents being nonrepresentative, weighting, in of itself, cannot solve all the issues.

[15] The U.S. Bureau of Labor Statistics (BLS) was also involved in designing and testing HPS questions that focus on household spending. See Thesia I. Garner, Adam Safir, and Jake Schild, "Receipt and use of stimulus payments in the time of the Covid-19 pandemic," *Beyond the Numbers*: *Prices and Spending,* August 2020, https://www.bls.gov/opub/btn/volume-9/receipt-and-use-of-stimulus-payments-in-the-time-of-the-covid-19-pandemic.htm; and Thesia I. Garner, Adam Safir, and Jake Schild, "Changes in consumer behaviors and financial well-being during the coronavirus pandemic: results from the U.S. Household Pulse Survey," *Monthly Labor Review*, December 2020, https://doi.org/10.21916/mlr.2020.26.

[16] "Timeline of events related to the COVID-19 pandemic," January 3, 2020, to June 29, 2021 (Fraser, Federal Reserve Bank of St. Louis), https://fraser.stlouisfed.org/timeline/covid-19-pandemic.

[17] We did not use data for this question because of issues with weighting.

[18] In computing rates of people applying for UI and receiving UI, we use the population because it is the most appropriate denominator available in the HPS. As an alternative denominator, we considered measures of the prepandemic labor force (employed and unemployed). This denominator could not be constructed from the HPS because the survey does not contain any questions about employment activities or job search before the pandemic. Estimates of the prepandemic labor force are available from the Current Population Survey (CPS), and we considered using estimates for February 2020. However, we were concerned that some people who applied for UI benefits during the pandemic were not in the labor force in February. This result could arise from the expanded eligibility for UI benefits during the pandemic, in addition to normal movement in and out of the labor force. We also were concerned about other measurement differences between the HPS and the CPS.

[19] Garner et al., "Receipt and use of stimulus payments in the time of the Covid-19 pandemic." Stimulus payments authorized by the CARES Act were made to adults whose income was less than $99,000 (or $198,000 for joint filers). Garner et al.'s estimate is based on the HPS data for June 11–16, 2020 (week 7). The estimate reflects both those people who had received a stimulus payment by the survey date and those who had not received a stimulus payment but expected to receive one.

[20] Estimates from a 2018 supplement to the CPS, conducted in May and September 2018, provide a point of comparison for the success rate of UI applicants before the pandemic. Among unemployed people age 16 and older who worked in the 12 months before the supplement and applied for UI benefits since their last job, 65.8 percent received benefits. See *Characteristics of Unemployment Insurance Applicants and Benefit Recipients—2018*, USDL-19-1692 (U.S. Bureau of Labor Statistics, September 25, 2019), https://www.bls.gov/news.release/uisup.nr0.htm.

[21] Heidi Hartmann, Ashley English, and Jeffrey Hayes, "Women and men's employment and unemployment in the Great Recession," briefing paper, IWPR Publication C373 (Washington, DC: Institute for Women's Policy Research, February 2010).

[22] Titan Alon, Matthias Doepke, Jane Olmstead-Rumsey, and Michèle Tertilt, "This time it's different: the role of women's employment in a pandemic recession," IZA Discussion Paper 13562 (Bonn, Germany: Institute of Labor Economics, August 2020); and Matthew Dey, Mark A. Loewenstein, David S. Piccone Jr., and Anne E. Polivka, "Demographics, earnings, and family characteristics of workers in sectors initially affected by COVID-19 shutdowns," *Monthly Labor Review*, June 2020, https://doi.org/10.21916/mlr.2020.11.

[23] Robert Fairlie, "The impact of COVID-19 on small business owners: evidence from the first three months after widespread social-distancing restrictions," *Journal of Economics and Management Strategy*, vol. 29, no. 4, Winter 2020, pp. 727–740; David Dam, Meghana Gaur, Fatih Karahan, Laura Pilossoph, and Will Schirmer, "Black and White differences in the labor market recovery from COVID-19," *Liberty Street Economics* (Federal Reserve Bank of New York, February 9, 2021); and Brad J. Hershbein and Harry J. Holzer, "The COVID-19 pandemic's evolving impacts on the labor market: who's been hurt and what we should do," Working Paper 21-341 (Kalamazoo, MI: W. E. Upjohn Institute, February 11, 2021).

