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REPORT

FINAL REPORT

Additional Unemployment Compensation Benefits During the Great Recession: Recipients and Their Post-Claim Outcomes

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ABSTRACT

This report examines expansions to the unemployment compensation system that followed the onset of the Great Recession. Before the recession, eligible workers losing a job could collect up to 26 weeks of unemployment insurance (UI) benefits in most states. Near the end of 2009, up to 99 weeks were available in high-unemployment states through the UI program, the Emergency Unemployment Compensation Act of 2008 (EUC08) program, and the Extended Benefits (EB) program. Our main analysis used administrative and survey data on 2,122 recipients in 12 states. EUC08/EB benefits were collected by 45 percent of the UI recipients we studied, particularly those from groups that historically faced employment barriers. Each additional week of available benefits was associated with an increase of 0.08 to 0.17 weeks in the length of initial joblessness and larger reductions in the total time employed over the three years following the quarter of recipients' initial UI claims.

Key words: unemployment insurance (UI), Extended Benefits (EB), Emergency Unemployment Compensation Act of 2008 (EUC, EUC08), American Reinvestment and Recovery Act of 2009 (ARRA), Federal Additional Compensation (FAC), potential duration of benefits, weekly benefit amounts, Great Recession, reemployment, earnings, labor force participation

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EXECUTIVE SUMMARY

The unemployment compensation (UC) system in the United States cushions workers and their families against the financial hardships of unemployment. It expands during periods of high unemployment, providing additional benefits to eligible workers who need extra time to obtain a job. The Great Recession, officially lasting from December 2007 to June 2009, was characterized by the longest average unemployment durations seen since World War II. Eligible workers who lost their jobs during the recession could collect benefits through three programs:

1. The unemployment insurance (UI) program, which typically replaces a portion of eligible recipients' earnings for up to 26 weeks during both recessions and nonrecessionary periods
2. The Extended Benefits (EB) program, a permanent program that "triggers on" automatically to provide up to 13 or 20 added weeks of UC benefits in states with relatively high unemployment rates
3. The Emergency Unemployment Compensation Act of 2008 (EUC08) program, which was extended and expanded by the American Recovery and Reinvestment Act of 2009 (ARRA) and other legislation. The EUC08 program eventually provided up to 53 more weeks of benefits; the number of additional weeks available differed by state depending on the unemployment rate, although some EUC08 benefits were available in every state.

The 99 weeks of benefits available in some states through the UI, EB, and EUC08 programs combined represents the longest potential duration of benefits in the history of the UC system.

This report is part of a study commissioned by the U.S. Department of Labor (DOL) to assess the EUC08 program and other UC-related provisions of the ARRA. A previous report (Mastri et al. 2015) examined states' decisions to adopt provisions expanding access to UC benefits in response to ARRA incentives. The primary focus in this report is on increases in the number of weeks of benefits available to recipients through the EUC08 program and greater EB availability related to ARRA funding. In addition, we study ARRA provisions that enhanced the monetary value of UC benefits through direct payments and income tax relief.

A. Research design

We address two main sets of research questions about the additional UC benefits available to recipients who lost jobs during the Great Recession:

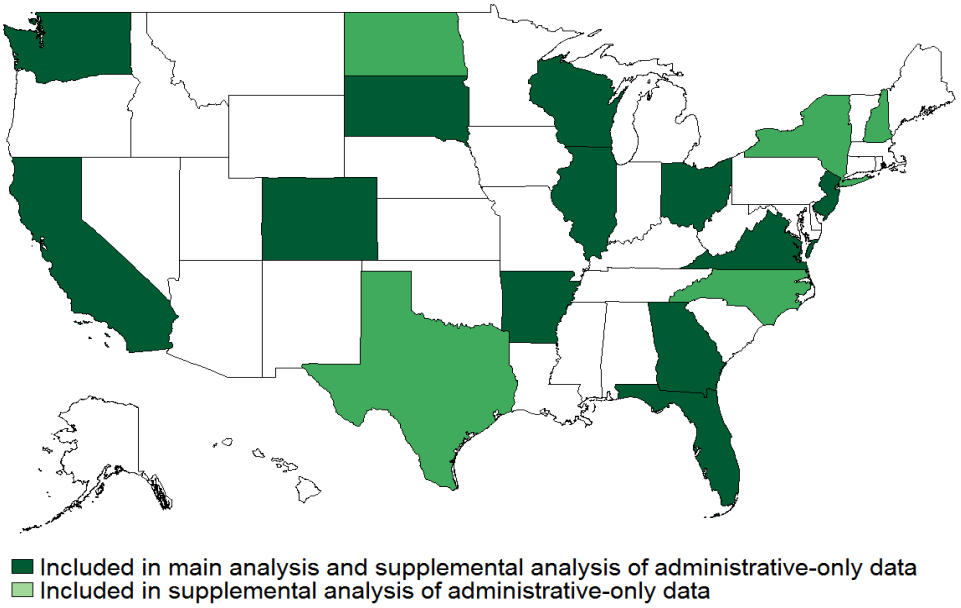
1. Who collected EUC08/EB benefits and how did they fare?
2. How was the availability of additional UC benefits—both additional weeks of benefits and additional dollars per week—related to recipients' outcomes?

To answer these questions, we collected administrative and survey data about the characteristics, benefit collection patterns, and subsequent outcomes of UC recipients.

Our main analysis uses a combination of administrative and survey data on approximately 2,100 recipients who began receiving UI benefits between January 2008 and September 2009 in 12 states. The administrative data include information about recipients' characteristics, pre-claim earnings, UC benefit collection, and employment in UI-covered jobs for three years after the

calendar quarter of the initial UI claim. The survey provides information about employment at the interview date, which was four to six years after recipients started collecting UI benefits, and about financial hardships since the initial UI claim date. The survey was fielded in 12 states that provided the necessary administrative data by late 2013; this subset of states had higher average unemployment rates during the recession and recovery period than the nation as a whole. We also conducted a supplementary analysis of administrative data on UC recipients in 17 states—the 12 survey states and 5 additional states that could not be included in the survey (Figure 1).

Figure 1. States included in the analysis



B. Who collected EUC08/EB benefits and how did they fare?

The UC recipients in our survey sample collected 36 weeks of benefits on average, but there was substantial variability in their benefit-collection patterns and reemployment outcomes. Around 30 percent received at least 52 weeks of benefits and another 30 percent collected for fewer than 13 weeks. In addition, 73 percent had become reemployed by the end of the first year after their initial UI claims. However, around 14 percent were not reemployed at any point over the three-year period we studied, and almost a quarter of the recipients started a job that subsequently ended within that timeframe.

Over 45 percent of the UC recipients we studied collected EUC08 benefits—a higher utilization rate than seen for past recessionary emergency extended benefits programs. Using DOL program data, we estimated that a similar share of UC recipients in the nation as a whole (43 percent) collected EUC08 benefits during the six-year period when EUC08 was in effect. These calculations also suggest substantial growth over time in the fraction of UC recipients served by emergency benefits programs since 1980—from 30 percent during the early 1980s, to 38 percent during both the early 1990s and early 2000s.

Recipients who collected EUC08/EB benefits were more likely than those who collected only UI benefits to have difficulties in securing or maintaining employment. Our analysis of recipients' characteristics suggests that those who eventually collected EUC08/EB benefits were

less well positioned to cope with job loss than other recipients. For example, relative to UI-only recipients, EUC08/EB recipients were less likely to be unionized and more likely to have been permanently displaced from their pre-claim jobs. Comparing outcomes across groups, we found that EU08/EB recipients were significantly less likely than UI-only recipients to become and stay reemployed and more likely to experience financial hardships.

C. How was the availability of additional UC benefits related to recipients' outcomes?

Recipients eligible for more potential weeks of UC benefits tended to make extensive use of them, particularly displaced workers. The recipients we studied had 88 total weeks of potential benefits available, on average, 24 weeks of which were from the UI program and 64 weeks of which were from the EUC08 and EB programs. We estimated that each extra week of potential benefits was associated with 0.39 to 0.46 more weeks (or, approximately 3 more days) of UC benefits collected. This association was substantially stronger among displaced workers, relative to other UC recipients, a pattern we also found in our analysis of how benefit availability was related to employment outcomes.

Each extra week of available benefits was associated with a 0.08 to 0.17 week increase in the length of initial joblessness spells. Although our analysis framework was not developed to yield cause-and-effect impact estimates, this range is similar to what was found by earlier causal studies of UC recipients in the 1980s and 1990s. However, our estimate is substantially larger than the range suggested by causal studies of unemployed workers during the Great Recession using nationwide data. Our estimates likely overstate the impacts of extra benefit availability on the duration of joblessness, whereas other recent studies are likely to understate impacts. In addition, our analysis focused on a subset of states that differed from the nation as a whole. Hence, our results provide information that should be used in combination with findings from other studies to understand the range of the likely relationship between additional weeks of EUC08/EB benefits on joblessness durations following recipients' UI claims.

A larger number of weeks of available benefits was likely associated with more job instability and lower long-term earnings, but no change in long-term employment. Each extra week of available benefits was associated with 0.14 to 0.53 fewer total weeks of employment over a three-year period—a larger reduction than implied by the increase in the initial length of joblessness. Extra weeks of benefits were also associated with lower earnings from the main job at the time of the survey. However, these findings could be attributable to more potential weeks of UC benefits being available in states hit relatively harder by the recession. We found no association between benefit availability and employment or labor force participation at the time of the survey. There is little other research on the longer-term outcomes of workers laid off during the Great Recession; this topic would benefit from additional study.

The recipients we studied derived a modest amount of financial support from the ARRA provisions that increased the monetary value of benefits. Enhancements from these provisions represented slightly less than 7 percent of the weekly benefits to which recipients would otherwise have been entitled. Based on past research on weekly benefit amounts, the ARRA monetary enhancements likely resulted in relatively minor increases in the lengths of recipients' unemployment spells.

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I. INTRODUCTION

The unemployment compensation (UC) system in the United States cushions workers and their families against the financial effects of unemployment, and it provides more benefits as economic conditions worsen during recessions. At the core of the UC system is the federal-state unemployment insurance (UI) program, which temporarily replaces a portion of lost earnings for up to 26 weeks to eligible individual separating from their jobs.[1] The UI program itself acts as an "automatic stabilizer" during recessions (Vroman 2010), paying out benefits to a growing number of laid-off workers as unemployment rises. The UC system also includes mechanisms to allow recipients facing longer joblessness spells during a recession to collect more weeks of benefits. The Extended Benefits (EB) program was created in 1971 to automatically provide up to 13 or 20 added weeks of UC benefits in states with relatively high unemployment rates. During every major recession since that point, the federal government has also passed emergency legislation to allow recipients to collect even more weeks of benefits than what they would be entitled to through the standby EB program.

The Emergency Unemployment Compensation Act of 2008 (EUC08) was passed in response to the Great Recession, which began in December 2007 and ended in June 2009. The recession brought extensive unemployment and led to the longest average joblessness durations seen since World War II. Long-term joblessness remained higher than any other point during the post-war period for another five years after the recession officially ended. As long-term unemployment grew and persisted, the EUC08 program was extended and expanded by the American Recovery and Reinvestment Act of 2009 (ARRA) and other legislation. The program eventually provided up to 53 additional weeks of benefits to eligible UI recipients exhausting their benefits. This amount differed by state depending on the unemployment rate, although (unlike the EB program) some EUC08 benefits were available in every state. Recipients losing jobs in high-unemployment states could collect up to 99 weeks of total benefits: 26 through the regular UI program, 53 weeks through the EUC08 program, and 20 weeks through the EB program. This was almost quadruple the maximum available through the regular UI program during period of low unemployment and represents the longest potential duration of benefits in the history of the UC system.

This report is part of a larger study commissioned by the U.S. Department of Labor (DOL) to assess the EUC08 program and other UC-related provisions of the ARRA providing relief to unemployed workers and state workforce agencies during and after the Great Recession. A previous report (Mastri et al. 2015) examined permanent adoption of optional "modernization" provisions, which generally expanded access to UC benefits, in response to federal incentives specified by the ARRA. The primary focus in this report is on increases in the number of weeks of benefits available to recipients through the EUC08 program and increased EB activity that resulted from ARRA funding. In addition, we study provisions of the ARRA that enhanced the monetary value of UC benefits through direct payments and tax relief. Finally, an appendix to the report provides an analysis of a separate ARRA provision that temporarily waived the

[1] Throughout this report we use "states" to refer to the 53 UI jurisdictions in the United States, which include the 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. As discussed later in this report, state-specific UI eligibility requirements are related to workers' earnings histories and their reasons for job separation.

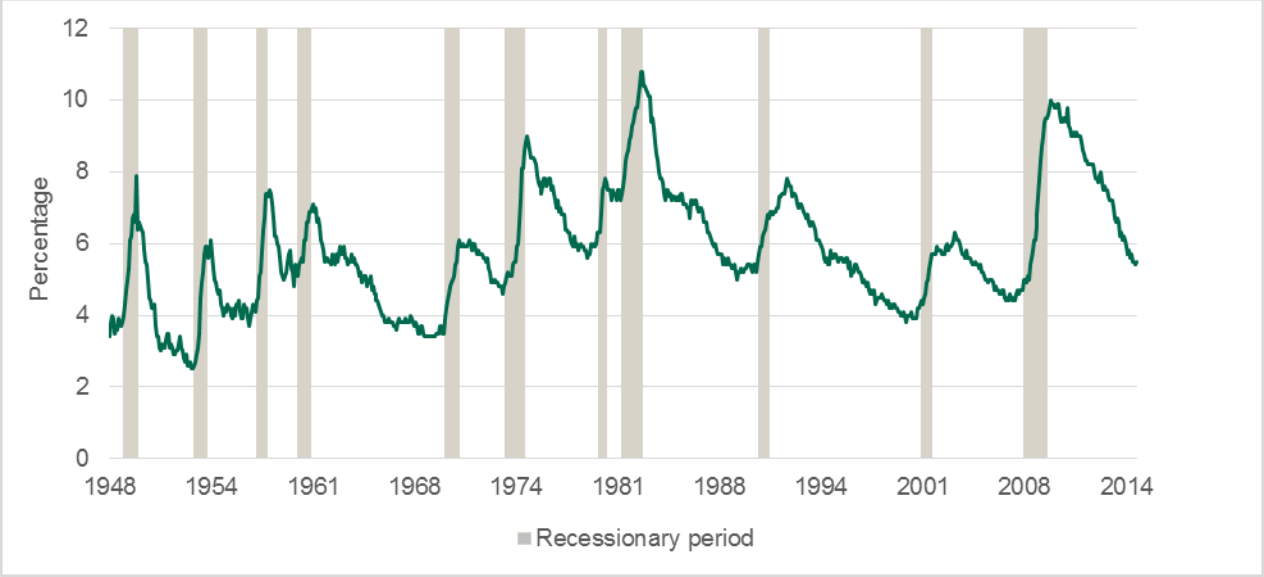
interest owed on borrowing states undertook to maintain their capacity to pay benefits from Unemployment Trust Fund accounts.

