

Understanding Unemployment Insurance Reciprocity During the Covid-19 Pandemic

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As of March 1st, the United States remains mired in the depths of the Covid-19 crisis, with infection rates falling but still extremely high. State and local governments have enacted public health restrictions to control the spread of the virus, and individuals seeking to protect themselves from the virus are avoiding many in person businesses, all resulting in a continued widespread economic crisis.¹ The federal government is currently considering enacting additional economic relief, which may include extensions to unemployment insurance as well as universal payments.

A key consideration in designing an economic relief package is understanding which individuals are covered by existing programs and which individuals in need are falling through the cracks. In this memo I seek to understand how well the Unemployment Insurance (UI) system is reaching unemployed workers.

I utilize data from the Understanding America Survey (UAS) Understanding Covid In America Survey to measure how many individuals who are currently unemployed

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¹See Forsythe et al. (2020a) for more on the effects of policy versus individual behavior and the spread of the virus in the early stages of the crisis.

are receiving unemployment insurance. Such a question cannot be answered by data products such as the Current Population Survey (CPS) or the Census Pulse Survey. The basic monthly CPS does not ask individuals about UI benefits, while the Census Pulse only asks if individuals have received benefits since March 13th.

The UAS Covid data has several advantages. It is a panel, with approximately 6,000 individuals responding roughly every two weeks. The survey has been in the field since March 10th 2020, capturing from the beginning of the labor market crisis to the current day. The UAS is a nationally representative random sample, and provides weights to match the population data from the Current Population Survey. Most importantly, the survey asks a variety of important questions about the individual's current labor market status, whether they are currently receiving UI, and, if they are not, why not. This allows for detailed identification of bottlenecks in UI coverage.

In this memo, I begin by describing cross-sectional data on the share of unemployed individuals who reported receiving UI benefits in the last two weeks, and then examine differences by type of unemployment, demographic characteristics, and state of residence. I next utilize a survival analysis, in which I follow individuals who left employment over time and estimate what fraction have received UI benefits. Information on the data source and construction are provided in the Data Appendix.

I find that, in January 2021, only 14% of the currently unemployed report that they have received UI benefits in the last two weeks. Since June 2020, 41% of the unemployed report they have either received benefits at some point or are waiting for approval. I find important differences between demographic groups, with Asian workers, Black workers, young workers, and workers without a 4-year college degree all substantially less likely to be receiving benefits compared with other groups.

These results indicate that many unemployed individuals are not receiving UI benefits. If policymakers are concerned about providing benefits to the unemployed, the current UI system is not able to reach all of these individuals. Thus, policymakers should consider additional instruments to reach those who are excluded from the UI system.

It is important to emphasize that the UAS survey is relatively small compared with surveys such as the CPS, resulting in greater sampling error and an increased possibility of bias in the estimates. When possible, I benchmark UAS estimates to other data sources. In addition, the UAS survey does not distinguish between active and passive search, leading to a larger unemployment rate compared with official statistics. Nonetheless, the UAS data is the best data available in the United States to estimate

UI coverage and receipt at the individual level.

1 Background on UI and Unemployment

In the United States, the Unemployment Insurance (UI) system is a partnership between the federal government and individual states. States have substantial leeway in how they administer the program and the benefits provided, which results in wide disparities between states in the coverage and benefit levels.² UI is designed as insurance, hence covered employers pay premiums into the state for their employees, and when employees are laid-off their claims are paid out of this common fund of money. However, to qualify workers must have been laid-off, they must have been employed as a regular employee (e.g. not an independent contractor), and they must have earned sufficient income over the past few quarters to qualify for benefits.

Due to these restrictions in eligibility, UI reciprocity rates are typically very low. In 2018, only 16.8% of unemployed individuals reported received UI benefits at some point in the past year (Bureau of Labor Statistics (2019)). Thus, before the Covid-19 pandemic it was well-known by policy-makers that the current UI system would not be able reach all in need in the case of an economic downturn.³

During the Covid-19 Pandemic, the CARES Act and subsequent legislation expanded UI coverage in several ways. First, coverage was extended to the self-employed and those with insufficient work histories via the PUA program. Second, the duration of benefits were extended. Third, all UI recipients received \$600 per week additional payments through July 2020.⁴ Thus, compared to normal times, coverage was expanded substantially and the amount of benefits available also increased dramatically. We would expect that more individuals would claim benefits compared with before the pandemic.

It is important to emphasize that, since UI is designed as unemployment insurance for working individuals, it does not provide benefits to individuals who were not laid-off from a qualifying job. This is very different from the official definition of unemployment from the Bureau of Labor Statistics, that is, individuals who are on temporary layoff or actively searching for work. Thus, individuals who recently graduated from school or

²See Abraham et al. (2020) for more details on the UI system.

³See for instance https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160711_furman_uireform_cea.pdf

⁴See Cortes & Forsythe (2020) for more details on the UI provisions in the CARES Act.

