

# Chicago Fed Letter

## How do unemployment benefits relate to job search behavior?

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We examine the relationship between unemployment insurance and job search using data from 2013 through 2019. Our research shows that the unemployed exert a high level of effort to find work. This is especially true for those receiving unemployment insurance benefits. Those who have exhausted their unemployment benefits search less intensely for work, but are also willing to accept work that pays considerably less than their prior job.

Economists and policymakers have debated the relationship between unemployment insurance (UI) benefits and job search for decades. In the U.S., workers who lose their jobs are typically eligible for up to six months of UI benefits. The generosity of these benefits varies widely by state, but on average, they pay individuals about 35% of their previous earnings until they are either able to find new work or their benefit eligibility period runs out. The debate around UI benefits centers on just how generous these benefits should be. The issue is that benefits that are more

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generous may reduce an individual's incentive to look for new work, causing them to remain unemployed for longer than they otherwise would be. There is evidence that when the government has extended the UI eligibility period—for example, during a recession—

unemployment durations increase somewhat, even after controlling for things like an individual's demographic and labor market characteristics and the state of the overall economy.<sup>1</sup> There is also an issue of how an individual's search and job acceptance behavior changes the longer they are unemployed. One concern is that individuals lose valuable skills and work experience over time. Another is that employers perceive the long-term unemployed as less employable, leaving these individuals with fewer and lower-quality job offers. There is also the concern that individuals become discouraged as their unemployment spell persists, and search less intensely as a result.<sup>2</sup>

These concerns are important because they can lead to *hysteresis* in the labor market—which is a situation where unemployment becomes a near-permanent state for many individuals. At the same time, advocates of unemployment benefits point out that they provide an important means for individuals to pay their bills and maintain some subsistence level of consumption. Research by Raj Chetty underscores how UI benefits in fact provide those who need it most with cash for their basic needs.<sup>3</sup> We are particularly interested in understanding the relationship between unemployment benefits and job search now, given the sharp increase in unemployment during the ongoing Covid-19 crisis and the high levels of additional UI benefits available as part of the recent federal Coronavirus Aid, Relief, and Economic Security (CARES) Act.<sup>4</sup>

In this article, we study the relationship between UI benefit receipt and job search using data from the Job Search supplement of the New York Fed's *Survey of Consumer Expectations* (SCE). The New York Fed has administered the supplement annually to about 1,200 individuals each year since 2013. The Job Search supplement contains extensive information on the employment situation, job search behavior, and job search outcomes for all individuals in the survey. We use a sample of the SCE Job Search supplement that pools together all years of data between 2013 and 2019.<sup>5</sup> Consequently, our sample period covers the recovery and expansion period between the Great Recession and the Covid-19 crisis. We show that only a fraction of the unemployed collect UI benefits, but those that do tend to search somewhat more intensely than other unemployed individuals. At the same time, all unemployed individuals search more intensely than either the employed or those out of the labor force.<sup>6</sup> In addition, search effort drops substantially once individuals exhaust their UI benefits. Those who exhaust their benefits also tend to be willing to accept, and are often offered, jobs that pay less than their previous positions, on average. One should be cautious with a causal interpretation, however, because we also find evidence that those collecting UI benefits may differ from those who do not collect benefits along unobservable dimensions. Specifically, those who receive UI benefits tend to have had higher-paying jobs than those who never apply for benefits, suggesting that they may be higher-skilled workers, on average. One should also be cautious in interpreting the magnitudes of some of our results—the SCE Job Search sample is relatively small, so some of our estimates are imprecise. The small sample size also limits our ability to split the data into finer groups than we report here. Finally, while we do not have direct evidence from the SCE Job Search supplement on what job search behavior looks like during an economic downturn, other studies suggest that individuals are more likely to receive UI benefits and search for work more intensely during a downturn.<sup>7</sup> Thus, during the current economic climate, one could expect a greater share of the unemployed to receive UI benefits and to search more intensely for work.