In this introductory chapter we summarize the context for the report, including: the economic and policy environment in which EUC08 and the ARRA were enacted (Section A), the UC policy response to the recession (Section B), the study's main research questions and an overview of the data used to answer them (Section C), and findings from past research on extended unemployment benefits programs (Section D). The final section of this chapter (Section E) provides a roadmap for the remainder of the report.

A. Economic and policy context

The Great Recession resulted in a considerable increase in joblessness in the United States. As shown in Figure I.1, the unemployment rate increased rapidly from below 5 percent at the start of the recession in late 2007 to approximately 10 percent two years later (shortly after the recession officially ended). This peak unemployment rate was slightly lower than the peak rate during the recession of the early 1980s. However, the rise during the Great Recession was from a lower pre-recessionary base, and there was a relatively sluggish decline in unemployment during the recovery period.

Figure I.1. Unemployment rates since World War II

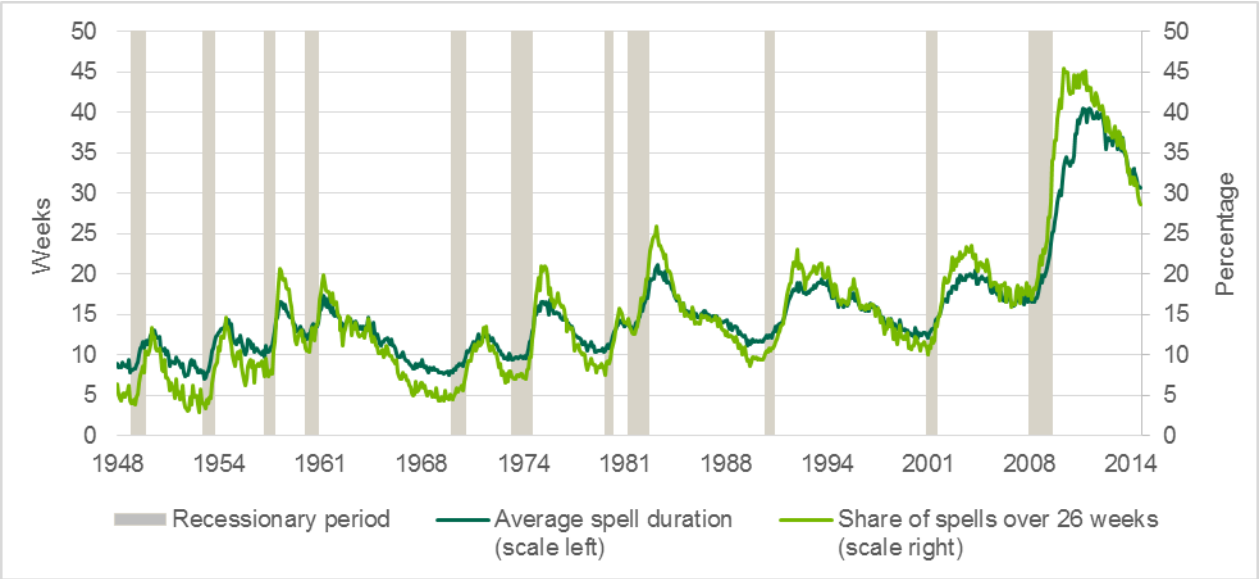


Source: Labor Force Statistics from the Current Population Survey (http://www.bls.gov/cps/), National Bureau of Economic Research (http://www.nber.org/cycles/cyclesmain.html)

Note: The line graph displays seasonally adjusted unemployment rates, and shaded bars indicate recessionary periods.

The severity of the Great Recession and slow recovery are particularly evident when looking at how long unemployed individuals remained out of work (Figure I.2). The average length of unemployment spells reached unprecedented levels, exceeding 40 weeks in 2011 and 2012—almost twice as high as the average unemployment duration at any other point since World War II. In addition, 45 percent of the unemployed were out of work for more than 26 weeks during 2010–2012, a much higher incidence of long-term unemployment than in any prior recession.

Figure I.2. Unemployment durations since World War II



Source: Labor Force Statistics from the Current Population Survey (http://www.bls.gov/cps/), National Bureau of Economic Research (http://www.nber.org/cycles/cyclesmain.html)

Note: The line graphs display seasonally adjusted average weeks of unemployment and the share of the unemployed who had been jobless for more than 26 weeks. The shaded bars indicate recessionary periods.

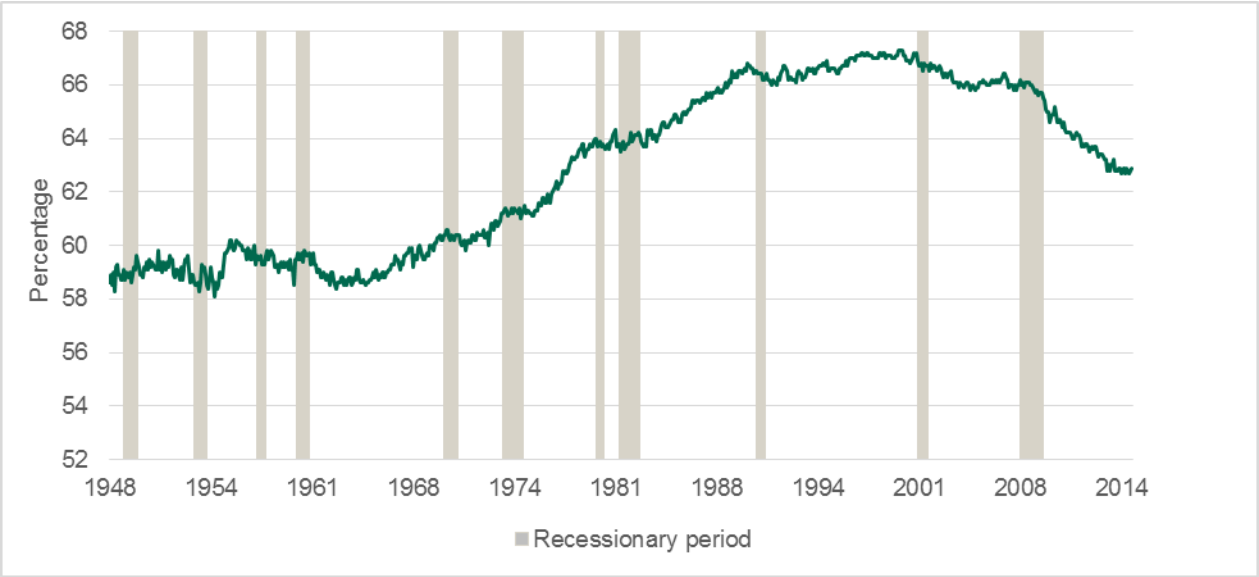
Perhaps partly in response to declining job opportunities, the labor force participation rate in the U.S. fell from over 66 percent in 2007 to below 63 percent in 2013 (Figure I.3). An analysis by Fujita (2014) suggests that, although much of this change was a continuation of longer-term trends related to retirement and disability, almost one-third of the decline from the start of the recession through 2011 was due to growth in the number of discouraged workers—that is individuals who did not search for work even though they wanted a job. In a separate analysis of labor market trends, Nichols and Lindner (2015) suggested that the main source of declines in the participation rate was reduced entry into the workforce, rather than an increase in exits. They found that labor force exit rates in 2010 and 2011 were, in fact, slightly lower than in the two years following the previous recession.[2]

The disruptions in the labor market caused by the Great Recession resulted in a substantial increase in UI benefit payouts; the annual benefit amount paid through the UI program more than doubled over the course of the recession and the early recovery period.[3] In addition, the average number weeks of benefits collected by regular UI recipients increased by about one-quarter, from a little over 15 weeks to almost 19 weeks, between 2007 and 2009. Over that same period, the dollar amount of UI benefits paid out increased from about $31 billion to nearly $76 billion.

[2] As discussed later in this chapter, some of the research on EUC08 and EB benefit extensions has suggested that these programs dampened the discouraged worker effect by keeping laid off individuals in the labor market (Rothstein 2011; Farber and Valletta 2015).

[3] Statistics cited in this paragraph are based on DOL's ET Financial Handbook 394 data, which are available at http://workforcesecurity.doleta.gov/unemploy/hb394.asp.

Figure I.3. Labor force participation rates since World War II



Source: Labor Force Statistics from the Current Population Survey (http://www.bls.gov/cps/), National Bureau of Economic Research (http://www.nber.org/cycles/cyclesmain.html)

Note: The line graph displays seasonally adjusted labor force participation rates, and shaded bars indicate recessionary periods.

In addition, Congressional efforts to encourage additional states to expand UI eligibility to include more types of unemployed workers, which began before the recession, intensified as the economy deteriorated (Mastri et al. 2015). Generally speaking, states have historically offered UI benefits to workers who (1) met an earnings threshold during a one-year "base period" preceding their claims; (2) were laid off, fired for reasons other than misconduct, or quit for good cause; and (3) made themselves available for full-time work. However, states often differ in their specific eligibility rules, and several have adopted laws or interpretations of their policies that resulted in expanded UI eligibility. For example, some states use an alternative base period that could result in more favorable benefit-eligibility determinations for workers with shorter earnings histories. In addition, some states extend eligibility to workers who quit for "compelling family reasons" (such as illness or relocation of a spouse) and/or allowed UI recipients to search for part-time work under certain circumstances.

Longer unemployment durations during the recession translated into increases in the number of UI recipients who "exhausted" their regular benefits—that is, those who collected all of the UI benefits to which they were entitled. The national UI exhaustion rate rose from around 35 percent in 2007 to a peak of more than 50 percent in 2009 and 2010. However, although the UI exhaustion rate was growing, recipients exhausting their UI benefits in early 2008 had no additional benefits available because the standby EB program had not activated in any state. EB benefits are paid out only when unemployment rates in a state exceed one or more pre-specified "trigger rules," some of which are optionally selected by the state. A combination of changes in federal rules and the use of relatively stringent trigger criteria by most states had resulted in negligible EB payouts from the end of the recession in the early 1990s through the middle of 2008 (Vroman, Wenger, and Woodbury 2003; Mastri et al. 2015).

Although the expansions to the UC system discussed below likely dampened the hardships faced by those receiving benefits, the Great Recession also led to a widespread reduction in the financial well-being of American families.[4] The national poverty rate rose from 12.5 to 15.1 percent—that is, by one-fifth—between 2007 and 2010, the first year of the official recovery period, and stayed above 15 percent until 2013. Participation in income-support programs also rose significantly over the recession and recovery period. For example, the number of people participating in the Supplemental Nutrition Assistance Program (SNAP) climbed by over 80 percent between 2007 and 2013.

B. The UC policy response

In response to the increasing number of people exhausting their UI benefits, the U.S. Congress passed the EUC08 legislation in June 2008. The program initially provided up to 13 weeks of additional benefits for UI exhaustees nationwide. Legislation in November 2008 increased this baseline EUC08 benefit entitlement to 20 weeks and created a second tier providing 13 more weeks of benefits in states with high unemployment rates. Activation of these EUC08 tier 2 benefits relied on a less-stringent triggering rule than states typically used for EB. By January 2009, EUC08 tier 2 benefits were available in 25 states (and tier 1 benefits were available in all states); in contrast, EB was active in only 6 states. However, the EUC08 program was scheduled to expire later that year.

The passage of the ARRA in February 2009, along with related legislation, resulted in further changes intended to meet the growing needs of unemployed workers and the states that administer the UC program. UC-related policy provisions of this legislation included:

- **Extensions to EUC08 benefits and increases in the weeks of benefits available (to a maximum of 99 weeks):** The ARRA postponed the expiration of EUC08 into 2010, and subsequent legislation renewed the program through the end of 2013. Legislation in November 2009 also added two more tiers of benefits for states with high unemployment rates. In over two-thirds of the states, a total of 53 weeks of benefits were available through four tiers of EUC08—more than twice the typical maximum regular UI entitlement. These benefits added to 26 weeks of UI and 20 weeks of EB in many states for a total UC entitlement of up to 99 weeks. Details of the EUC08 legislation and its extensions are provided in Appendix Table D.1. Overall, EUC08 provided $230 billion in benefits while the program was in operation from 2008 to 2013 (Table I.1); in comparison, the regular UI program paid out $293 billion over the same period.
- **Full federal financing of the EB program:** Traditionally EB financing was split equally between state UI trust funds and the federal government, but the ARRA provided for complete federal financing of EB under most circumstances. This change spurred many states to adopt less-stringent trigger rules for determining EB availability (Mastri et al. 2015), meaning that EB could be paid for a longer period of time and in states with relatively lower unemployment rates. Table I.1 shows that EB provided $29.5 billion during

[4] Poverty rates cited in this paragraph are from the data tables maintained by the U.S. Census Bureau (https://www.census.gov/hhes/www/poverty/data/historical/) and information about SNAP participation is based on the annual program participation and cost data made available by the Food and Nutrition Service of the U.S. Department of Agriculture (http://www.fns.usda.gov/sites/default/files/pd/SNAPsummary.pdf).

the 2008–2013 period. Mastri et al. (2015) estimated that approximately two-thirds of EB first-payments during that period were linked to states' adoption of the less-stringent triggering rule after the ARRA was passed.