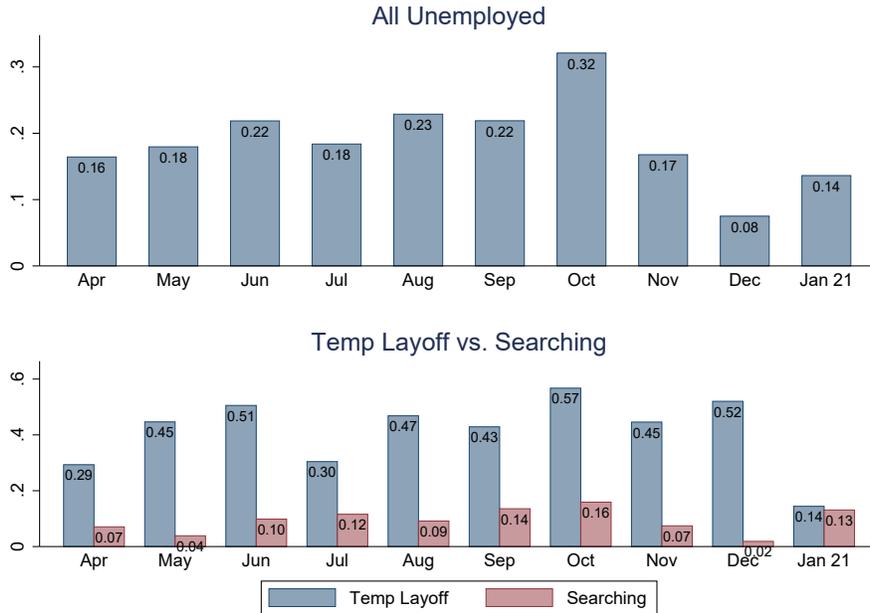


Figure 1: Share of unemployed individuals who report receiving unemployment insurance benefits in the prior two weeks, by month, beginning April 2020.

labor-market re-entrants (such as for child-rearing) who are searching for work would count as unemployed but would not qualify for UI benefits. Thus, the share of unemployed individuals who are eligible to receive benefits depends in part upon what share of the unemployed were recently employed.

Nonetheless, from a policy perspective, it is important to understand what share of individuals who are unemployed are receiving benefits. This is the focus of this memo.

2 Cross-Sectional Evidence

To measure how many currently unemployed individuals are receiving UI benefits, I use the cross-sectional labor market status sample and measure the share of individuals who have received unemployment insurance benefits in the last 14 weeks among individuals who self-report being on temporary layoff or searching for new work. (See Appendix A for details on how this sample is constructed.) In the top panel of Figure 1 I plot the share of unemployed individuals receiving UI by the month of the survey. In April, only 16% of unemployed individuals received benefits in the last two weeks, which increased to 22% by June. The series reaches a high in October of 32%, but

in January 2021 was only 14%.⁵ Across all months, 18% of unemployed individuals received UI benefits in the last two weeks.⁶ Note that the low values in December and January are likely due the expiration of benefits at the end of December. Although benefits were extended at the end of December, the delay in enacting the legislation led millions of UI beneficiaries to temporarily lose coverage. Thus, we should expect these numbers to improve somewhat as states restart these programs.

In the bottom panel of Figure 1 I separate the unemployed into two mutually exclusive groups: individuals who report being on temporary layoff, and individuals who report searching for work. Individuals on temporary layoff have substantially higher UI reciprocity rates, which again increased through the spring to a high of 51% in June. While 52% received benefits in December, that fell to 14% in January 2021. In contrast, among individuals searching for new work very few report receiving benefits, in most months fewer than 10%. Across all months, 38% of individuals on temporary layoff reported receiving UI benefits in the last two weeks, compared with only 9% of those unemployed and searching for new work.

The fact that we see higher reciprocity rates among individuals on temporary layoff is consistent with the structure of the unemployment insurance system, which is designed to insure individuals against job loss through no fault of their own. However, while individuals on temporary layoff dominated the stock of unemployed through the summer, by the fall the balance shifted towards searching individuals (see Forsythe et al. (2020b)). Thus, part of the decline in the aggregate unemployed reciprocity rate in the fall was due to a compositional shift towards searching unemployed.

Reasons for Not Receiving UI Benefits

In Figure 2 I disaggregate individuals not receiving benefits by their reasons for non-employment. The construction of these variables is explained in detail in Appendix A. Note that these questions were added to the survey in June, so these results do not cover the early period of the economic crisis. In the top panel of Figure 2 I again focus on all unemployed: I find that 36% of unemployed individuals report that they are either currently receiving benefits or have received benefits, while an additional 5% have applied but are waiting to be approved. Thus, while only 18% of unemployed individuals reported receiving benefits in the last two weeks, as many as 41% have

⁵The 95% confidence interval for October is 20.1% to 44.0%. The 95% confidence interval for January is 1.46% to 25.8%.

⁶The 95% confidence interval for all months is 15.7% to 20.6%.

received benefits at some point. This discrepancy may be due to delays in qualifying and receiving benefits, which have plagued state UI systems over the pandemic period.

A further 5% applied for benefits, but were either denied or did not receive benefits for other reasons (e.g., they returned to work before qualifying). The remaining 54% of unemployed individuals never applied. Among those who didn't apply, about 3/4 believed they were ineligible, while the remaining 1/4 were either unsure about how to apply or chose not to apply.

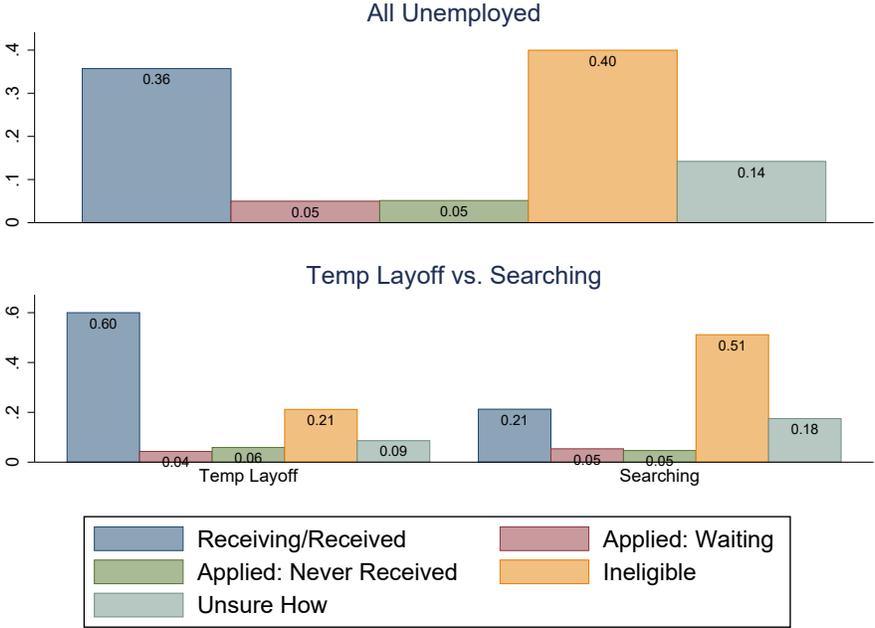


Figure 2: Unemployment insurance status or reason for not receiving benefits for unemployed individuals. Columns are mutually exclusive and sum to 1 for each group. “All Unemployed” consists of those workers on temporary layoff and those who are searching.