## Who receives unemployment benefits?

We begin with an analysis of who receives UI benefits. Figure 1 reports the demographic and labor market characteristics of all nonemployed individuals by their UI “take-up” status. That is, we split individuals by whether they are currently receiving UI benefits, were collecting but have exhausted their UI benefits, or did not collect UI benefits. Those that are either collecting or have exhausted their UI benefits are more likely to be male and college educated. Those who are currently receiving benefits tend to be younger, while those who have exhausted benefits are more likely to be nonwhite. There are also notable differences in labor market characteristics by UI receipt. Those who are either collecting or have exhausted their UI benefits previously had higher-paying jobs and currently have higher *reservation wages*, meaning that they require a higher hourly wage in order to accept a new job. Those currently receiving benefits have also been out of work for significantly less time than the other groups. This is expected, though, since UI benefits last only six months in the absence of any special policy that extends the eligibility period. Those currently receiving benefits also have a reservation wage similar to the hourly wage of their previous job, while those who either exhausted or did not collect benefits have a reservation wage below the hourly wage of their previous job. This is consistent with the idea that people are willing to accept lower-quality jobs the longer they are unemployed, either because they realize they were too optimistic about the quality of available jobs or because they become discouraged over time.<sup>8</sup> The finding that those who are currently collecting or have exhausted their UI benefits earned higher wages before becoming unemployed suggests that whether someone decides to collect UI benefits may depend on other characteristics, such as a worker's experience and job-specific skills.

## Unemployment benefits and job search effort

Next, we examine job search effort by UI benefit take-up and labor force status. Our results are in figure 2. We measure search effort two ways: the number of hours spent searching for work in the past seven days and the number of job applications sent in the past four weeks. The two measures

## 1. Characteristics of nonemployed by incidence of unemployment insurance (UI) receipt

	Currently receiving UI benefits	Exhausted UI benefits	All others
Demographics (%)			
Male	46.4 (6.8)	45.4 (5.3)	39.8 (1.5)
Nonwhite	24.6 (5.9)	34.3 (5.0)	26.8 (1.3)
College degree	34.9 (6.5)	22.2 (4.4)	20.3 (1.2)
Age 18 to 39	33.9 (6.5)	16.4 (3.9)	25.2 (1.3)
Age 40 to 54	28.6 (6.2)	31.6 (4.9)	23.3 (1.3)
Age 55+	37.5 (6.7)	52.0 (5.3)	51.5 (1.5)
Labor market characteristics			
Median prior wage (2019 dollars)	19.90 (2.31)	18.20 (6.01)	14.64 (2.49)
Median months since last job	5.0 (0.5)	29.0 (4.7)	36.0 (2.2)
Median reservation wage (2019 dollars)	19.69 (1.87)	15.17 (4.65)	12.92 (1.47)
Observations	54	90	1,112

NOTES: Estimates are for all nonemployed individuals age 18 to 64 classified either as unemployed or out of the labor force at the time of the survey. Standard errors are in parentheses.

SOURCE: Authors' calculations based on data from the 2013 to 2019 Job Search supplement to the *Survey of Consumer Expectations*.

## 2. Job search effort by labor force status and incidence of unemployment insurance receipt

	Observations	Hours spent searching in past seven days	Applications sent in past four weeks
Employed			
All	4,589	1.1 (0.1)	1.0 (0.1)
Unemployed			
Currently receiving benefits	43	14.1 (1.3)	12.6 (1.6)
Exhausted benefits	32	12.2 (2.2)	9.7 (2.1)
All others	121	12.4 (1.3)	9.0 (1.1)
Out of the labor force			
Receiving or exhausted benefits	69	1.3 (0.6)	1.5 (0.7)
All others	991	0.5 (0.1)	0.4 (0.1)
All nonemployed			
Currently receiving benefits	54	11.1 (1.3)	10.7 (1.4)
Exhausted benefits	90	4.7 (1.0)	3.7 (0.9)

NOTES: Estimates are for all individuals age 18 to 64 classified in each labor force category. Standard errors are in parentheses.