- **Federal Additional Compensation (FAC):** The FAC program created through the ARRA offered an extra $25 per week to all UC benefit recipients between February 22, 2009, and December 11, 2010. This represented proportionately larger monetary enhancements for recipients who qualified for a relatively low weekly benefit amount (WBA) according to each state's benefit formulas, as well as recipients in states using formulas resulting in lower average WBAs. In all, DOL program data on FAC disbursements indicate that almost 800 million such weekly payments were made, totaling nearly $20 billion as shown in Table I.1. Although these payments amounted to a relatively small fraction of total UC benefits paid during this period, they nonetheless increased the degree to which the overall UC program contributed to economic stabilization.
- **Tax exemption of UC benefits:** A second provision of the ARRA that enhanced the monetary value of UC benefits was a federal tax exemption on the first $2,400 of benefits received during 2009. This had the effect of increasing the net, after-tax WBA, especially for higher income taxpayers. The Joint Committee on Taxation (2009) projected that this provision would cost the U.S. Treasury about $4.7 billion in lost tax revenue.
- **Modernization provisions:** The ARRA provided financial incentives to states to adopt several optional "modernization" provisions into their permanent UI laws. These provisions generally made it easier for unemployed workers to initially qualify for UI benefits or to retain their benefit eligibility, although one provision also enhanced WBAs for recipients with dependents. Of the $7 billion that was budgeted for possible incentive payments, about $4.4 billion was paid out to 41 states, as indicated in Table I.1. These 41 states either enacted new legislation conforming to ARRA-specified requirements for the modernization provisions or already had such legislation in place prior to the ARRA. Adoptions of new modernization provisions by state were largely based on financial considerations related to incentive funds and expected benefit payouts (Mastri et al. 2015).
- **Trust fund interest waiver:** The ARRA included a provision that temporarily waived the accrual of interest on loans from the Unemployment Trust Fund taken out by states to finance benefit payments. The ARRA specified that interest accrual be waived on loan balances held between February 2009 and December 2010. As discussed in Appendix A, we estimate that states avoided up to $2.2 billion in potential interest payments due to the ARRA provision.

Altogether, these changes to UC policy substantially increased the availability and generosity of benefits for unemployed workers. As discussed in an earlier study report (Mastri et al. 2015), the number of UC recipients increased from 37 percent of unemployed workers in 2007 to over 60 percent for much of 2009 and 2010. This likely reflected a combination of factors, including states' expansion of UI eligibility rules, additional EB triggering, and the substantial number of benefits weeks available through the EUC08 program. Figure I.4 depicts how the maximum weeks of benefits available expanded, and then later contracted, over the recession and recovery period. We discuss in more detail later in this report how the phased rollout of the program affected benefit availability over time.

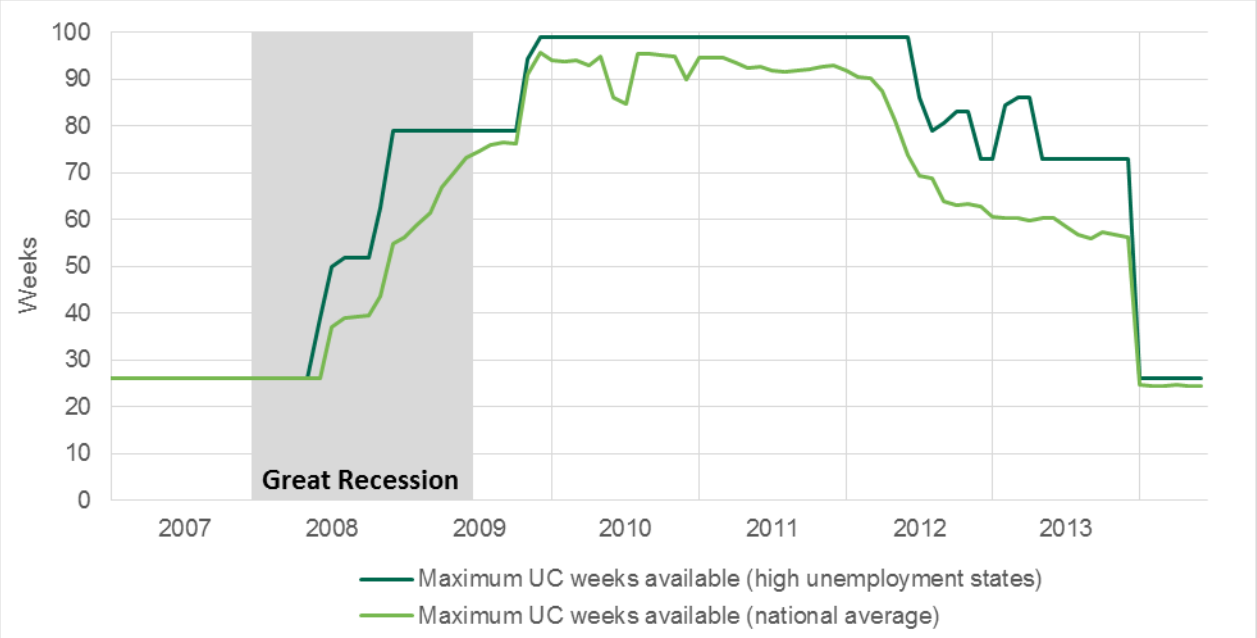
Table I.1. Estimated budgetary costs of recessionary UC policies and programs

Policy or program component	Budgetary cost	Reference period	Source
UI program	$293 billion	2008 to 2013	See Chapter II of this report
EUC08 program	$230 billion	2008 to 2013	See Chapter II of this report
EB program	$30 billion	2008 to 2013	See Chapter II of this report
FAC program	$20 billion	February 2009 to December 2010	DOL program data on FAC payment activity[a]
Federal income tax exemption on UC benefits	$4.7 billion	Tax year 2009	Estimated by the U.S. Joint Committee on Taxation (2009)
Incentive payments to states adopting ARRA modernization provisions	$4.4 billion	February 2009 to August 2011	DOL summary of approved applications for incentive payments[b]
Waiver of interest on Unemployment Trust Fund borrowing	$2.2 billion	February 2009 to December 2010	See Appendix A of this report

[a]Retrieved from: http://workforcesecurity.doleta.gov/unemploy/fac.asp.

[b]Retrieved from: http://www.workforcesecurity.doleta.gov/unemploy/docs/app_form.doc.

Figure I.4. Maximum number of weeks of UC benefits available, 2007 to 2014



Source: National Bureau of Economic Research (http://www.nber.org/cycles/cyclesmain.html), EUC08 and EB trigger notices (http://www.oui.doleta.gov/unemploy/claims_arch.asp), and ETA 5159 Reports on UI program activity (http://workforcesecurity.doleta.gov/unemploy/claimssum.asp).

Note: The line graphs display the maximum number of week available in each month through the UI, EUC08, and EB programs combined for a recipient eligible for 26 weeks of regular UI benefits. The national average was computed using the monthly number of UI last payments as weights.

Although not directly addressed in this study, an important feature of the substantial expansions to the UC system occurring through the EUC08 program and ARRA is how they affected the United States economy as a whole. According to "multiplier" models of fiscal stimulus, the total increase in gross domestic product (GDP) arising from the EUC08 program might have been higher than the $230 billion in benefits paid out. This is because some portion of each additional dollar collected by UC recipients translated into additional spending on goods and services, supporting employment in the sectors producing those goods and services, resulting in further consumer economic activity, and so on. The Council of Economic Advisers (CEA 2010) estimated that, as of September 2010, spending through the EUC08 and EB programs resulted in 793,000 additional jobs. The CEA estimated the GDP multiplier effect of Federal UC spending, finding it to be similar to independent estimates produced by Mark Zandi of Moody's Analytics. These analyses suggest that each dollar received by EUC08 recipients through the middle of 2010 translated into an increase in GDP of around $1.60 (Zandi 2010). There is, however, some debate about the size of the multiplier effect, particularly after accounting for the longer-term increases in taxes needed to support stimulus spending.[5] Nonetheless, an important purpose of the EUC08 program and several of the UC provisions of ARRA was to provide immediate financial support to the long-term unemployed. These initiatives assuredly helped UC recipients maintain their household consumption through their spells of unemployment. An analysis by Bitler and Hoynes (2013) found that, compared to other government assistance programs, the UC program provided a particularly substantial income buffer to households at risk of poverty during the Great Recession and subsequent recovery period.

C. Study research questions and data used to answer them

The focus of this report is on recessionary increases in the duration and monetary value of UC benefits, especially the unprecedented number of extra benefit weeks available through the EUC08 and EB programs. We address two main sets of research questions:

1. Who collected EUC08/EB benefits and how did they fare? We answer this question by contrasting the characteristics and outcomes of recipients of these benefits versus those who collected UI benefits only.
2. How was the availability of additional recessionary UC benefits related to recipients' outcomes?
    - For the extra weeks of benefits provided by EUC08/EB, we examine associations between potential benefit durations and total benefits collected, post-claim reemployment and earnings, and measures of economic well-being.[6]
    - For the FAC and the ARRA income tax exemption, we examine the extent to which they increased the weekly monetary value of UC benefits and what these monetary enhancements likely implied for unemployment durations.

[5] For example, the Congressional Budget Office (CBO 2010) estimated the multiplier to range from 0.8 to 2.1 for UC and other transfer programs. In an extensive review of the estimated multiplier effects of government purchases over multiple time periods, Ramey (2011) found that most of published estimates fall in a range of 0.8 to 1.5.

[6] Throughout the report, we use "post-claim" to refer to the period after recipients' initial UI claim dates.

In a separate analysis (Appendix A), we also summarize Unemployment Trust Fund borrowing activity and estimate the amount of interest payments avoided due to the ARRA waiver.

We designed the study's data collection to provide information about the characteristics, benefit collection patterns, and subsequent outcomes of UC recipients who lost their jobs during the Great Recession. Given the time lag between when individuals separate from jobs to when they start collecting UI benefits, our data collection efforts focused on recipients who began receiving UI benefits between January 2008 and September 2009.[7] To learn about this target population:

- We collected administrative data from 17 geographically diverse states that covered approximately 57 percent of first UI payments occurring while the EUC08 program was in effect. These administrative data included (1) all UI, EB, and EUC08 claims in those states from 2008 through the last quarter of 2013, and (2) all records of UI-covered wages in those states over the same period. We also received UI wage records from an additional 2 states.
- We fielded a survey to a subsample of approximately 2,100 recipients in 12 states from which we received reliable and complete administrative data by late 2013 (when the survey was launched). The survey was used to gather more detailed information about recipients' pre-UI characteristics, their post-claim experiences, and their outcomes at a time that was four to six years after their initial UI claims.

Chapter II includes more details about the data sources, the main analysis datasets, and the states included in the study.

D. Prior research on extended UC benefits

Emergency extended benefit programs have been enacted in virtually every major recession since World War II, although none of the prior programs offered as many weeks of benefits as were provided under EUC08. Nicholson and Needels (2011) provide details about all postwar recessionary benefits programs and the research literature about them, and Nicholson et al. (2014) provide an extensive discussion of studies relevant to the UC expansions that occurred during the Great Recession. In this section, we focus on a subset of the past research that is particularly germane to the research questions of this report.

1. Research on recipients of benefits from past Federal emergency UC programs

Since the recession of the early 1980s, temporary emergency benefits programs enacted by the Federal government have been the main source of additional unemployment benefits for UI exhaustees. During this period the EB program was relatively inactive, particularly given (1) changes to the program's triggering rules in the 1980s, and (2) rules since the early 1990s recession allowing states to pay EB benefits after recipients exhaust the Federal emergency

[7] Although we refer to "UI benefits" and "UI recipients" for simplicity, approximately one percent of the recipients for whom we collected data received their benefits through the programs for federal employees (UCFE) and ex-service members (UCX). UCFE and UCX recipients were generally subject to the same rules as UI recipients in each state, and they were also eligible for EUC08 and EB benefits (if available) upon exhausting their regular benefit entitlement. We measured the start of recipients UI claims based on the benefit-year begin date, which we refer to in the text as the "initial UI claim date."

benefits available to them. As shown in Table I.2, the EUC08 program was bigger than any other emergency benefits program in effect since 1980 in almost every regard. Nonetheless, those prior programs still typically provided a substantial amount of extra support to UI exhaustees. For example, in combination with the EB program, the Federal Supplementary Compensation (FSC) program of the early 1980s roughly doubled the number of benefit weeks available to recipients with 26-week UI entitlements, and the EUC program of the early 1990s provided a similar benefit augmentation.

Table I.2. Federal emergency UC programs since 1980

	Federal Supplemental Compensation (FSC)	Emergency Unemployment Compensation (EUC)	Temporary Extended Unemployment Compensation (TEUC)	EUC08
Features of the corresponding economic downturn				
Recession dates	January 1980 to July 1980; July 1981 to November 1982	July 1990 to March 1991	March 2001 to November 2001	December 2007 to June 2009
Peak unemployment rate	10.8%	7.8%	6.3%	10.0%
Peak average unemployment duration	12 weeks	20 weeks	21 weeks	41 weeks
Features of the emergency UC program				
Program start date	September 1982	November 1991	March 2001	July 2008
Program length	2.8 years	2.5 years	2.2 years	5.5 years
Maximum total UC benefit weeks typically available in high-unemployment states for recipients with 26-week regular UI entitlement[a]	51 weeks	53 weeks	46 weeks	99 weeks
Total dollars of emergency benefits paid	$21.6 billion	$45.6 billion	$28.7 billion	$230 billion
First payments through the emergency program				
Number	7.6 million	9.2 million	7.5 million	24.5 million
Share of UI first payments during emergency program period	30%	38%	38%	43%

Source: Unless otherwise noted, program statistics for recessionary programs prior to the EUC08 program are based on data collected for an earlier study report (Nicholson and Needels 2011, Table 1), with monetary amounts converted to 2013 dollars. Statistics on the EUC08 program are based on the data sources indicated in Table II.2 of this report.