These numbers can be compared to data from the 2018 Current Population Survey Supplement on UI Applicants and Benefit Recipients, the most recent fielding of that survey (Bureau of Labor Statistics (2019)). There are a few differences between the samples, specifically in that the CPS Supplement is restricted to individuals who were employed at some point in the last year, while I am unable to make such a restriction in the UAS data. In addition, the CPS measure of unemployment is somewhat narrower than the definition I am able to construct from the UAS data (see Appendix A for more details).

In 2018, only 16.8% of the unemployed received UI benefits over the past year. This is substantially lower than the 36% that I find during the pandemic period, which is consistent with both a larger share of the unemployed being covered by regular UI as well as the expansion of eligibility from the CARES Act. In 2018, only 26% of the unemployed had applied for benefits. Thus, my estimate of 41% from March 2020 through January 2021 is substantially larger than this most recent benchmark data. This is reassuring, as it indicates that the 2020 expansion of coverage and increase in benefits likely did increase reciprocity rates.

In 2018, 60% of those who didn't apply believed they were ineligible, compared with 75% during the pandemic period. Finally, in 2018, only 2/3 of individuals who applied for benefits actually received benefits. In contrast, during the pandemic period 78% report receiving benefits and an additional 11% were waiting for approval. Thus, while many unemployed individuals are not receiving benefits during the pandemic period, UI coverage has expanded substantially when compared to 2018.

In the bottom panel of Figure 2, I again separate the unemployed into those who report being on temporary layoff and those who report searching for new work. Similar to what we saw in Figure 1, individuals on temporary layoff are much more likely to be served by the UI system. 64% of individuals on temporary layoff either are receiving benefits, have received benefits, or have applied for UI benefits. In contrast, only 26% of those searching fall in this category. Both groups report a similar share who applied but did not receive benefits (about 5%), however among the searching unemployed a much larger share report not applying for benefits (69%) compared to those on temporary layoff (30%). 3/4 of the searching unemployed who did not apply believed they were not eligible, while 1/4 were unsure or did not apply for other reasons. A similar fraction (70%) of individuals on temporary layoff who did not apply did so because they believed they were ineligible.

Demographics

In Figure 3, I separate unemployed individuals along several demographic dimensions and again calculate the fraction that report receiving unemployment insurance benefits in the last two weeks. In the top left panel, I separate individuals into non-Hispanic racial categories and Hispanic. Only 11% of Asian workers and only 13% of Black workers reported receiving UI benefits in the last two weeks, compared with over 20% of Hispanic, Mixed race, and White workers.

In the top right panel of Figure 3, I show that female and male workers report receiving UI benefits at similar rates. In the bottom left panel, I show that more educated workers are substantially more likely to receive UI benefits, with only 12% of individuals with a high school degree or less receiving benefits, compared with 23% of individuals with some college education, and 32% of individuals with a 4-year college degree or more. We see a similar relationship with age, with only 12% of individuals under 30 receiving benefits, versus 22% of individuals 30–50, 30% of individuals 50–65, and 21% of individuals 65 and up.

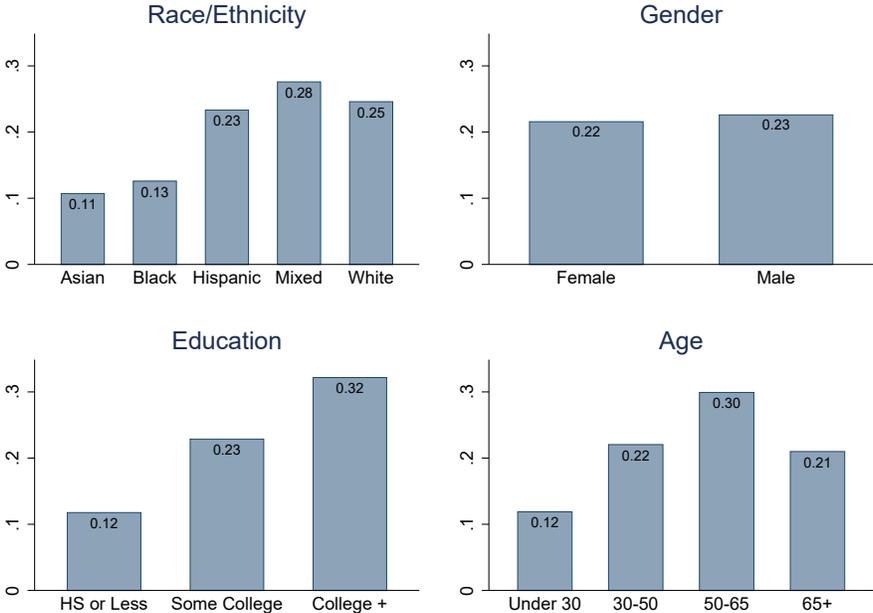


Figure 3: Share of unemployed individuals reporting receiving unemployment insurance benefits in the last two weeks, by demographic categories.

There are several reasons for these disparities. Black workers are more likely than White workers to live in states with historically restrictive state UI systems. Non-white workers, young workers, and less-educated workers all have higher baseline unemployment rates compared with dominant groups (Forsythe & Wu (2020)). This means that for each of these groups, the stock of unemployed is likely to contain more searching and longer-term unemployed who did not recently lose employment and hence do not qualify for UI. Finally, disadvantaged groups are more likely to have difficulties navigating complicated bureaucratic systems, and thus may be less likely to apply or may face discrimination or other barriers to accessing benefits.