[24] The question about the 2019 household income had a relatively high rate of nonresponse. Overall, 28 percent of HPS respondents did not answer the question about household income.

[25] Dey et al., "Demographics, earnings, and family characteristics of workers in sectors initially affected by COVID-19 shutdowns." Using 2019 data, Dey et al. show that workers with lower education and lower family income were disproportionately represented in the industry sectors most susceptible to employment losses during the initial stage of the pandemic. These sectors were not considered essential and provided goods and services requiring considerable interaction between workers and customers. See also Michael Dalton, Jeffrey A. Groen, Mark A. Loewenstein, David S. Piccone Jr., and Anne E. Polivka, "The K-shaped recovery: examining the diverging fortunes of workers in the recovery from the COVID-19 pandemic using business and household survey microdata," *The Journal of Economic Inequality*, 2021, https://doi.org/10.1007/s10888-021-09506-6; and Hershbein and Holzer, "The COVID-19 pandemic's evolving impacts on the labor market."

[26] Guido Matias Cortes and Eliza C. Forsythe, "Impacts of the Covid-19 pandemic and the CARES Act on earnings and inequality," unpublished paper, University of Illinois at Urbana-Champaign, May 12, 2021), http://publish.illinois.edu/elizaforsythe/files/2021/05/Cortes_Forsythe_Inequality_May2021.pdf. Cortes and Forsythe find that with the federal supplement, UI benefits were successful at protecting the income of low-wage workers from the greater extent of job loss. However, after the federal supplement expired at the end of July 2020, the income of low-wage workers (earnings and UI benefits combined) fell sharply.

[27] Peter Ganong, Pascal J. Noel, and Joseph S. Vavra, "US unemployment insurance replacement rates during the pandemic," *Journal of Public Economics*, vol. 191, no. 104273, November 2020, https://doi.org/10.1016/j.jpubeco.2020.104273. Ganong et al. estimate that with the federal supplement, about 76 percent of workers eligible for regular UI had replacement rates above 100 percent—that is, they were eligible for UI benefits that exceeded their lost wages. Without the supplement, typical replacement rates would be around 45 percent to 55 percent.

[28] According to Government Accountability Office (GAO), low levels of UI receipt among unemployed low-wage workers may be explained, in part, by state UI eligibility rules, including (1) the base period for meeting the minimum earnings requirement often excludes the latest calendar quarter and (2) family obligations may not be considered "good cause" for leaving employment. For more information, see "Unemployment insurance: low-wage and part-time workers continue to experience low rates of receipt," GAO-07-1147 (Government Accountability Office, September 2007).

[29] Roxanna Edwards and Sean M. Smith, "Job market remains tight in 2019, as the unemployment rate falls to its lowest level since 1969," *Monthly Labor Review*, April 2020, https://doi.org/10.21916/mlr.2020.8.

[30] Christopher J. O'Leary and Stephen A. Wandner, "An illustrated case for unemployment insurance reform," Working Paper 19-317 (Kalamazoo, MI: W. E. Upjohn Institute, January 22, 2020). We use the state recipiency rate constructed by ETA ("Recipiency rates, by state," Section A.13, *Unemployment Insurance Chartbook*, https://oui.doleta.gov/unemploy/chartbook.asp). The numerator for the 2019 recipiency rate is the average weekly number of people who received UI benefits in 2019 through the regular UI program, according to UI administrative data. The denominator is the average monthly unemployment level for 2019, based on state unemployment estimates from BLS (Local Area Unemployment Statistics).

[31] In "How low can we go? State unemployment insurance programs exclude record numbers of jobless workers," Briefing Paper 392 (Washington, DC: Economic Policy Institute, March 9, 2015), Will Kimball and Rick McHugh find that states that cut the maximum duration of UI benefit recipiency saw their recipiency rates decline relative to other states. In addition, in "Low benefit recipiency in

state unemployment insurance programs," Report for the Office of Workforce Security, Employment and Training Administration, U.S. Department of Labor (The Urban Institute, June 2001), Wayne Vroman finds that states with high recipiency rates made more accommodations for non-English speakers in filing for UI benefits and had requirements for monetary eligibility that were easier to satisfy. Labor market variables that were related to state recipiency rates include the unionization rate and the job loser share of new unemployment spells.