[a]In this calculation, we have assumed a typical maximum regular UI entitlement of 26 weeks. Maximum potential benefit durations for the FSC, EUC, and TEUC programs are based on the high end of the range for each program reported in Nicholson and Needels (2011). Up to 13 weeks of EB benefits were available in high-unemployment states while the FSC program was in effect, given the triggering rules of that program during the early 1980s. For the purposes of this calculation, we assumed that 0 weeks of EB were typically available while the EUC and TEUC programs were in effect because (1) EB had remained off from the early 1980s through 2008 in three-quarters of the states; (2) EB was paid only after EUC and TEUC benefits were exhausted; and (3) as indicated in Nicholson and Needels (2011), EB payments amounted to less than two percent of all benefits received by UI exhaustees while the EUC and TEUC programs were operating.

However, aggregate program statistics suggest that the majority of individuals receiving UI first payments while Federal emergency UC programs were in effect did not collect benefits through those programs (Table I.2). Using the ratio of emergency-program first payments to UI first payments as a rough measure of utilization, approximately 30 percent of UI first payments resulted in an FSC first payment during the early 1980s, and approximately 38 percent of UI first payments led to EUC payments during the 1990s and payments through the Temporary Emergency Unemployment Compensation (TEUC) of the early 2000s.[8] Based on a similar calculation, approximately 43 percent of UI first payments resulted in EUC08 payments during the Great Recession and subsequent recovery period.

Thus, one research goal of earlier DOL studies was to assess what factors differentiated recipients who collected UI only from those who exhausted those benefits and collected Federal emergency benefits. These studies generally found that Federal emergency benefits tended to serve recipients from groups that historically have faced employment barriers.

- Corson, Grossman, and Nicholson (1986) found that recipients of FSC benefits during the early 1980s were more likely to be female, African American, and older, as compared to individuals who collected only UI benefits during the same period. Corson, Needels, and Nicholson (1999) found a similar pattern when studying the EUC program of the early 1990s. (No comparable information exists for the TEUC program of the early 2000s.) These characteristics have been found to be associated with lower employment rates and earnings, which might suggest a greater need for long-term benefits among these groups.
- Recipients of FSC and EUC benefits were also less likely to be members of unions or to be recalled to their pre-layoff jobs than recipients who collected only UI while those programs were in effect (Corson et al. 1986 and 1999). Similarly, past emergency benefits programs served a disproportionate number of workers who were permanently displaced from the job they held before receiving UC benefits.

In addition, recipients of emergency benefits tended to remain unemployed for substantially longer than those who collected only UI benefits during past recessions. For example, Corson et al. (1986) found approximately half of FSC recipients were employed at the end of the second year after the quarter of their initial UI claim. In contrast, approximately three-fourths of those who had received UI only were employed at that point. Similarly, Corson et al. (1999) found that approximately 65 percent of EUC recipients had become reemployed at some point during a 10-quarter period after they first started collecting UI benefits. In contrast, around 80 percent of those who had collected UI only had returned to work by that point. Among those who became reemployed, changes in the industry of employment, relative to the pre-layoff job were substantially more common among recipients of both FSC and EUC benefits than among those who collect only UI benefits while those programs were offered. This could reflect the greater tendency of recessionary benefits to be used by workers permanently displaced from a job who needed to look for employment in a different sector of the economy.

[8] Some of this difference over time likely reflects the fact that EB benefits were paid before FSC benefits, while EB has been paid after Federal emergency benefits were exhausted since the early 1990s.

2. Research on how benefit availability affects reemployment and unemployment

Important questions for understanding the potential implications of extended UC benefits programs are why they might lead to a delayed return to work and how large this effect is. From a theoretical perspective, offering more weeks of UC benefits is expected to increase the duration of joblessness, but this effect can arise for two broad reasons. First, increased benefit availability allows jobseekers to search longer for appropriate employment, rather than taking on stopgap employment just to make ends meet (Ehrenberg and Oaxaca 1976). This search-enhancing effect is expected to be particularly strong for unemployed workers who do not have assets and face limitations on their capacity to borrow (Card, Chetty, and Weber 2007). Second, there might be a "moral hazard" cost to extending UC benefits if recipients put less effort into finding a job because their lost earnings are partially replaced by benefits for a longer period of time (Feldstein 1974, 2005). A study by Chetty (2008) found that the search-enhancing mechanism accounted for approximately 60 percent of the observed increase in unemployment durations caused by UI monetary benefit levels during nonrecessionary periods in the United States. Another recent study of UI benefit levels concluded that the moral-hazard cost was lower in state labor markets with higher unemployment, while the search-enhancing effect remained fairly constant across a range of labor market conditions (Kroft and Notowidigdo 2011). This suggests that recessionary expansions to the UC system might primarily tend to help laid-off workers without a financial buffer become choosier in their job search. However these studies have focused on the role of weekly benefits amounts; it is not clear that the results are fully applicable to increases in the number of weeks of benefits available through extended benefits programs (Schmeider, von Wachter, and Bender 2012).

Several studies have sought to quantify the size of the effects of additional UC benefits on the length of unemployment spells, controlling for other factors. Virtually all of these studies have found that increasing the number of weeks of available benefits increases the duration of joblessness. However, they have come to quite differing conclusions about the size of this relationship.

- **Studies conducted on UC recipients prior to the Great Recession.** These studies generally analyzed recipients from the 1980s and 1990s identified in administrative program data files. Their results suggest that one extra week of available benefits was associated with approximately 0.1 to 0.2 additional weeks of unemployment (Moffitt and Nicholson 1982; Moffitt 1985; Katz and Meyer 1990; Card and Levine 2000). A simple linear extrapolation from these prior estimates would suggest that making up to 73 weeks more of benefits available over the recession (up to 53 through EUC08 and 20 through EB) could increase the unemployment durations of UC recipients by 7 to 15 weeks. Given that the UC recipiency rate rose well above 50 percent near the end of the recession (Mastri et al. 2015), this might represent a substantial minority of the increase in the average duration of unemployment among all unemployed workers from 2008 to 2010 shown in Figure I.1 (Elsby, Hobijn, and Şahin 2010). It is, however, not clear whether previous estimates can be extrapolated in this

fashion since the 73-week increase in UC benefit availability that followed the Great Recession is substantially larger than what had been previously studied.[9]

- **Studies conducted on unemployed workers during the Great Recession.** More recent studies have attempted to estimate the effects of EUC08/EB benefit availability on labor market outcomes using data about unemployed respondents to the Current Population Survey (CPS). Relative to what would be suggested by extrapolating from the findings of earlier studies, the more-recent studies have yielded smaller estimates of the extent to which extra weeks of benefits delayed jobseekers' return to work.
  - Rothstein (2011) and Farber and Valletta (2015) studied the rollout of EUC08 and triggering-on of EB during the recession and recovery period. Farber and Valletta concluded that each week of added benefits increased unemployment spell durations by 0.06 weeks, and Rothstein's estimates suggest even smaller effects. Both studies also found that additional weeks of benefits available through the EUC08 and EB programs were linked to reductions in labor force exits. They conclude that a significant portion of the increase in unemployment spell lengths due to additional benefit availability was driven by individuals staying in the labor force to look for work rather than delaying their reemployment.
  - A recent study of the phase-out of the EUC08 program in 2013 (Farber, Rothstein, and Valletta 2015) reaches broadly similar conclusions about how additional benefits affected unemployment durations. The authors' analysis suggested, however, that the shortening of unemployment spells that followed the phase-out was driven primarily by an increased return to work rather than an increase in labor force exits.
  - Another study that drew on additional data about benefit availability since the late-1970s recession (Figura and Barnichon 2014) suggests duration effects larger than what was found in the other Great Recession studies. However, this study's findings still imply that EUC08/EB resulted in far smaller increases in the length of joblessness than would be implied by extrapolating from earlier research.

One important difference between these two groups of studies is that the recent research on unemployed workers during the Great Recession uses data from the CPS, which does not allow UC recipients to be clearly identified. To assess the effects of additional benefits on those who were likely eligible for benefits, the authors of the CPS studies focus their analyses on unemployed workers who reported losing their job (rather than leaving their job). However, less than half of such individuals typically collected UC benefits (Farber and Valletta 2015), and the analysis samples used in the CPS studies do not include UI-eligible workers who quit for good cause. In addition, the recent studies assume that every laid-off worker was eligible for 26 weeks of regular UI benefits, irrespective of their earnings history. In fact, the number of weeks available through the UI program varies with prior earnings in most states, and a non-negligible

[9] Grubb (2011) suggested a different method for extrapolating from previous estimates using numerical simulations. Based on this approach, one week of additional benefit availability might lead to as much as 0.4 additional weeks of unemployment. In this case, benefit extensions through EUC08 and EB would be responsible for most of the increase in the average duration of unemployment observed in the United States during the time period he studied.

share of recipients qualify for fewer than 26 weeks of regular UI benefits.[10] As a result, analyses of CPS data are likely to yield understated (less negative) estimates of the effects of extra weeks of benefits on the duration of joblessness.

Recent research studies have also reached varying conclusions about how the overall unemployment rate was affected by the recessionary increases in benefits available via the EUC08 and EB programs. Like the individual-level studies of joblessness, some of the differences between these macro-level studies seems to be based on the data sources and methodology used. In fact, much of this research uses models of unemployment that draw on the estimated relationships from the individual-level studies of joblessness. For example, Mazumder (2011) and Elsby et al. (2010) apply estimates from the pre-Great-Recession studies and conclude that increases in the duration of available benefits due to EUC08 and EB resulted in an increase in the employment rate of 0.7 to 1.8 percentage points. Grubb (2011) finds that a different extrapolation of the findings from earlier studies could imply an effect of EUC08/EB benefit availability that was twice as large (i.e., up to 3.6 percentage points). However, models of unemployment that draw on more recent individual-level data on unemployment spells from the CPS typically find smaller effects in the range of 0.1 to 0.5 percentage points (Rothstein 2011; Farber and Valletta 2015). Another statistical approach used by Hagedorn et al. (2013) to directly model the macro-level effects of EUC08 and EB benefit availability suggested an impact on the unemployment rate of 4 percentage points, but a re-analysis of the data by Amaral and Ice (2014) found a more modest impact of 1 percentage point. Thus, there is some ambiguity about the size of the impact of additional benefit availability through the EUC08 and EB programs on unemployment rates.

3. Research on how benefit availability affects economic wellbeing

Greater UC benefit availability is also expected to affect the economic circumstances of recipients and their families. As already noted, Hoynes and Bitler (2012) found that the UC system provides a substantial buffer against poverty during recessionary periods when considering the population as a whole. A few studies have also suggested that extended benefits are linked to lower poverty rates among UC recipients (Corson et al. 1999; Needels, Corson, and Nicholson 2001). In addition, Gruber (2001) found that more-generous weekly benefits reduce the extent to which laid-off workers drain their assets over an unemployment spell.

But, the precise dynamics of how individuals adjust their consumption choices in response to job loss and the availability of UC benefits remains relatively poorly understood. Although recessionary benefit extensions immediately provide financial support to unemployed workers, they might not always have positive effects on economic wellbeing over the longer term. For example, workers who reduce work search efforts in response to greater benefit availability might end up no better off in the longer run; this would occur if they enter jobs after benefit exhaustion that are otherwise similar to the jobs that they might have sought while collecting benefits. In fact, they could actually end up worse off if prolonged job search reduces their labor market prospects due to the "negative duration dependence" of unemployment—that is, longer

[10] Data from the ET Financial Handbook 394 (http://ows.doleta.gov/unemploy/hb394.asp) maintained by DOL indicate that maximum number of weeks of UI benefits that could be collected by recipients nationwide was, on average, between 23 and 24 weeks from 2008 to 2013.

gaps on the resume that make unemployed workers less appealing to potential employers, a phenomenon documented in a recent experimental resume audit study in the United States (Kroft, Lange, and Notowidigdo 2013). For example, a study of laid-off workers in Germany found that sharp increases in the number of UC benefit weeks available led to lower reemployment wages due to this type of duration effect (Schmeider, von Wachter, and Bender 2013). In addition, workers who extend their search efforts in response to greater benefit availability to look for more appropriate jobs or wait out a bad economy might also end up worse off over the long run if the labor market deteriorates more than they expected.[11] No previous research exists to assess the size and direction of the long-term association between benefit availability and economic wellbeing.

E. Roadmap for the rest of this report

The main text of the report proceeds as follows:

- Chapter II discusses the data we collected for the study and how the study states compare to the nation as a whole.
- Chapter III presents an overview of key study outcomes for individuals responding to the survey, including the number of weeks of UC benefits they collected and their post-claim reemployment rates.
- Chapter IV provides a summary of the characteristics of survey respondents who collected recessionary benefits through the EUC08 and EB programs, and how they compared to recipients who collected regular UI only during the same time period. We also summarize and compare employment and financial outcomes in the years following their initial UI claims.
- Chapter V presents results from our analysis of the extent to which respondents experienced more or less favorable post-claim outcomes when a larger number of weeks of UC benefits were available. This analysis measures associations between outcomes and the number of weeks of benefits available through the UI, EUC08, and EB program combined, after adjusting for recipients' pre-claim characteristics.
- Chapter VI presents an assessment of the income support survey respondents derived from the FAC program and the ARRA-based tax exemption on income from UC. We estimate the degree to which these provisions increased the effective monetary value of UC benefits and how these enhancements likely altered reemployment outcomes.
- Chapter VIII provides additional discussion of our main findings and concluding remarks.