I again compare these results to the 2018 CPS Supplement on UI (Bureau of Labor Statistics (2019)). In 2018 Asian workers had the lowest rate of UI reciprocity (11.5%), followed by Hispanic (14.1%), Black (14.2%), with White workers (18.1%). The general pattern is similar in the UAS data, although Hispanic individuals appear to be doing relatively better in the pandemic period compared with 2018. In addition, in 2018, women received benefits at a lower rate than men (15.2% vs. 18.1%), while the estimates from the UAS show much more similar rates.

The 2018 CPS data also shows a strong correlation between education and UI reciprocity, a pattern that holds in the UAS pandemic-era data. Similarly, the CPS shows a strong correlation with age, however, the summarized tables do not allow for the separation of pre-retirement and post-retirement age workers. Interestingly, for workers with a bachelor's degree or higher, the 2018 CPS estimate of 29.6% of unemployed receiving UI is quite close to the 32% from the 2020 UAS data. Similarly, for individuals 55 and up, in 2018 29.2% received UI benefits, compared to my estimate of 30% for those 50–65 during the Covid pandemic. Thus, the UAS Covid data from 2020 is broadly consistent with the demographics of UI reciprocity from the 2018 CPS UI supplement.

Differences by State

In Figure 4, I investigate whether state of residency matters for whether unemployed individuals received benefits in the last two weeks. Due to the small sample size of the UAS data, I cannot provide reliable estimates at the state level. Instead, I group states based on whether they historically provide more or less access to the UI system. In particular, I use the 2019 Unemployment Insurance Reciprocity Rate (UIRR) statistic provided by the Department of Labor. States with a smaller UIRR covered fewer unemployed individuals with UI before the pandemic, while those with a larger UIRR covered relatively more. See the Data Appendix for more details and a list of specific states.

The blue columns in Figure 4 include all individuals who are unemployed. Here we see a clear increase in the share of unemployed individuals who report receiving benefits in the last two weeks based on their state of residency. Only 15% of unemployed individuals in states with a low 2019 UIRR received benefits in the last two weeks, compared with 19% in middle-UIRR states and 32% in high-UIRR states.

In the red and green columns I separate unemployed individuals into those on temporary layoff and those searching for new work. As discussed above, individuals on

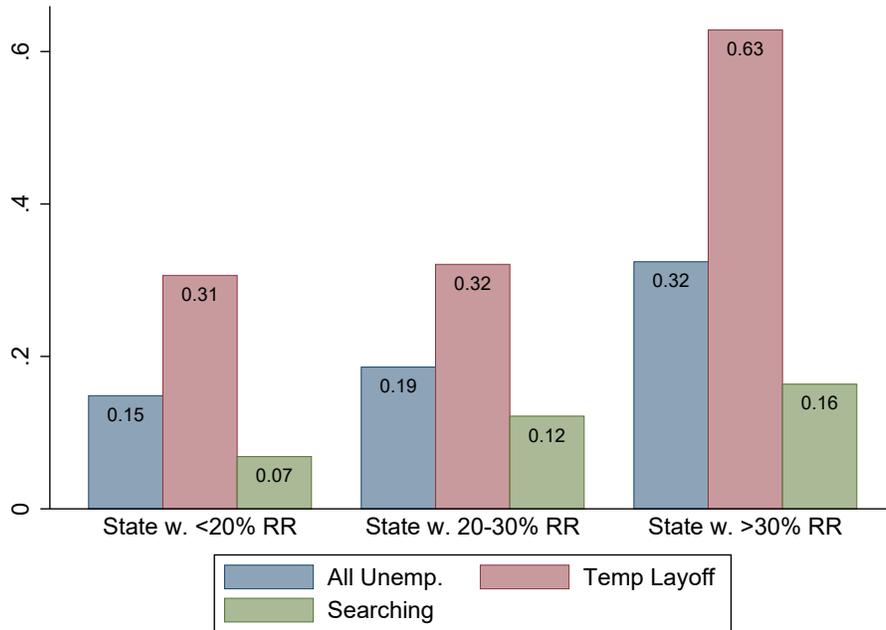


Figure 4: Share of unemployed individuals who report receiving unemployment insurance benefits in the prior two weeks, by the state of residence 2019 UI reciprocity rate.

temporary layoff are more likely to have a work history that provides UI eligibility when compared with those searching. For individuals on temporary layoff, only 31–32% in low and middle-2019-UIRR states received benefits, while 63% did in high-UIRR states. In contrast, among those searching 7% in low-UIRR states received benefits, compared with 12% in middle-UIRR and 16% in high-UIRR states.

These results suggest that even individuals who are likely to be eligible for UI are not receiving benefits, and that state of residency has a strong correlation with whether individuals are able to access UI benefits.

3 Survival Analysis

In this section, I turn to the longitudinal survival analysis sample. This sample identifies individuals who were employed and then transition to non-employment, including 1534 individuals who leave employment. It may include individuals who would not be considered unemployed in the previous section, for instance if the individuals report they have left the labor force. See Appendix A for more details on the sample construction.

It is important to note that there are many reasons individuals who leave employment may not be eligible for UI. For instance, if they left employment voluntarily or if they are an immigrant without work authorization, they are explicitly excluded from UI programs. Thus, we would not expect 100% of individuals who separate from employment to receive benefits.