SOURCE: Authors' calculations based on data from the 2013 to 2019 Job Search supplement to the *Survey of Consumer Expectations*.

give similar results. Regardless of UI take-up, the unemployed look for work much more intensely than either the employed or those out of the labor force. They spend over 12 hours per week searching and send over nine job applications per month. In contrast, the employed spend about one hour per week searching and send one application per month, while those out of the labor force exert about half the search effort of the employed. Among the unemployed, those currently receiving UI benefits search somewhat more intensely than those who have exhausted their benefits or those who did not collect benefits. Among those out of the labor force, those who are currently receiving or have exhausted their benefits search more than others, but the overall search intensity for both groups is much lower than the search intensity of the unemployed. We also group all nonemployed by whether they are currently collecting or have exhausted their UI benefits. Those currently collecting benefits search more than twice as intensely as those who have exhausted their benefits. This is consistent with recent research by Ioana Marinescu and Daphné Skandalis, who find a similar pattern among the unemployed in France.<sup>9</sup>

## **Unemployment benefits and job search outcomes**

Finally, we examine how job search outcomes vary with UI benefit take-up and labor force status. We focus on how frequently individuals receive an employer contact, including a job offer, and the average hourly wage associated with any job offer received. Figure 3 shows that the unemployed are at least twice as likely to receive an employer contact or job offer as the employed or those out of the labor force. Keep in mind, though, that the unemployed search about 12 times more intensely than these other groups, so accounting for their search effort suggests that these efforts yield a relatively low number of job offers. The employed and those out of the labor force who do not collect UI benefits also receive significantly better job offers, in terms of the potential wage. Among the unemployed, those who are currently collecting or have exhausted their UI benefits receive somewhat better job offers than those who never collected benefits, in terms of the hourly wage offered. If we group the nonemployed together and focus on those who are either collecting or have exhausted their benefits, we find that the two groups have a similar likelihood of receiving a job offer, but those currently collecting benefits receive somewhat better job offers, on average. Interestingly, the average wages of job offers for each group, shown in figure 3, are comparable to their reservation wages reported in figure 1. Relative to their wages in their previous jobs, though, those currently collecting benefits tend to receive job offers that are comparable to their previous job, while those who have exhausted their UI benefits tend to receive job offers that pay substantially below their previous job. It is not clear from the evidence, however, if this is because the quality of job offers declines the longer an individual searches for work or because those who exhaust their benefits are inherently different from those who find work before exhausting their benefits. The fact that individuals collecting or exhausting their benefits had similar wages in their previous jobs tends to favor the hypothesis that job offer quality declines with unemployment duration.<sup>10</sup>

## **Conclusion**

This article documents the relationship between the take-up of UI benefits and job search. We find that, among the nonemployed, those collecting UI benefits are more likely to be male and more likely to have a college degree. They are also more likely to have separated from higher-paying jobs, suggesting that these individuals' skills differ from those of other workers in ways that are unobservable in the data. Nevertheless, we find that those currently receiving UI benefits search intensely for new work, and their effort appears to be somewhat greater than that of the unemployed not receiving benefits. At the same time, once individuals exhaust their benefits, their search effort drops precipitously. Finally, those collecting UI benefits tend to receive better job offers than those who have exhausted their benefits. This may be because the quality of job offers declines the longer an individual is unemployed. Regardless, both groups receive poorer offers than the employed or those currently out of the labor force.