In addition, Appendix A includes results from a separate analysis we conducted to determine how much savings states might have realized from a temporary interest waiver specified in the ARRA for unemployment trust fund borrowing. Appendix B provides a more-extensive discussion of the study's data and how we developed the main analysis files used in this report. Appendix C presents an analysis of how outcomes were related to the number of weeks of UC

[11] For example, in early 2009, it was predicted that the unemployment rate would stay below 8 percent if ARRA was passed and 9 percent without the recovery plan (Romer and Bernstein 2009). However, the unemployment rate ended up rising to 10 percent by October of that year.

benefits available (similar to that of Chapter V) using large samples of administrative-only data from all 17 states providing data for the study. Finally, Appendix D includes tables of detailed results for readers who would like to dive more deeply into the contextual information and statistical estimates discussed in the main text of the report.

II. DATA SOURCES AND STUDY STATES

To answer the main study research questions, we collected administrative UC claims and UI wage records from a diverse set of states and fielded a survey in a subset of those states. Our main analysis in this report is based on a combination of administrative and survey data for about 2,100 individuals collecting UI first payments in 12 states. We also conducted select analyses (in Appendix C) using administrative-only data on over 350,000 recipients in 17 states that include the 12 states in which the survey was fielded plus 5 additional states. This chapter provides an overview of the contents and structure of these analysis datasets; additional details about study data collection are included in Appendix B. To provide additional context for the analysis, we also describe the states in the study and how they compared to the nation as a whole.

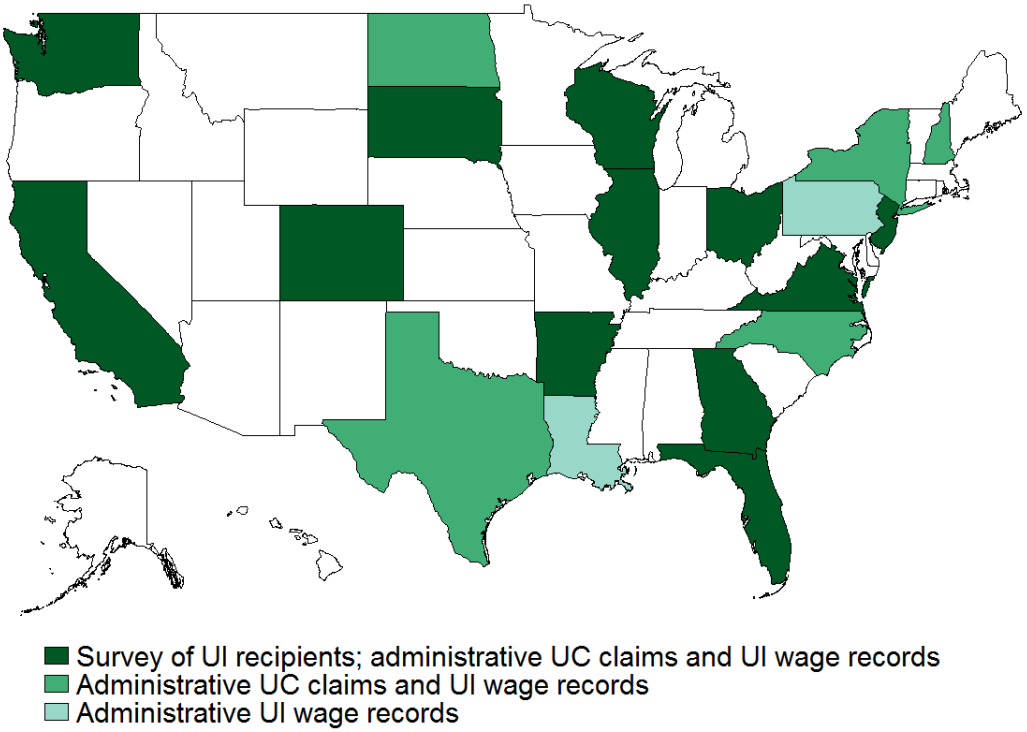
A. Data collected for the study

The population of interest for the study was individuals who received UI after losing a job during the Great Recession, and we focused on recipients who began collecting benefits between January 2008 and September 2009. To learn about their characteristics, experiences, and outcomes, we collected the following data:

1. **Administrative UC claims records.** These data include detailed information about recipients' collection of UC benefits, demographic characteristics, base period earnings, pre-UI job separation reason, and the industry and occupation of the pre-UI job. The records cover the period from January 2008 through the date that states extracted the data (which ranged from late 2012 through mid-2014). Our study includes claims data from the administrative records of 17 states.
2. **Administrative UI wage records.** These data contain information about quarterly employment and earnings in UI-covered jobs from 2008 through the data extraction date. The records provide information about reemployment for at least three years after recipients' initial UI claim dates in all 17 states providing claims records for the study, as well as 2 additional states that provide wage records. Reemployment outcomes based on these data measure employment occurring in any of the 19 states, which included 64 percent of all UI-covered jobs while the EUC08 program was in effect (2008 to 2013). However, administrative measures of reemployment do not capture work occurring in other states, self-employment, or other work in non-UI covered jobs. In addition, the administrative records would not consistently capture work more than 12 quarters after the initial UI claim quarter in several states.
3. **Survey of UC recipients**. We fielded a survey to a randomly selected subset of individuals receiving a UI first payment identified in the administrative claims records of 12 states. The survey yielded detailed information about their characteristics, the nature and timing of pre-UI employment, and household economic circumstance at the time of the initial UI claim. The survey also included questions about (1) reemployment and financial hardships since the time of the claim and (2) economic well-being and labor market participation at the time of the survey—which was four to six years after recipients started receiving UI benefits.

Figure II.1 shows the specific states from which the study data were collected. We initially sought to collect all three types of data from a total of 20 states that were randomly sampled to achieve diversity along measures of benefit availability, growth in UI receipt over the recession, and geographic region. However, only a subset of the originally sampled 20 states provided all administrative data required in a form that could be used for the study's analysis. As discussed in Appendix B, the most limiting data component was information about EUC08/EB collection. This was likely due to challenges states faced in accounting for the complexities of the phased rollout of the EUC08 program and subsequent modifications to the program. Given the study's research questions, the survey was fielded only in states for which reliable administrative data on EUC08/EB collection was available by late 2013.

Figure II.1. States from which study data were collected



Variation in the availability and quality of state administrative data resulted in two main analysis datasets used for the study (Table II.1).

1. The **merged survey respondent data file** includes both administrative and survey data on 2,122 individuals who received a UI first payment in 12 states and had benefit-year begin (BYB) dates running from January 2008 to September 2009.
   - In addition to including survey response data, we merged the following information to respondents' records in this file: (1) information about their collection of UI, EUC08, and EB benefits, based on the administrative UC claims records; and (2) information on 12 quarters of their employment and earnings, based on the administrative UI wage records, starting with the quarter after the date of initial UI claim.

- As discussed in Appendix B, we allocated the survey sample to achieve a greater number of survey responses from more populous states, since such states tended to show higher diversity in the characteristics of UC recipients. Respondents were a subset of the 5,541 survey-eligible individuals that we randomly sampled from the administrative records and attempted to survey. The response rate was 39 percent, and we use weights in our analysis to adjust our estimates for survey nonresponse.

2. The **administrative-only analysis file** contains data on 357,000 UI claims from the 17 states whose administrative UC claims data we used for this study. These claims were randomly selected from the full set of UI claims in those states with BYB dates between January 2008 and September 2009.
   - Each record in the file includes administrative measures of demographic and pre-claim employment characteristics, regular-UI collection, and quarterly post-claim employment and earnings. The large administrative-only analysis file does not include information about EUC08/EB collection, however, given the issues with those data noted above.
   - The samples were drawn to yield approximately 1,000 UI claims per state and month. This relatively equal allocation was chosen to allow for a stronger capacity to model differences across states and time periods; the large sample sizes would ensure adequate representation of a diverse set of recipients within each state/month.

Table II.1. States and data sources, by analysis dataset

Analysis dataset	States included	Survey responses	Administrative records		
			UI claims	EUC08/EB claims	UI-covered wages
Merged survey respondent data file (2,122 cases)	Arkansas, California, Colorado, Florida, Georgia, Illinois, New Jersey, Ohio, South Dakota, Virginia, Washington, Wisconsin	X	X	X	X
Administrative-only analysis file (357,000 cases)	Arkansas, California, Colorado, Florida, Georgia, Illinois, New Jersey, New Hampshire, New York, North Carolina, North Dakota, Ohio, South Dakota, Texas, Virginia, Washington, Wisconsin		X		X

Note: In both datasets, employment and earnings measures derived from the administrative records draw on the UI wage data from 19 states: all states listed in the table plus Louisiana and Pennsylvania.

The majority of our analysis focuses on the merged survey respondent file because we have the richest set of information for these recipients. We conducted a separate analysis of the administrative-only data (in Appendix C) to assess whether relationships observed for survey respondents differ when examining larger recipient samples, accounting for fewer recipient characteristics, and/or including additional states in the analysis.

We refer to "recipients" rather than "UI claims" when discussing our data and results, but our main unit of analysis throughout the report is an initial UI claim resulting in a first payment. That is, we do not conduct a person-level analysis. Instead, each paid UI claim is considered

separately when calculating outcomes such as UC benefit collection, reemployment, and post-claim earnings. Similarly, the associations between outcomes, characteristics, and benefit availability are all measured at the claim level, rather than the person level. This approach is consistent with past UI studies, and it aligns with the UC eligibility and monetary determination that might result, for example, in differing amounts of benefits being available through two separate claims from the same individual. All of the claims sampled for the UI recipient survey corresponded to distinct people. The administrative-only analysis files included a small fraction of records (less than 2 percent) that were part of a pair of UI claims sampled for the same person; these were treated as distinct observations throughout.

B. Description of the study states

The study states encompass important variation that can provide insights into the experiences of a wide variety UC recipients around the nation.

- The states are spread out geographically (Figure II.1), and each of the six DOL regions contains between one and three study states.
- The study states include a sizeable share of the national population of individuals who received a UI first payment while the EUC08 program was in effect. The survey states included 42 percent of all such UI first payments nationwide; the 17 states in the administrative-only analysis file included 57 percent of first payments. Slightly higher percentages of all nationwide EUC08 and EB first payments occurred in the two sets of study states (Table II.2).
- The UC recipients from the study states we analyzed faced a diverse range of labor market conditions, as measured by unemployment rates (Appendix Table D.2). There was substantial variability across the 12- and 17-state analysis samples both in the average unemployment rate from 2007 to 2013 and in the growth in unemployment over the recession between 2007 and 2009. The extent of this variability was similar to the nation as a whole, particularly for the full set of 17 states in the administrative-only analysis file.

However, the study states experienced more severe labor market downturns than the nation as a whole (Figure II.2) and aggregate data suggest that their UC benefit collection experiences were slightly more extensive than those of recipients nationwide (Table II.2).

- The unemployment rate in the study states was similar to the nationwide average in 2007 but increased more substantially over the course of the recession. In the nation as a whole, the seasonally adjusted unemployment rate rose from 4.5 percent at the start of 2007 to 9.9 percent at the end of 2009. In the 12 survey states over that same period, unemployment rose from 4.4 to 10.7 percent. The full set of 17 study states in the administrative-only analysis file also experienced higher unemployment growth than the nation as whole, although the difference was less pronounced. Because of these differences, findings based on the study states might not generalize to the nation as a whole.
- The average number of weeks of regular UI benefits collected in the study states were 1 to 2 percent greater than the national average. In addition, the ratio of EUC08 first payments to UI first payments was 0.43 both in the survey states and nationwide. This suggests that similar shares of UC recipients in the survey states and the nation as a whole exhausted their

UI claims and proceeded to collect EUC08 benefits. However, recipients in our study states were noticeably more likely to exhaust tier-1 and tier-2 benefits and they collected one to two more weeks of EUC08 benefits than recipients across the nation as a whole.

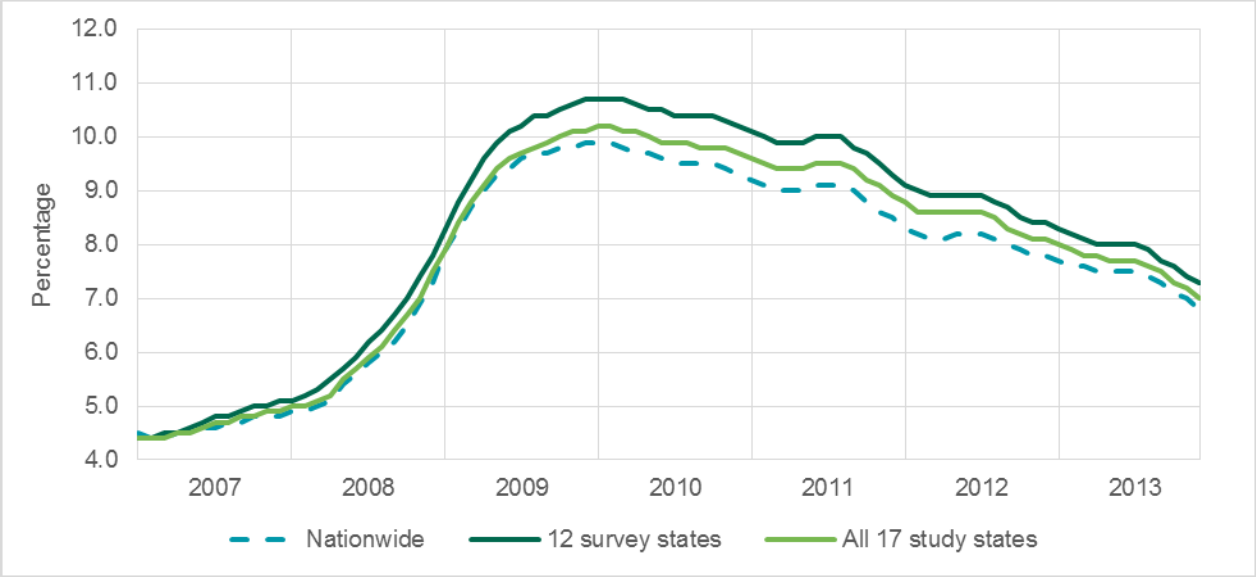
Table II.2. UC program statistics 2008 to 2013