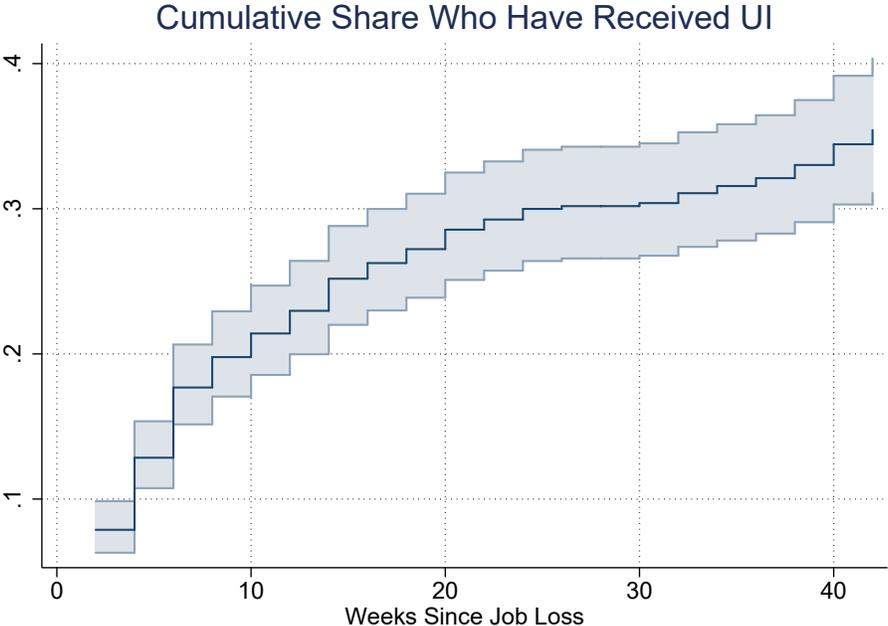


Figure 5: This figure plots the Nelson–Aalen cumulative hazard functions for the share of individuals who left employment who have received UI benefits at some point since exiting employment. The shaded area represents 95% confidence intervals.

I then estimate the cumulative hazard function. I identify the wave in which individuals first report receiving UI in the last 14 days. Figure 5 plots the Nelson–Aalen cumulative hazard function for the full dataset, along with 95% confidence intervals. Although the cumulative hazard function increases rapidly, by 10 weeks since leaving employment only 20% of individuals had received at least one UI check. By 42 weeks after exiting employment, about 1/3 of individuals reported having received UI.

In Figure 6 I separate the sample into the earlier (exit before June) and later (exit after June) periods. The vast majority of layoffs occurred from March through May, thus the early period represents the initial wave of layoffs and the later period collects all separations that occurred subsequently Forsythe et al. (2020b). Those exiting earlier were substantially more likely to have received UI, with 37% receiving benefits by 34

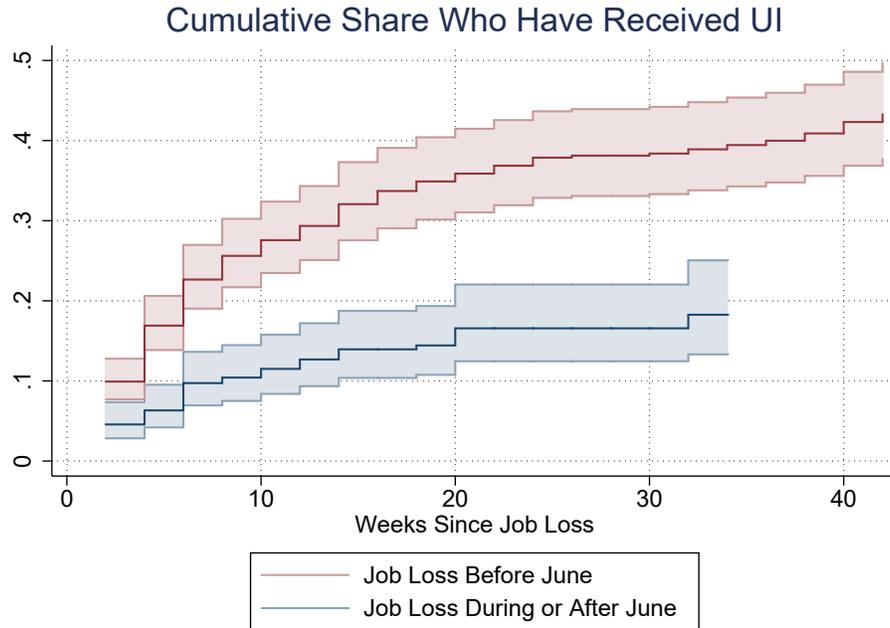


Figure 6: This figure plots the Nelson–Aalen cumulative hazard functions for the share of individuals who left employment who received UI benefits at some point since exiting employment, estimated separately by the date of job exit. The shaded area represents 95% confidence intervals.

weeks after exiting employment, and 40% receiving benefits by 42 weeks. In contrast, for those who left employment during or after June, only 18% received benefits by 34 weeks after exiting employment.

There are several reasons why we might see differences. First, the characteristics of individuals leaving employment may have changed in the later period of the pandemic, with fewer exits that are eligible for UI. Second, anecdotally, claimants have reported that state UI systems have increased scrutiny on individuals claiming via the Pandemic Unemployment Assistance program that was enacted by the CARES Act. This is likely a response to fraud in the system, but could result in making it more difficult for legitimate claimants to receive benefits.