### 3. Job search outcomes by labor force status and incidence of unemployment insurance receipt

	Search outcomes in the past four weeks		
	Mean employer contacts received	Percent with a job offer	Mean job offer hourly wage (\$)
Employed			
All	0.9 (0.1)	11.8 (0.5)	23.70 (1.22)
Unemployed			
Currently receiving benefits	1.3 (0.5)	13.6 (5.3)	18.33 (4.75)
Exhausted benefits	3.4 (1.4)	28.4 (8.1)	17.98 (4.62)
All others	2.1 (0.5)	28.2 (4.1)	14.78 (1.80)
Out of the labor force			
Receiving or exhausted benefits	1.2 (0.5)	10.5 (3.7)	15.11 (1.96)
All others	0.2 (0.04)	7.2 (0.8)	23.97 (2.24)
All nonemployed			
Currently receiving benefits	2.4 (0.8)	11.4 (4.4)	18.88 (4.23)
Exhausted benefits	1.3 (0.5)	17.0 (4.0)	15.76 (2.17)

NOTES: Estimates are for all individuals age 18 to 64 classified in each labor force category. Standard errors are in parentheses.

SOURCE: Authors' calculations based on data from the 2013 to 2019 Job Search supplement to the *Survey of Consumer Expectations*.

These results challenge the notion that collecting unemployment benefits reduces job search. Those collecting UI benefits actually search the hardest among all the groups we studied. If anything, search effort declines once individuals exhaust their benefits. Furthermore, individuals collecting benefits tend to receive better job offers than those who are not collecting benefits. In contrast, those who exhaust their benefits both receive and are willing to accept lower-paying job offers, suggesting that UI benefit exhaustion may have detrimental effects on employment outcomes.

#### Notes

<sup>1</sup> Early examples of these studies include those by Lawrence F. Katz and Bruce D. Meyer, 1990, "Unemployment insurance, recall expectations, and unemployment outcomes," *Quarterly Journal of Economics*, Vol. 105, No. 4, November, pp. 973–1002, Crossref, <https://doi.org/10.2307/2937881>, and Bruce D. Meyer, 1990, "Unemployment insurance and unemployment spells," *Econometrica*, Vol. 58, No. 4, July, pp. 757–782, Crossref, <https://doi.org/10.2307/2938349>. Recent studies that followed the Great Recession find similar results. See, for example, Jesse Rothstein, 2011, "Unemployment insurance and job search in the Great Recession," *Brookings Papers on Economic Activity*, Fall, pp. 143–213, Crossref, <https://doi.org/10.1353/eca.2011.0018>; Ioana Marinescu, 2017, "The general equilibrium impacts of unemployment insurance: Evidence from a large online job board," *Journal of Public Economics*, Vol. 150, June, pp. 14–29, Crossref, <http://dx.doi.org/10.1016/j.jpubeco.2017.02.012>; and Scott R. Baker and Andrey Fradkin, 2017, "The impact of unemployment insurance on job search: Evidence from Google search data," *Review of Economics and Statistics*, Vol. 99, No. 5, December, pp. 756–768, Crossref, [https://doi.org/10.1162/REST\\_a\\_00674](https://doi.org/10.1162/REST_a_00674).

<sup>2</sup> Some recent research underscores these concerns. For example, Kory Kroft, Fabian Lange, and Matthew Notowidigdo find that a randomized group of individuals with longer employment gaps on their resume was less likely to receive an employer callback. Alan Krueger and Andreas Mueller find that the amount of job applications from UI recipients declines the longer they remain unemployed. See Kory Kroft, Fabian Lange, and Matthew J. Notowidigdo, 2013, "Duration dependence and labor market conditions: Evidence from a field experiment," *Quarterly Journal of Economics*, Vol. 128, No. 3, August, pp. 1123–1167, Crossref, <https://doi.org/10.1093/qje/qjt015>; Alan B. Krueger and Andreas Mueller, 2010, "Job search and unemployment insurance: New evidence from time use data," *Journal of Public Economics*, Vol. 94, Nos. 3–4, April, pp. 298–307, Crossref, <https://doi.org/10.1016/j.jpubeco.2009.12.001>; and Alan B. Krueger and Andreas Mueller, 2011, "Job search, emotional well-being, and job finding in a period of mass unemployment: Evidence from high-frequency longitudinal data," *Brookings Papers on Economic Activity*, Spring, pp. 1–81, Crossref, <https://doi.org/10.1353/eca.2011.0001>.