	Nation	12 survey states	All 17 states included in administrative-only analysis file
UI program			
Number of first payments	57.3 million	24.0 million	32.7 million
Recipiency rate	30.5%	29.4%	29.2%
Number of weeks compensated	1,003 million	430 million	582 million
Exhaustion rate	49.5%	51.7%	51.4%
Average duration of benefits collected	17.5 weeks	17.9 weeks	17.8 weeks
Average weekly benefit amount	$292	$297	$297
Average UI wage replacement rate	33.7%	33.0%	32.6%
Total benefits paid	$293 billion	$128 billion	$173 billion
EUC08 program (all tiers except where specified)			
Number of first payments (tier 1 only)	24.5 million	10.4 million	14.6 million
Number of weeks compensated	792 million	358 million	484 million
Exhaustion rate for tier 1	69.2%	81.9%	72.9%
Exhaustion rate for tier 2	73.3%	79.8%	72.1%
Exhaustion rate for tier 3	85.8%	89.2%	84.6%
Exhaustion rate for tier 4	94.4%	95.7%	93.7%
Average duration of benefits collected	32.4 weeks	34.3 weeks	33.1 weeks
Average weekly benefit amount	$290	$298	$295
Total benefits paid	$230 billion	$107 billion	$143 billion
EB program			
Number of first payments	6.6 million	2.9 million	4.3 million
Number of weeks compensated	100 million	47 million	67 million
Exhaustion rate	70.0%	71.7%	69.6%
Average duration of benefits collected	15.3 weeks	16.1 weeks	15.7 weeks
Average weekly benefit amount	$294	$301	$296
Total benefits paid	$29.5 billion	$14.1 billion	$19.8 billion
Number of UI jurisdictions	**53**	**12**	**17**

Source: UI program statistics are mostly based on monthly data covering January 2008 through June 2013 from ETA 5159 Reports (http://workforcesecurity.doleta.gov/unemploy/claimssum.asp). The UI recipiency rate also uses data on the total number of unemployed from the Local Area Unemployment Statistics of the Bureau of Labor Statistics (http://www.bls.gov/lau/data.htm), and the average UI wage replacement rate is based on ET Financial Handbook 394 (http://ows.doleta.gov/unemploy/hb394.asp). EUC08 and EB program statistics are based on monthly aggregate activity reports for the each program covering July 2008 through December 2013 (available at http://workforcesecurity.doleta.gov/unemploy/euc.asp).

Note: The UI recipiency rate is defined as the total number of insured unemployed individuals in regular unemployment benefits programs divided by the total number of unemployed individuals. The average UI wage replacement rate is defined as the ratio of the average weekly benefit amounts for payments made through the UI program to the average weekly wage in UI-covered employment. Exhaustion rates are calculated as the total number of last payments divided by the total number of first payments. Average benefit durations are calculated as the number of weeks compensated divided by the number of first payments. Average weekly benefit amounts are calculated as the total benefits paid divided by the number of weeks compensated.

Figure II.2. Total unemployment rates over time, nationwide and for study states



Source: Local Area Unemployment Statistics (LAUS) data from the Bureau of Labor Statistics (http://www.bls.gov/lau/data.htm)

Note: The graph displays seasonally adjusted unemployment rates for the labor force contained in each of the listed areas. Nationwide estimates do not include Puerto Rico and the Virgin Islands because the LAUS database does not contain information for those jurisdictions.

C. Description of the survey respondents

Because the analyses of this study rely primarily on the merged data file for survey respondents, it is important to understand the extent to which they might resemble UI recipients in the nation as a whole.

- The survey data cannot be analyzed in a way that produces nationally representative estimates from a statistical standpoint. This is because, as explained further in Appendix B, there were systematic differences in unemployment rates between the states that were and were not able to make data available in time for the survey.
- Nonetheless, the characteristics of the UI recipients included in the survey were broadly similar to the characteristics of UI recipients in the nation as a whole in 2008 and 2009 (Table II.3). The distribution of demographic characteristics and pre-separation job industries generally differs between survey respondents and the national population of UI recipients by only one or two percentage points. The most sizeable difference is in the share that is black or African American, which is estimated to be almost 21 percent for the national population and 17 percent for survey respondents.[12] In addition, the study's survey sample includes a slightly higher share of females than the national population of UI recipients (42 percent versus 40 percent).

[12] Some of this discrepancy could arise because the figures in the table are based on records with complete data only. Race information was not available for over one-fifth of the records in the national database of UI recipients used to draw comparisons with the survey sample.

This suggests that the experiences of recipients in the 12 survey states might be reflective of a broad cross-section of individuals who began collecting UI during the recession. Nonetheless, generalizing findings beyond the study states should still be done cautiously because of the systematic differences in economic conditions noted above between these states and the nation as a whole.

Table II.3. Characteristics of the national unemployed population, the national population of UI recipients, and respondents to this study's survey (percentages)

	UI recipients included in this study's survey	National population of UI recipients	National population of all unemployed workers
Gender			
Female	42.2	39.7	41.7
Male	57.8	60.3	58.3
Ethnicity			
Hispanic or Latino	17.2	17.2	18.9
Not Hispanic or Latino	82.8	82.8	81.1
Race			
Black or African-American	16.9	20.5	18.9
White	74.3	74.3	74.0
Other	8.8	5.2	7.1
Age			
Younger than 25	9.1	9.5	28.3
25 to 34	24.8	23.7	22.6
35 to 44	23.2	24.1	18.7
45 to 54	26.1	24.8	17.6
55 or older	16.9	17.8	12.8
Industry			
Natural resources and mining	2.2	2.8	2.1
Construction	16.4	15.5	13.7
Manufacturing	20.4	18.3	13.9
Trade, transportation, and utilities	15.1	17.9	19.0
Information	2.4	2.6	2.3
Financial activities	6.4	5.2	4.8
Professional and business services	15.5	17.4	12.0
Education and health services	10.1	8.4	8.8
Leisure and hospitality	7.2	7.3	12.9
Other services	2.3	2.8	4.0
Public administration	2.1	1.7	6.5

Source: Merged survey respondent data file developed for this study (described above), ETA Form 203 data (http://workforcesecurity.doleta.gov/unemploy/chariu.asp), and Current Population Survey (CPS) microdata (Flood et al. 2015).

Note: The first column is based on the 2,122 individuals responding to the survey conducted for this study, and the estimates have been adjusted for survey nonresponse. The second column uses ETA 203 data on the national population of individuals filing a continued UI claim on the 19th of each month over the same period. The final column is based on CPS microdata describing all unemployed workers on the 15th of each month from January 2008 to December 2009. For all three columns, the summary statistics presented in the table are based only on records with complete data. Appendix Tables D.4 and D.5 provides additional information about how data items were coded for this study's survey sample.

It is also of potential interest to consider how UI recipients compare to the national population of unemployed workers that also includes nonrecipients. Historically, there have been substantial differences in UI application and recipiency rates across demographic groups, industries, and job separation reasons (Vroman 2009; Michaelides and Mueser 2012). And, laid-off workers who did not apply for UI tended to do so because they anticipated that they would not meet the eligibility requirements (Vroman 2009). This suggests that the broader population of unemployed would be more likely to include workers with lower earnings and more irregular employment, although UI modernization as a result of the ARRA could be expected to have reduced the extent of these differences (Lindner and Nichols 2012; Mastri et al. 2015). At the same time, a substantial proportion of unemployed UI nonapplicants before the recession expected to become employed soon, and, in some cases, reported that they did not need the money (Vroman 2009). If this pattern continued into the recession, it would suggest that some portion of unemployed nonapplicants had (or expected to have) better economic prospects than UI applicants and recipients. In actuality, differences between UI recipients and the national population of unemployed workers in gender, race, and ethnicity are relatively small (one or two percentage points), but there are more substantial differences between these groups in age (Table II.3). Most notably, over 28 percent of the unemployed were younger than 25 years, whereas less than 10 percent of UI recipients fell into that age category. This likely reflects the very high incidence of unemployment during the Great Recession among new entrants (Elsby et al. 2010; Michaelides and Mueser 2012) who would not generally meet the eligibility requirements of the UI program described in Chapter I. There are also substantial differences between the overall population of unemployed and the insured unemployed in the distribution of the pre-separation industry. This might be a product of the age differences already noted, as well as differences across industries in the UI eligibility or coverage rate. Hence, it could be problematic to extrapolate from the experiences of the UI recipients included in the survey to the larger population of unemployed workers.

III. PATTERNS OF BENEFIT COLLECTION AND POST-CLAIM EMPLOYMENT

In this chapter, we describe the main outcomes used in our analysis of UC benefit receipt and employment after recipients' initial UI claim dates. We provide an overview of how these key measures were constructed using individual-level administrative and/or survey data. To motivate the more-detailed examination in subsequent chapters, we also present an overall summary description of benefit collection and employment patterns for the sample of survey respondents.

Key findings

- Almost 46 percent of UC recipients responding to the survey collected recessionary benefits through the EUC08 or EB programs (in addition to UI benefits).
- On average, they collected a total of 36 weeks through the UI, EUC08, and EB programs combined, although there was substantial variation across recipients in the duration of UC benefit collection.
- The majority of all UC recipients (55 percent) we studied regained employment in the first calendar quarter after the quarter of their initial UI claims, and the percentage who became reemployed rose steadily over the first three post-claim years.
- About 86 percent became reemployed at some point during the three post-claim years. However, only 62 to 63 percent were employed toward the end of the third post-claim year (or at the time of the survey), indicating that post-claim employment was unstable or short-term for a substantial fraction of recipients.

A. Benefit collection

The administrative UC claims data linked to the records of survey respondents yield important insights into the benefit collection that are not readily gleaned from national aggregate data. The individual-level data allow us to develop detailed measures that provide an understanding of how extensively UC benefits were used during the Great Recession, particularly those available through the EUC08/EB program. In this section, we first describe how we constructed our main measures of UC receipt; this discussion includes information on the main monetary components of UI, EUC08, and EB claims needed to characterize the duration of benefits. We then characterize the overall patterns of the benefit collection among individuals responding to the survey conducted for this study.

1. Defining measures of UC receipt

Our main outcome measures of UC receipt for each UI claim are (1) whether it eventually led to EUC08 or EB collection, (2) the total duration of UC benefit collection through the regular, EUC08, and EB entitlements linked to it, and (3) the total number of dollars received through such claims. Much of our analysis focuses on the number of weeks of benefits collected, rather than dollars received, since duration measures allows for clearer comparisons of the extent of benefit utilization across recipients with differing WBAs.

We measure UC durations as the total benefit amount divided by the WBA—that is, as full-time week equivalents. For example, if recipient collected $7,800 through their UI claim and had a WBA of $300, we would calculate their duration of UI receipt as 26 weeks [= $7,800 / $300

per week]. In addition to providing a basis for comparing recipients with different WBAs, this approach results in duration measures unaffected by any "stretching out" of benefit collection over time due to weeks of partial or intermittent employment. Our study uses two main measures of duration:

1. The **total potential duration of benefits** is the maximum number of multiples of the WBA that could be collected through a given claim or set of UC claims linked to an initial UI claim. This measure captures the number of weeks of benefits available to UC recipients, which (as explained in Chapter I) could affect their job search behavior, unemployment durations, and other outcomes. The potential duration of UI claims varies in most states according to recipients' earnings during a one year base period before the claim, but is typically capped at 26 weeks.[13] The potential durations of EUC08 and EB claims linked to an initial UI claim are calculated as a multiple of the potential duration of the UI claim. For example, EUC08 tier 1 initially added 50 percent to recipients' potential durations, up to a maximum of 13 weeks. However, national legislation added new EUC08 tiers and/or changed the multipliers and maximums for existing tiers over time (Appendix Table D.1). In addition, the availability of EUC08 tiers and EB differed across states and over time depending on the rates of unemployment, given the triggering rules for these programs. We discus in Chapter V and Appendix B how we developed measures of potential benefit durations that accounted for this variation across states and time.
2. The number of **weeks of UC benefits collected** is calculated as the total dollars collected through the claim divided by the WBA. This calculation indicates the actual number of full-time week equivalents of benefits collected according to administrative UC claims data included in the merged survey respondent file. Most recipients could collect EUC08 or EB benefits only if they exhausted the benefits available through their UI claim. The total number of UC weeks collected through entitlements stemming from an initial UI claim is determined by taking the sum across all UI, EUC08, and EB claims linked to it.

For individuals with multiple UI first payments, we calculated potential durations and the number of weeks of benefits collected using only the EUC08/EB benefits tied to the one that was randomly sampled for the survey. That is, information about potential benefit availability or collection through another UI first payment was analyzed separately, given the claim-level analysis approach indicated in Chapter II.

2. Patterns of UC benefit collection

Around 45 percent of those who received a UI first payment between January 2008 and September 2009 also received a subsequent EUC08 first payment (Table III.1). This figure is slightly higher than the transition rate from UI to EUC08 of 43 percent we estimated in Chapter II using aggregated national data from 2008 through 2013 as a whole. Both are substantially larger than what the same type of aggregated data presented in Table I.2 suggest for the share of UC recipients who received benefits through earlier emergency programs.

[13] In some "uniform duration" states, all eligible claimants are entitled to a potential regular UI duration of 26 weeks, whereas in "variable duration" states the entitlement amount is determined by base period wages. As of early 2009, which was roughly the midpoint of the benefit collection start dates of the recipients examined in this study, there were 10 uniform duration UI jurisdictions including 3 study states (Illinois, New Hampshire, and New York).