In Figure 7 I separate individuals based on the 2019 UI reciprocity rates (UIRR) for their state of residence, a classification that is described in detail in the Data Appendix. I find that individuals in the middle category (20–30% 2019 UIRR) have a very similar estimated cumulative hazard function to the high category (30% and up), so I combine those two groups for clarity on the graph. Those residing in states with lower 2019 UIRR

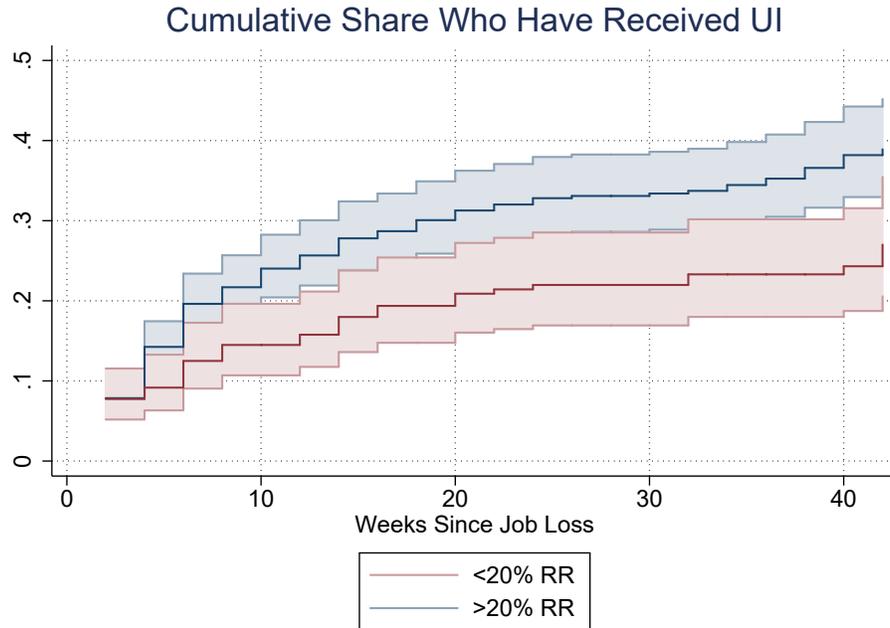


Figure 7: This figure plots the Nelson–Aalen cumulative hazard functions for the share of individuals who left employment who have received UI benefits at some point since exiting employment, separated between those residing in states with more or less than 20% 2019 UIRR. The shaded area represents 95% confidence intervals.

are substantially less likely to have received benefits at each point in the distribution. By 42 weeks post displacement, 33% of individuals in high-UIRR states had received benefits at some point, compared to only 24% in low-UIRR states. Thus, consistent with what we saw in the cross-sectional data, individuals in states that historically insure a lower fraction of the unemployed are significantly less likely to receive UI benefits in during the pandemic period.

4 Conclusions

In this memo, I have shown that many unemployed individuals are not receiving UI benefits during the current Covid pandemic crisis. Many unemployed individuals did not apply, believing they are ineligible. Compared with 2018 data from the CPS, the share of unemployed receiving benefits has increased during the pandemic period, suggesting that the CARES Act expansion was successful in increasing access to UI benefits.

Nonetheless, many unemployed individuals continue to lack access to benefits. In order to provide support to individuals who are unemployed or negatively affected by the pandemic but are outside of the UI system, policymakers should consider additional policies.

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A Data Appendix

I use data from the Understanding America Survey (UAS) Understanding Covid In America Survey from March 1st 2021 through February 17th 2021. This longitudinal data follows approximately 6,000 individuals across 23 waves, with each wave collected approximately every two weeks.⁷

⁷Individuals are invited to respond on a staggered two week schedule and have two weeks to respond. Thus, actual response dates within a wave vary by as much as four weeks.

The UAS Covid survey is self-administered digitally; thus, answers may differ systematically from surveys such as the U.S. Census or the Current Population Survey, which are collected using trained enumerators. In addition, survey participants are compensated for participating. Individuals without access to a computer or mobile device are provided a tablet.⁸

Defining Labor Market Status

There are two portions of the survey that I will use to define labor market status. First, every three months, individuals are asked to update their current demographic characteristics, as well as labor market status. In this part of the questionnaire, individuals self-report whether they are in any of the following statuses: currently working, on sick leave or other leave, unemployed and on temporary layoff, unemployed and looking, retired, disabled, or other not-in-the-labor-force (NILF). Since individuals are allowed to report multiple statuses, I re-assign individuals to a primary status following the Current Population Survey hierarchy (employed, then absent, then on temporary layoff, then unemployed searching, then retired, and then disabled).

It is important to note that UAS Covid measures of unemployment are broader than the official measures derived from the CPS. For individuals who are on temporary layoff, the CPS requires individuals to have a return date or to expect to return within six months. Hence some individuals who appear to be on temporary layoff in the UAS Covid survey might be assigned to searching unemployment or NILF by the CPS questionnaire.

Similarly, CPS enumerators ask individuals who say they are unemployed and searching for work to volunteer what actions they have taken to find a job. Without being prompted, individuals must report activities that are considered “active search” to be classified as unemployed. Active search activities include applying for jobs, contacting employment agencies, or placing ads. Since the UAS Covid survey does not ask individuals what search activities they have recently performed, the searching unemployed category very likely includes individuals who the CPS would consider as NILF.

In addition, in each wave of the UAS survey, individuals are asked a series of questions based on their previous labor market status to identify changes in status. However, due to the structure of the survey, these biweekly variables are unable to reliably differentiate between temporary layoff, searching unemployed, and NILF. Thus,

⁸See <https://uasdata.usc.edu/index.php> for more details on the survey design and administration.

while the biweekly data can be used to identify transitions between employment and non-employment, it does not appear to be well-suited to study more detailed non-employment status.

Due to these data considerations, in this memo I focus on two samples. The first sample is a cross-sectional labor market status sample which is restricted to the subset of respondents each wave that were given the updated labor market status survey. This sample contains 13,086 observations, with approximately 600 individuals per wave. The second sample is a longitudinal sample in which I follow individuals as they move between non-employment and employment every two weeks. This sample contains 102,653 observations, with approximately 4,500 individuals per wave.