[32] This relationship is consistent with Eliza Forsythe's findings from her draft paper "Understanding unemployment insurance recipiency during the Covid-19 pandemic" (University of Illinois at Urbana-Champaign, March 1, 2021). Forsythe finds that, during the pandemic, the share of unemployed individuals who reported receiving UI benefits in the last 14 days is positively correlated with the 2019 UI recipiency rate in the individuals' state of residence. She uses data from the Understanding America Study from March 2020 through February 2021.

[33] "How the government measures unemployment," technical documentation (U.S. Bureau of Labor Statistics, June 2014), https://www.bls.gov/cps/cps_htgm.pdf; and "Did you know official unemployment estimates are NOT from unemployment insurance counts?" *Commissioner's Corner* (U.S. Bureau of Labor Statistics, October 17, 2019), https://blogs.bls.gov/blog/2019/10/17/did-you-know-official-unemployment-estimates-are-not-from-unemployment-insurance-counts/.

[34] Before the pandemic, those who were not searching for work typically would not have been eligible for UI benefits. (Individuals on layoff from an employer are eligible for UI benefits if they expect to be recalled, even if they are not searching for work.) However, during the pandemic (per the Families First Coronavirus Response Act), states were allowed to relax the requirement that applicants had to be actively seeking work.

[35] Thomas Hale, Noam Angrist, Rafael Goldszmidt, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster, Emily Cameron-Blake, Laura Hallas, Saptarshi Majumdar, and Helen Tatlow, "A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker)," *Nature Human Behaviour*, vol. 5, no. 4, April 2021, pp. 529–538, https://doi.org/10.1038/s41562-021-01079-8.

[36] This statement is based on the standardized coefficients reported in brackets in table 3. These numbers are the coefficients multiplied by ($p75 - p25$), where $p75$ and $p25$ are the 75th and 25th percentiles of the distribution (across states) of the relevant independent variable, respectively.

[37] These calculations were the authors, and they used estimates from the CPS that were not seasonally adjusted. For more available data, see https://www.bls.gov/webapps/legacy/cpsatab8.htm and https://www.bls.gov/webapps/legacy/cpsatab9.htm.

[38] Individuals covered by the Pandemic Unemployment Assistance program include "self-employed, individuals seeking part-time employment, individuals lacking sufficient work history, or those otherwise not qualified for regular UI, extended benefits under state or federal law, or PEUC." See "Pandemic unemployment assistance (PUA) implementation and operating instructions," Attachment I to Unemployment Insurance Program Letter No. 16-20 (U.S. Department of Labor, ETA, April 5, 2020), https://wdr.doleta.gov/directives/attach/UIPL/UIPL_16-20_Attachment_1.pdf.

[39] Emsellem and Evermore, "Understanding the unemployment provisions of the Families First Coronavirus Response Act."

[40] Handwerker et al., "Employment recovery in the wake of the COVID-19 pandemic"; and Misty L. Heggeness, "Estimating the immediate impact of the COVID-19 shock on parental attachment to the labor market and the double bind of mothers," *Review of Economics of the Household*, vol. 18, no. 4, December 2020, pp. 1053–1078.

[41] In "Parents in a pandemic labor market" (Federal Reserve Bank of San Francisco, February 2021), Olivia Lofton, Nicolas Petrosky-Nadeau, and Lily Seitelman use HPS data from this question to estimate a monthly school disruption index at the state level.

[42] Marianne Bitler and Hilary Hoynes, "The more things change, the more they stay the same? The safety net and poverty in the Great Recession," *Journal of Labor Economics*, vol. 34, no. S1, January 2016, pp. S403–S444; Chloe N. East and David Simon, "How well insured are job losers? Efficacy of the public safety net," Working Paper No. 28218 (Cambridge, MA: National Bureau of Economic Research, December 2020); Peter Ganong and Pascal Noel, "Consumer spending during unemployment: positive and normative implications," *American Economic Review*, vol. 109, no. 7, July 2019, pp. 2383–2424; and Jonathan Gruber, "The consumption smoothing benefits of unemployment insurance," *American Economic Review*, vol. 87, no. 1, March 1997, pp. 192–205.