Table III.1. Total weeks of UC benefits collected and EUC08/EB receipt (percentages unless otherwise indicated)

	Total
Total weeks of UC benefits collected	
One week or less	4.6
2 to 12 weeks	27.0
13 to 25 weeks	22.0
26 to 38 weeks	9.7
39 to 51 weeks	7.7
52 to 64 weeks	5.4
65 to 77 weeks	6.0
78 to 90 weeks	7.5
91 to 99 weeks	10.1
Average total duration of benefits (weeks)	35.7
Receipt of EUC08/EB benefits	
Collected EUC08 tier 1	45.2
Average duration of EUC08 tier 1 benefits (weeks)	16.6
Collected EUC08 tier 2	34.4
Average duration of EUC08 tier 2 benefits (weeks)	11.8
Collected EUC08 tier 3	28.1
Average duration of EUC08 tier 3 benefits (weeks)	11.5
Collected EUC08 tier 4	20.5
Average duration of EUC08 tier 4 benefits (weeks)	5.5
Collected EB	17.5
Average duration of EB benefits (weeks)	15.9
Collected all UI, EUC08, and EB benefits estimated to be potentially available	13.5
Had more than one UI first payment from 2008 through 2012	51.7
Unweighted sample size	**2,122**

Source: Merged survey respondent data file

Note: The total weeks of UC benefits collected were assigned to the categories displayed in the table after rounding to the nearest week. Average weeks collected for EUC08 tiers and EB were calculated among individuals who collected at least one dollar of benefits from the given program/tier. The number of weeks of UI, EUC08, and EB benefits available to a recipient was estimated based on the assumption that he or she remained continuously and fully unemployed after the initial UI claim date, as discussed in Chapter V and Appendix B. Estimates have been adjusted for survey nonresponse.

Just over 34 percent of UC recipients collected EUC08 tier 2 benefits; this represents around three-quarters of those who received benefits through tier 1 (Table III.1). Smaller percentages of survey respondents collected benefits through each progressively higher tier of EUC08 benefits, with 28 percent receiving tier 3 benefits, 21 percent receiving tier 4 benefits, and a little over 18 percent collecting benefits through the EB program.

Recipients collected, on average, a total of 36 weeks of UC benefits through both the regular UI claim and recessionary program claims linked to it (Table III.1). However, we found substantial variability in the duration of benefits received: more than half of recipients collected fewer than 26 weeks of benefits, and about 10 percent of recipients received 91 to 99 weeks of benefits. In addition, slightly more than half the survey respondents had a first payment on more than one UI claim over the five-year period covered by the administrative claims data.

Almost 14 percent of respondents collected all of the UC benefits estimated to be available to them (Table III.1). We created a measure to compare (1) the total weeks of benefits collected from all UI, EUC08, and EB claims linked to the initial UI claim; and (2) the total potential duration benefits available through all such claims, as estimated using the approach discussed in Chapter V and Appendix B. Based on this measure, 32 percent of those who received any EUC08 benefits collected all potential benefits estimated to be available to them. The corresponding figure was 39 percent among those who received any EUC08 tier 2 benefits (which were available in every state). In the remainder of this study, we will focus largely on the receipt of EUC08/EB and the total duration of benefits collected. An analysis of repeat claiming and a more comprehensive study of exhaustion will be included in a forthcoming report of the Research Study of UI Exhaustees being conducted by Mathematica for DOL.

B. Post-claim labor market outcomes

Our analysis uses two types of measures of labor market outcomes following a recipient's initial UI claim:

1. **Quarterly measures of employment and earnings during three post-claim years from the UI wage records data.** Because the data are measured on a quarterly basis, it is not possible to cleanly divide employment and earnings during the claim quarter into periods before and after the initial UI claim. Therefore, "post-claim" measures based on these data start with the calendar quarter after the quarter of the initial UI claim. For example, if the initial UI claim is in August 2008, the first post-claim quarter is the last calendar quarter of 2008.
2. **Employment status and earnings from the main job held at the time of the survey.** Respondents provided information about their labor force participation and employment during the week of the survey. They also indicated whether they currently held a job and, if so, gave information about their earnings, as well as other job characteristics. Respondents holding multiple jobs were asked to provide information about the one that they defined as being their main source of income and benefits.

One limitation of the administrative data are that they include only UI-covered employment in the 19 states providing wage records that could be used in this study. However, they include wage records from the states in which the main pre-UI job loss occurred for the recipients we analyzed. Although the survey collected data on employment between the initial UI claim date and the time of the survey, we do not use these retrospective data because we found evidence of substantial retrospective underreporting of employment during the first three post-claim years. There were fewer discrepancies between the two data sources closer to the interview date, though, suggesting a higher reliability of self-reported outcomes near the time of the survey. (See Appendix B for additional details.)

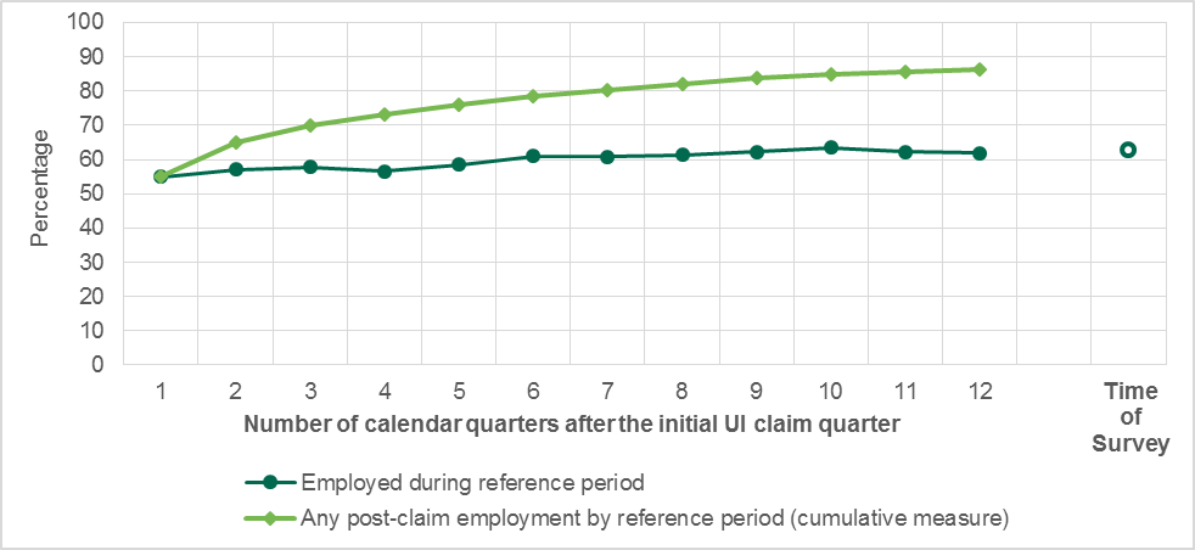
Based on the employment trajectories of UC recipients derived from the wage records and survey data (Figure III.1, Appendix Table D.3):

- Over half of the recipients had returned to work by the first calendar quarter after their initial UI claims. Approximately 55 percent were employed in that quarter, and 73 percent had become employed by the end of the first post-claim year.

- Progressively more recipients ended their joblessness spells over time, although the fraction who had become reemployed tapered off by the end of the third post-claim year. Approximately 86 percent of respondents had been employed in at least one quarter over that three-year window, based on the administrative data.
- There was a substantially smaller rise over time in the fraction of individuals who were employed within any given post-claim quarter. Although, 73 percent of the recipients had become reemployed at some point during the first year after the UI claim quarter, only 56 percent were employed within the final quarter of that year. At the end of the third post-claim year 62 percent were employed. Hence, at least 24 percent of recipients [= 86 – 62] had started a job but were no longer employed at the end of the three-year window covered by the administrative data.

These patterns suggest a considerable amount of cycling in and out of employment after recipients' initial UI claim dates. In addition, our estimates of the fraction of recipients that became reemployed in the years following their initial UI claims are substantially higher than what was observed in studies of past emergency benefits programs (Chapter I). However, these differences relative to past studies could partly be attributable to an improved capacity to track post-claim employment using the administrative data available for this study.[14]

Figure III.1. Overall patterns of post-claim employment



Source: Merged survey respondent data file

Note: The quarterly data points with solid graph markers and line connecters are based on administrative UI wage records for quarters following the initial UI claim quarter. The data point indicated with a hollow marker is based on survey responses about employment during the week before the survey.

[14] The study of the 1980s FSC program (Corson et al. 1986) used administrative UI wage data capturing only intrastate employment within each of 13 states in which recipients' had established their initial UI claims. Using ET Financial Handbook 394 data, we estimate that those 13 states included roughly 29 percent of the nation's UI-covered employment while the FSC program was in effect. As noted previously, this study's administrative data capture any UI-covered employment occurring in 19 states covering 64 percent all such UI-covered employment during the period when EUC08 was available. The study of the 1990s EUC program (Corson et al. 1999) used survey-based measures of retrospective employment, which our analysis in Appendix B suggests might have resulted in underestimates of employment shortly after the initial UI claim date.

The main summary measure of reemployment used in this study is the total number of quarters of employment over the three years after recipients' initial UI claim dates, as recorded in the administrative data. We also analyze the number of quarters until first reemployment so that we can compare our results to other research. However, we focus on the number of quarters employed because the apparent volatility of post-claim employment implies that the duration of initial joblessness is unlikely to adequately summarize recipients' employment experiences.

IV. WHO COLLECTED RECESSIONARY BENEFITS AND HOW DID THEY FARE?

In this chapter, we describe the characteristics of survey respondents and their experiences during the years after their initial UI claim. We focus on EUC08/EB recipients and how they compare to those who collected only UI ("UI-only recipients"). These comparisons between UI-only recipients and EUC08/EB recipients are not intended to measure the effects of receiving additional UC benefits or to model the link between benefit availability and outcomes. Instead, the purpose of the simple descriptive tabulations presented in this chapter is to characterize the extent to which those who collected EUC08 and EB benefits were hit harder by the recession or faced more limited reemployment prospects than those who did not collect such benefits. Our discussion of the results focuses largely on differences between UI-only recipients and EUC08/EB recipients that are statistically significant, but we also highlight similarities between the two groups when they are unexpected or of substantive importance.

Key findings

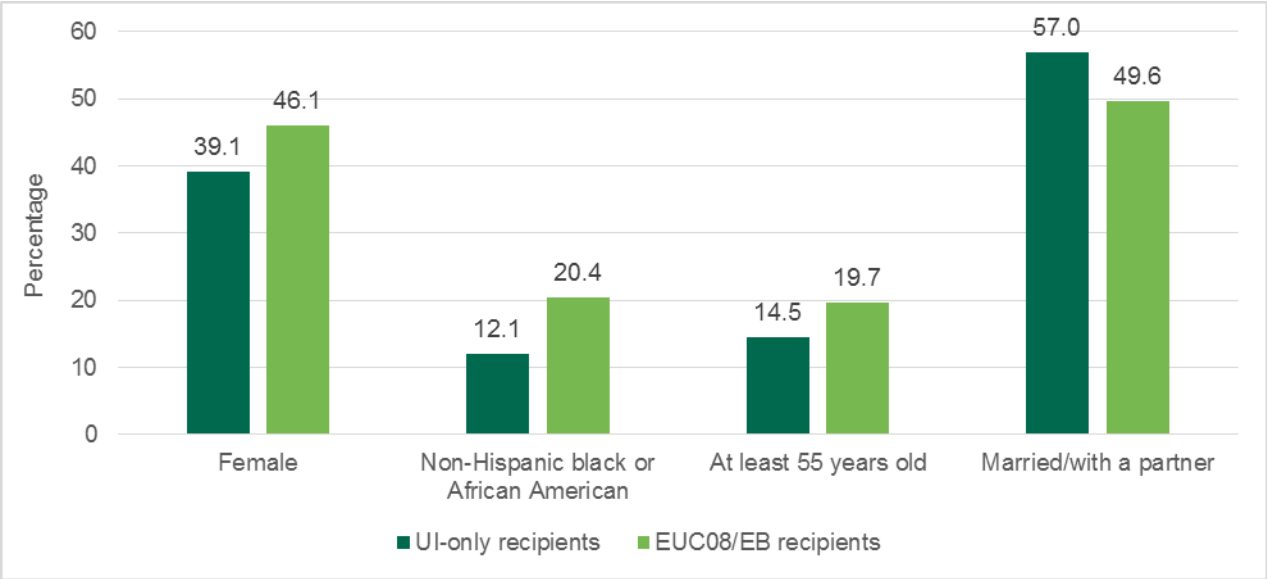
- In comparison to those who received UI only, we found that EUC08/EB recipients:
  - Were more likely to come from groups with historically worse labor market outcomes
  - Were less likely to have experienced layoffs in the past
  - Were more likely to have been displaced from their last job because it was permanently eliminated or there was insufficient work for them
  - Were less likely to find reemployment during the three years after their UI claims and more likely to have experienced financial hardships since their initial UI claim dates
  - Were less likely to be employed four to six years after their initial UI claim dates and were more likely to have exited the labor force by that point
- Among those employed at the time of the survey, EUC08/EB recipients were more likely than UI-only recipients to have experienced reductions in earnings, hours, and other measures of job quality in comparison to their pre-claim job

A. Characteristics of recipients before collecting UI

EUC08/EB recipients were more likely than UI-only recipients to come from demographic groups that have historically faced labor market barriers (Figure IV.1, Appendix Table D.4). Compared to those who collected UI only, recipients who collected EUC08/EB were more likely to be female, non-Hispanic African American, and older. In addition, EUC08/EB recipients were less likely than UI-only recipients to be married or with a partner—household structures that are associated with greater income security.

There were no statistically significant educational differences between EUC08/EB and UI-only recipients (Appendix Table D.4). This result is similar to what Corson et al. (1986) found for the FSC program of the early 1980s. However, it stands in contrast to the finding of Corson et al. (1999) that the longer-term recipients of benefits through the 1990s EUC program tended to be more highly educated than those who collected only UI while the EUC program was in effect.

Figure IV.1. Demographic characteristics



Source: Merged survey respondent data file

Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the characteristics displayed in the figure are statistically significant ($p < 0.05$, two-tailed test).