	E/pop		Unemp Rate		Temp. Layoff Share of U.		Temp. Layoff Share of Pop.	
	UAS	CPS	UAS	CPS	UAS	CPS	UAS	CPS
Mar	0.66	0.61	0.10	0.04	0.08	0.30	0.006	0.009
Apr	0.58	0.53	0.17	0.14	0.42	0.79	0.050	0.069
May	0.56	0.54	0.16	0.13	0.35	0.73	0.037	0.058
Jun	0.60	0.56	0.14	0.11	0.30	0.59	0.030	0.041
Jul	0.62	0.57	0.15	0.10	0.36	0.56	0.040	0.036
Aug	0.56	0.58	0.16	0.09	0.36	0.45	0.039	0.024
Sep	0.59	0.58	0.14	0.08	0.28	0.35	0.027	0.016
Oct	0.62	0.59	0.15	0.07	0.40	0.27	0.045	0.011
Nov	0.54	0.59	0.15	0.06	0.25	0.26	0.025	0.010
Dec	0.63	0.59	0.13	0.06	0.11	0.30	0.010	0.012
Jan 21	0.57	0.58	0.14	0.07	0.39	0.30	0.035	0.012
Average	0.59	0.57	0.14	0.09	0.30	0.45	0.031	0.027
Gap	0.02		0.06		-0.14		0.004	

Table A.1: This table compares the 2020 and 2021 monthly seasonally unadjusted CPS statistics for ages 18+ with the statistics derived from the UAS survey. Average is the average across months and the gap is the difference in the average.

In Table A I show how the UAS cross-sectional sample compares with the CPS sample from March 2020 to January 2021. The UAS survey is restricted to individuals 18 and older, so I also restrict the CPS data to individuals 18 and over. In the first two columns, we see that the UAS sample does a good job of tracking the employment to population ratio, with an average monthly difference of 2 percentage points. However, for the reasons discussed above, the UAS classifies more individuals as unemployed and fewer individuals as not-in-the-labor-force than the CPS. On average, the UAS has a

6 percentage point larger unemployment rate compared to the non-seasonally adjusted CPS rate. Moreover, these additional unemployed individuals appear to be much more likely to be classified as searching unemployed, as I show the temporary layoff share of the population is very similar between the UAS and CPS samples (3.1% versus 2.7%). This is consistent with individuals who are passively searching for work being classified as NILF by the CPS and classified as searching unemployed in the UAS.

Given the structure of the unemployment insurance system, individuals who are on temporary layoff are much more likely to be eligible for UI. Thus, by including more individuals in the searching unemployment category, the UAS sample is likely to have a lower “true” UI eligibility rate than a comparable CPS sample. Thus, we can expect that the share of unemployed receiving UI will be lower in this sample than it would be if it was possible to do such an exercise using CPS data. However, since these additional searching unemployed are individuals who self-identify as unemployed and searching for work, the UAS measure is in line with other broader measures of unemployment rates.

While the UAS Covid data contains three samples (nationally representative, California, and Los Angeles county) for this memo I focus on the nationally representative sample. All estimates are weighted using provided sampling weights, which are constructed to match Current Population Survey estimates of demographics of the adult nationwide population.

Measuring Unemployment Insurance

Each wave, the UAS Covid survey asks individuals whether they received UI benefits in the last 14 days. This question is asked regardless of the individual’s employment status, and thus can be used to identify all individuals receiving UI.

In addition, after wave 7 (June 10th), individuals that are not receiving UI are asked if they have applied for UI since February 2020. If they report that they have applied but did not receive benefits in the last 14 days, they are asked why. Possible responses are:

1. My application was approved but I haven’t been paid yet.
2. My application was rejected.
3. I’m still waiting for my application to be approved.
4. I am receiving benefits but have not been paid in the past fourteen days.

5. I went back to work.
6. I am still being paid by an employer.
7. I did receive benefits before at some point.

If they report they never applied for benefits, they are asked why. Possible responses are:

1. I am currently working.
2. My former employer has not made me eligible.
3. I am not eligible for other reasons.
4. I am unsure how to apply.
5. I decided not to apply for other reasons.
6. I am retired.
7. I receive disability or Supplemental Security Income (SSI).
8. I am temporarily on leave from my job, on summer break, or have seasonal work.

I use these measures to construct 5 categories of UI:

1. Are receiving, have received, or will receive benefits
2. Applied and are still waiting for approval
3. Applied and were rejected or never received
4. Did not apply because were ineligible
5. Did not apply because were unsure how to apply or chose not to

These categories are used in Figure 2.

Defining State Categories

To group states with similar Unemployment Insurance benefits, I use the 2019 unemployment insurance reciprocity rate (UIRR) as calculated by the DOL ETA.⁹ I use three groups with roughly equal numbers of states:

1. under 20% UIRR: Arizona, Florida, Georgia, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Nebraska, New Hampshire, New Mexico, North Carolina, South Dakota, Tennessee, Utah, Virginia
2. between 20% and 30% UIRR: Alabama, Alaska, Arkansas, Colorado, Delaware, DC, Idaho, Maine, Maryland, Michigan, Missouri, Ohio, Oklahoma, South Carolina, Texas, Washington West Virginia, Wisconsin, Wyoming
3. UIRR over 30%: California, Connecticut, Hawaii, Illinois, Iowa, Massachusetts, Minnesota, Montana, Nevada, New Jersey, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Vermont

B Understanding Reciprocity Rates

The traditional measure of UI reciprocity rate (UIRR) is the number of individuals receiving UI benefits divided by the number of unemployed, which provides an estimate of what fraction of the unemployed are receiving UI benefits. Over the last 20 years, the nationwide UIRR has ranged from 25 to 40%, with the highest rates occurring during recessions, when the mix of unemployed tilts toward insured separations and away from new labor market entrants who are not eligible for UI.¹⁰ Since unemployment insurance rules differ across states, the UIRR varies dramatically across states. For instance, in 2019 the UIRR ranged from 9% in North Carolina to 57% in New Jersey. In 2020, UIRR increased across all states, but ranged from 28% in South Dakota to 126% in Georgia. Note, however, that this measure only includes regular programs, so does not include individuals who received benefits through the CARES Act expansion.