[43] Elira Kuka, "Quantifying the benefits of social insurance: unemployment insurance and health," *The Review of Economics and Statistics*, vol. 102, no. 3, July 2020, pp. 490–505; and Joanne W. Hsu, David A. Matsa, and Brian T. Melzer, "Unemployment insurance as a housing market stabilizer," *American Economic Review*, vol. 108, no. 1, January 2018, pp. 49-81.

[44] "Report on the economic well-being of U.S. households in 2019, featuring supplemental data from April 2020" (Washington, DC: Board of Governors of the Federal Reserve System, May 2020), https://www.federalreserve.gov/publications/files/2019-report-economic-well-being-us-households-202005.pdf; and Brooke Helppie-McFall and Joanne W. Hsu, "Financial profiles of workers most vulnerable to coronavirus-related earnings loss in the spring of 2020," *Financial Planning Review*, vol. 3, no. 4, December 2020, p. e1102, https://onlinelibrary.wiley.com/doi/10.1002/cfp2.1102.

[45] Peter Ganong, Fiona Greig, Max Liebeskind, Pascal Noel, Daniel M. Sullivan, and Joseph Vavra, "Spending and job search impacts of expanded unemployment benefits: evidence from administrative micro data," Working Paper No. 2021-19 (Chicago, IL: Becker Friedman Institute, February 11, 2021).

[46] The anxiety measure is designed to match the concepts for the two-item Generalized Anxiety Disorder (GAD-2) scale. The depression measure is designed to match the Centers for Disease Control and Prevention concepts for the two-item Patient Health Questionnaire (PHQ-2) scale. The HPS questions are based on symptoms experienced over the last 7 days, rather than the typical 14 days. More details are available at https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm.

[47] Marianne P. Bitler, Hilary W. Hoynes, and Diane Whitmore Schanzenbach, "The social safety net in the wake of COVID-19," *Brookings Papers on Economic Activity*, Summer 2020 (COVID-19 and the economy: part one), pp. 119–145.

[48] "Early release of selected mental health estimates based on data from the January–June 2019 National Health Interview Survey," National Health Interview Survey Early Release Program (National Center for Health Statistics, May 2020), https://www.cdc.gov/nchs/data/nhis/earlyrelease/ERmentalhealth-508.pdf.

[49] Researchers have used unsuccessful applicants as a comparison group for benefit recipients in other contexts—for example, the Social Security Disability Insurance program in articles by John Bound, "The health and earnings of rejected disability insurance applicants," *American Economic Review*, vol. 79, no. 3, June 1989, pp. 482–503; and Till von Wachter, Jae Song, and Joyce Manchester, "Trends in employment and earnings of allowed and rejected applicants to the Social Security Disability Insurance Program," *American Economic Review*, vol. 101, no. 7, December 2011, pp. 3308–3329. In our analysis, people who applied for UI benefits but did not receive them is not as clean of a comparison group as in these other studies because it includes those who applied for benefits before the survey date and started receiving benefits after the survey date. However, given the long reference period (back to March 13, 2020), we believe this issue is minor.

[50] Among all adults, 34.1 percent were experiencing anxiety symptoms and 26.7 percent were experiencing depressive symptoms. These numbers are consistent with tabulations of HPS data for the same period reported in Anjel Vahratian, Stephen J. Blumberg, Emily P. Terlizzi, and Jeannine S. Schiller, "Symptoms of anxiety or depressive disorder and use of mental health care among adults during the COVID-19 pandemic—United States, August 2020 to February 2021," *Morbidity and Mortality Weekly Report*, vol. 70, no. 13, April 2, 2021, pp. 490–494.

[51] We control demographics to capture differences across groups in the well-being measures and as a predictor of earnings (given the presence of missing data on household income).

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