- <sup>3</sup> See Raj Chetty, 2008, “Moral hazard versus liquidity and optimal unemployment insurance,” *Journal of Political Economy*, Vol. 116, No. 2, April, pp. 173–234. Crossref, <https://doi.org/10.1086/588585>
- <sup>4</sup> More details about the benefits available under the CARES Act available online, <https://home.treasury.gov/policy-issues/cares>.
- <sup>5</sup> Our study uses a sample of individuals aged 18–64 pooled across the 2013–19 Job Search surveys. R. Jason Faberman, Andreas I. Mueller, Ayşegül Şahin, and Giorgio Topa, 2017, “Job search behavior among the employed and non-employed,” National Bureau of Economic Research, working paper, No. 23731, August, Crossref, <https://doi.org/10.3386/w23731>, provide extensive details on the survey.
- <sup>6</sup> People are classified as unemployed if they are out of work and either on temporary layoff or have actively looked for work within the last four weeks and are available to start a new job. If they are out of work but do not meet those criteria, they are considered to be out of the labor force.
- <sup>7</sup> See Bart Hobijn and Ayşegül Şahin, 2011, “Do initial claims overstate layoffs?,” *FRBSF Economic Letter*, Federal Reserve Bank of San Francisco, No. 2011-04, February 7, available online, <https://www.frbsf.org/economic-research/publications/economic-letter/2011/february/claims-layoffs-overstated/>, for evidence on UI benefit take-up rates over time, and Toshihiko Mukoyama, Christina Patterson, and Ayşegül Şahin, 2018, “Job search behavior over the business cycle,” *American Economic Journal: Macroeconomics*, Vol. 10, No. 1, January, pp. 190–215, Crossref, <https://doi.org/10.1257/mac.20160202>, for evidence on job search effort over time.
- <sup>8</sup> There is a long literature on the relationship between reservation wages, unemployment duration, and UI benefit take-up going back to at least Nicholas M. Kiefer and George R. Neumann, 1979, “An empirical job-search model, with a test of the constant reservation-wage hypothesis,” *Journal of Political Economy*, Vol. 87, No. 1, February, pp. 89–107, Crossref, <https://doi.org/10.1086/260741>, and Martin Feldstein and James Poterba, 1984, “Unemployment insurance and reservation wages,” *Journal of Public Economics*, Vol. 23, Nos. 1–2, February–March, pp. 141–167, Crossref, [https://doi.org/10.1016/0047-2727\(84\)90070-7](https://doi.org/10.1016/0047-2727(84)90070-7). Recent evidence by Alan Krueger and Andreas Mueller similarly finds that individual reservation wages fall with the duration of search, but only modestly. See Alan B. Krueger and Andreas I. Mueller, 2016, “A contribution to the empirics of reservation wages,” *American Economic Journal: Economic Policy*, Vol. 8, No. 1, February, pp. 142–179, Crossref, <https://doi.org/10.1257/pol.20140211>; a related study is Thomas Le Barbanchon, Roland Rathelot, and Alexandra Roulet, 2019, “Unemployment insurance and reservation wages: Evidence from administrative data,” *Journal of Public Economics*, Vol. 171, March, pp. 1–17, Crossref, <https://doi.org/10.1016/j.jpubeco.2017.05.002>.
- <sup>9</sup> See Ioana Marinescu and Daphné Skandalis, 2019, “Unemployment insurance and job search behavior,” University of Pennsylvania, working paper, revised December 17 (originally issued November 18, 2019). Crossref, <http://dx.doi.org/10.2139/ssrn.3303367>
- <sup>10</sup> The notion that those who exhaust their benefits, and therefore have been unemployed longer, receive poorer job offers is also consistent with the study by Kroft, Lange, and Notowidigdo (2013).

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