However, there are important conceptual differences between this traditional measure and the individual-level statistics that I construct. The UIRR is simply a ratio of

⁹See the DOL ETA UI Chartbook for Reciprocity Rates by State <https://oui.doleta.gov/unemploy/chartbook.asp>

¹⁰See the DOL ETA UI Chartbook for Reciprocity Rates by State <https://oui.doleta.gov/unemploy/chartbook.asp>

aggregate statistics. Thus if many individuals on UI are not counted as unemployed in the CPS then the UIRR will be an over-count of actual individual-level benefit rates. This was particularly likely during the Covid-19 Pandemic period, during which many individuals employed in April left employment and were classified as out-of-the-labor-force. Although individuals who receive UI typically need to demonstrate they are searching for work, this differs by state and does not necessarily correspond to the definition of active search used by the CPS. In addition, individuals can work part-time and receive a partial UI check. For both reasons the ratio of total UI beneficiaries to the stock of unemployed is an over-estimate of the share of unemployed that are receiving UI benefits.

In contrast, the measure I construct from the UAS Covid data uses self-reported UI receipt data. This may result in an undercount compared to the official UI statistics if individuals are mistaken about whether they received benefits in the last 14 days. In addition, as discussed in Appendix A, the UAS Covid measures of unemployment are somewhat broader than the official CPS definitions, which could also lead to an undercount if individuals who are on temporary layoff without a return date or who are passively searching are less likely to qualify for UI. The UAS Covid sample is much smaller than the CPS. Although the UAS Covid sample is constructed to be nationally representative, if the survey happens to include individuals who are less likely to be eligible for UI or to apply for UI it will under-estimate the true national UIRR. In addition, it is unclear how delays in the receipt of UI benefits would affect either the official UIRR or the rate I construct from the UAS Covid data.

We can compare the share of individuals in the 2018 CPS UI supplement who reported receiving UI benefits in the last year with the traditional UIRR calculated by the Department of Labor. In 2018, 16.8% of unemployed individuals who responded to the CPS supplement reported receiving benefits, versus a 24% nationwide UIRR from the DOL. Thus, in 2018, the individually measured rate was approximately 30% smaller than the ratio of UI recipients to the stock of unemployed.

Recently, a new report from the California Policy Lab extended the traditional UIRR calculation to compare the stock of regular state UI programs to an expanded set of unemployed or underemployed workers during the pandemic period Bell et al. (2021). This report finds several important patterns in UIRR in California. They estimate the UIRR increased dramatically, from around 20% in the first quarter of 2020, to around 60% in the second quarter, and 80% by the third quarter. By December 2020, they estimate a UIRR of 90%.

This number is substantially higher than my estimates that 18% of unemployed individuals who received benefits in the last two weeks, and 41% who received benefits at some point or are currently waiting for approval. However, as discussed above, individual-based estimates of UI reciprocity systematically produce smaller numbers than the aggregate UIRR ratio.

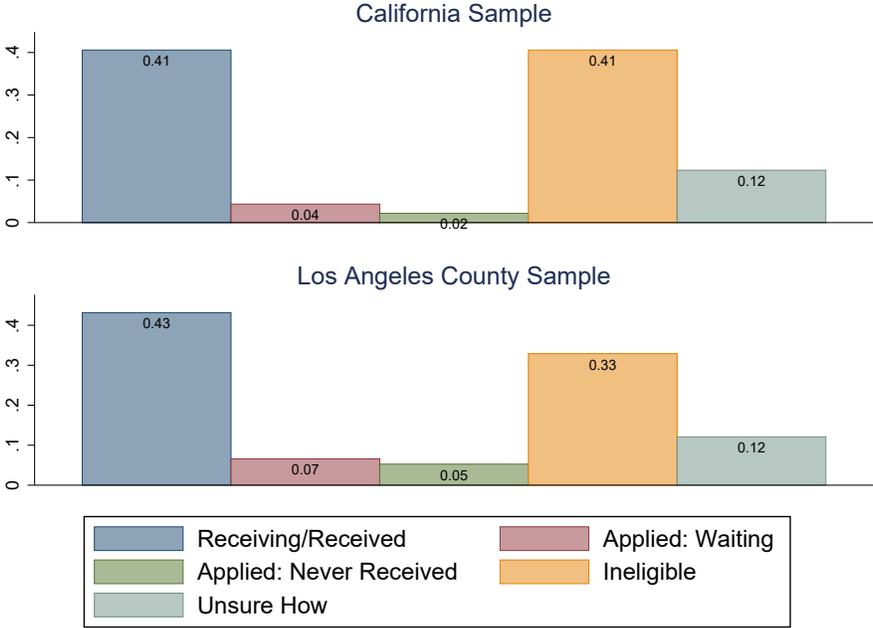


Figure B.1: Unemployment insurance status or reason for not receiving benefits for unemployed individuals. Columns are mutually exclusive and sum to 1 for each group. The top figure is estimated using the UAS California sample, while the bottom figure is estimated using the UAS Los Angeles County sample.

To better understand the differences between these methodologies, I reproduce Figure 2 using two additional survey samples conducted by the UAS: a representative California sample and a representative Los Angeles County sample. This includes data from June through January. Figure B.1 shows that 45% of the California sample reports having received benefits or that they are currently waiting for approval, and 50% of the LA County sample reports the same. Thus, both estimates are larger than what I report in Figure 2 for the nationwide sample. Nonetheless, this is still substantially smaller than the UIRR estimates from the CA Policy Lab. Thus, while some of the variation is certainly due to differences in program administration between states, much of the gap remains to be explained.

Nonetheless, it is important to emphasize that, methodologically, we should expect to find smaller estimates of the share of unemployed receiving benefits when using individual-level data compared with an aggregate-level estimate using the ratio of UI recipients to the stock of unemployed. For instance, if we use the 30% shrinkage estimate I constructed above by comparing the DOL UIRR to the CPS UI Supplement estimates, the DOL UIRR estimate of 0.78 in 2020 would correspond to an individual-level estimate of 0.56.