EUC08/EB recipients were more likely to have separated from a job in finance, professional services, and business support industries, as compared to recipients of UI only (Figure IV.2, Appendix Table D.5). This differential could partially reflect the toll the recession took on those sectors, although historically workers in those financial and professional industries have been more likely than those from other industries to exhaust UI benefits. EUC08/EB recipients were less likely to have been employed in construction before their initial claim than recipients of UI only. This differential could reflect the recession but it is also consistent with seasonal employment that would result in a lower likelihood of exhausting regular UI benefits.

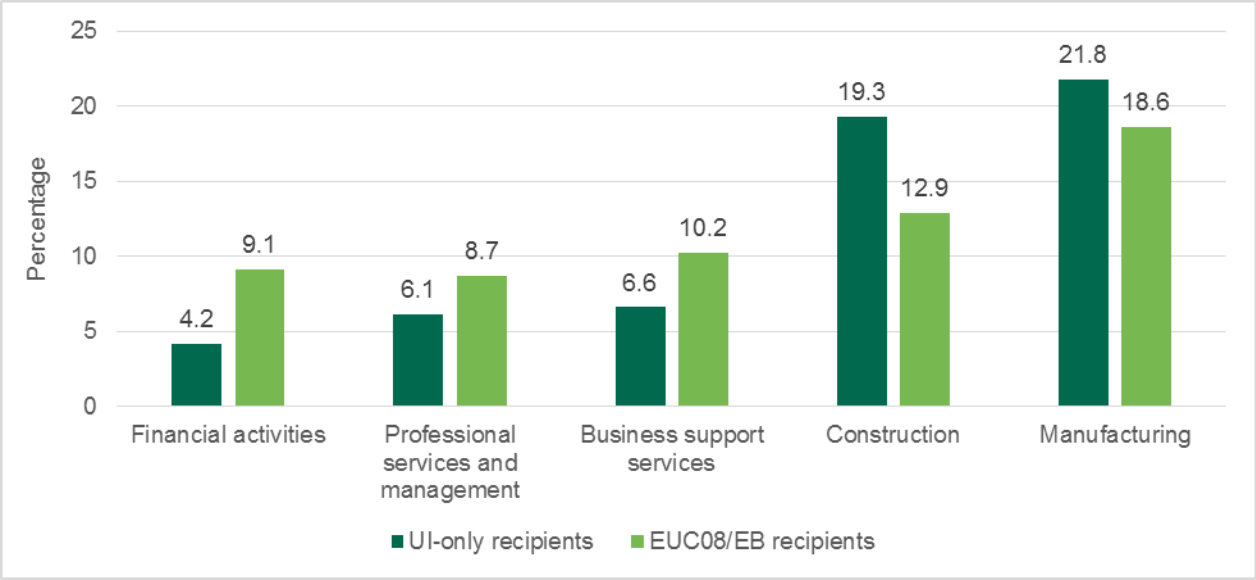
EUC08/EB recipients were less likely to have a history of prior layoffs and less likely to have been unionized in their pre-UI job than were recipients of UI only (Figure IV.3, Appendix Table D.6)**.** Moreover, EUC08/EB recipients were less likely both to expect a recall and to be recalled to their pre-UI job, in comparison to those who collected UI only (Figure IV.3, Appendix Table D.7). Unionized jobs have historically been associated with shorter-term layoffs and an option to return the separating employer as work becomes more available again.

EUC08/EB recipients were more likely to have been displaced from the pre-UI job, as compared to UI-only recipients. Overall, 58 percent of recipients in our sample were "displaced workers," defined by the Bureau of Labor Statistics (BLS) as those who reported having been laid off due to lack of work; elimination of a job or shift; closing or moving of a plant, facility, or company; the recession; or downsizing or restructuring of the company.[15]

[15] We classified recipients as displaced workers according to the category of the job separation reason they reported when responding to the survey. This aligns with the core definition of displaced workers used by the BLS, and it is distinct from the more-complex approach to defining "dislocated workers" for the purposes of programs funded through the Workforce Investment Act and the Workforce Innovation and Opportunity Act.

However, displaced workers represented 64 percent of EUC08/EB recipients compared to 54 percent of recipients who collected UI only (Figure IV.3, Appendix Table D.7). This pattern suggests that displaced workers might have had more difficulties in finding employment after the UI claim than other UC recipients—a group that included those who reported having been fired, retired, quit, or ended a temporary job.

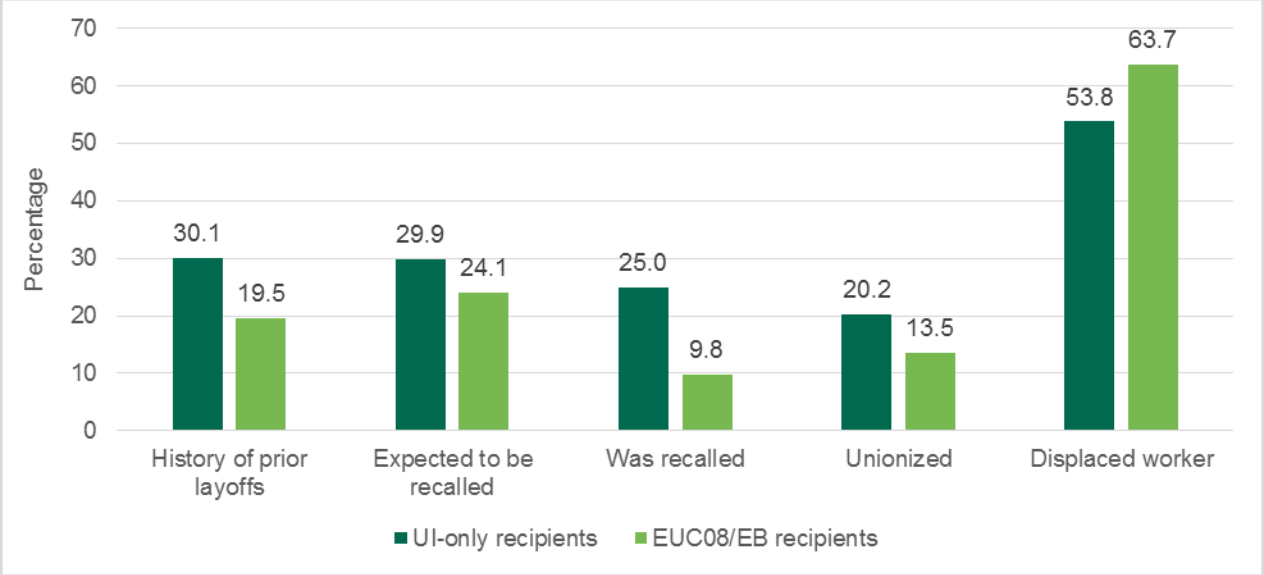
Figure IV.2. Industry of the pre-claim job



Source: Merged survey respondent data file

Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the industries displayed in the figure are statistically significant ($p < 0.05$, two-tailed test), with the exception of manufacturing.

Figure IV.3. Pre-claim layoff history, job separation, and union membership

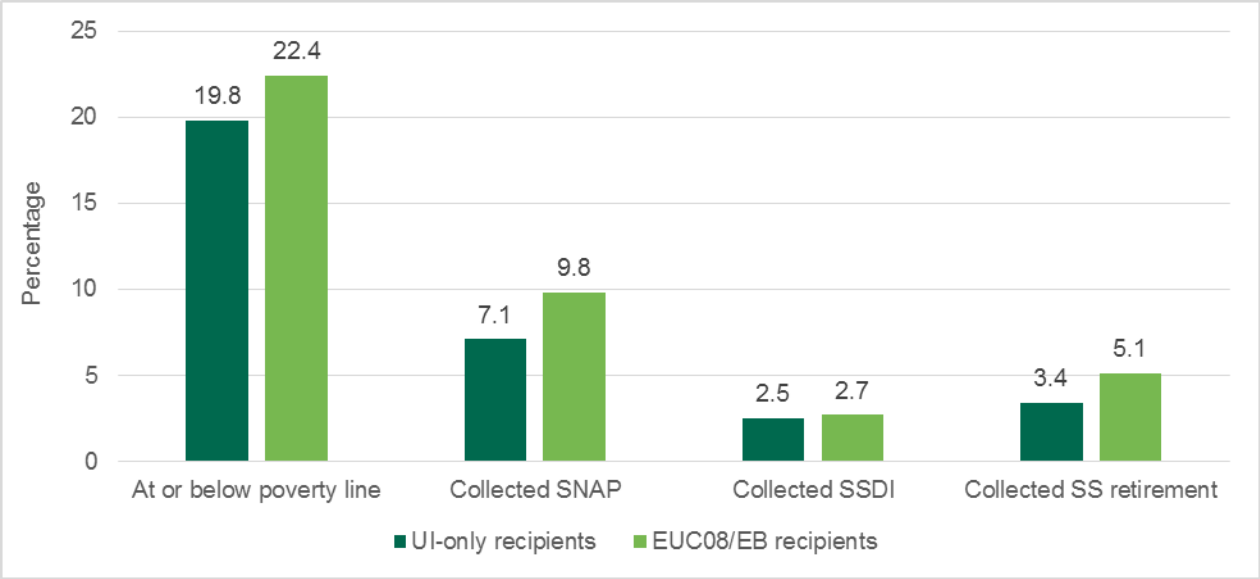


Source: Merged survey respondent data file

Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test).

Household economic circumstances before the initial UI claim were similar between those who eventually collected EUC08/EB and those who would collect UI only. There was a small difference (three percentage points) in household-level SNAP participation rates before the claim: 10 percent versus 7 percent for EUC08/EB and UI-only recipients, respectively. However, we found no statistically significant differences between the two types of recipients in pre-claim poverty rates or income support through the Social Security Disability Insurance (SSDI) or Social Security retirement programs in the pre-claim period (Figure IV.4 and Appendix Tables D.8 and D.9). In addition, asset ownership rates at the time of the initial UI claim did not differ significantly between EUC08/EB recipients and UI-only recipients (Appendix Table D.10).

Figure IV.4. Pre-claim income and program participation



Source: Merged survey respondent data file

Note: All of the measures displayed in this figure are household-level measures of income or program participation. Estimates have been adjusted for survey nonresponse. The difference between EUC08/EB and UI-only recipients in household SNAP receipt displayed in the figure is statistically significant ($p < 0.05$, two-tailed test). Other differences are not statistically significant.

SNAP = Supplemental Nutrition Assistance Program, SS = Social Security, SSDI = SS Disability Insurance, including disability-based Supplemental Security Income.

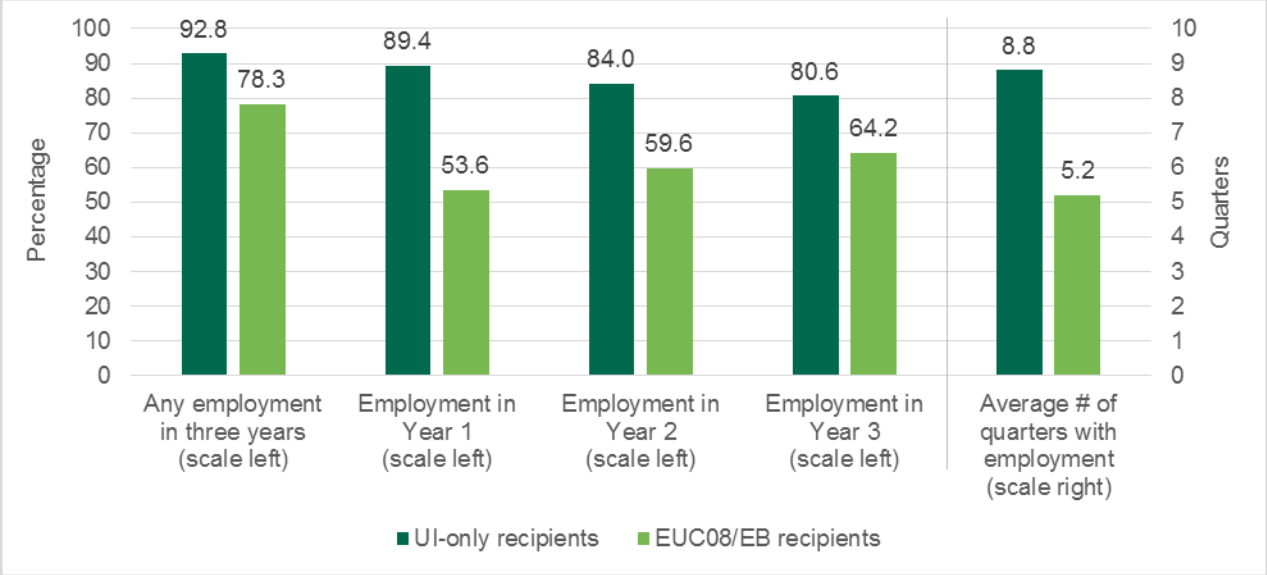
B. How UC recipients fared after the initial UI claim

In this subsection, we examine reemployment patterns during the three years after recipients' initial UI claim and financial hardships from the time of the claim to the time of the survey. Measures of employment are obtained from the UI wage records, for the reasons discussed in Chapter II, and measures of financial hardship are obtained from the survey. In addition, we examine measures of other activities related to labor market outcomes such as job search efforts and training participation based on survey data.

EUC08/EB recipients were less likely than UI-only recipients to be employed in the three years after their UI claim, and they became reemployed significantly later (Figure IV.5, Appendix Tables D.11 and D.12).

- Approximately 78 percent of EUC08/EB recipients and 93 percent of UI-only recipients were employed over this period as a whole.
- By the end of the first year after the initial UI claim quarter, almost 54 percent of EUC08/EB recipients returned to work, as compared to 89 percent of the UI-only recipients
- The employment rate among EUC08/EB recipients rose in each post-claim year and peaked at 64 percent in the third year, whereas the employment rate among UI-only recipients peaked (at 89 percent) in the first year and fell to 81 percent by the third post-claim year
- UI-only recipients were employed in 3.6 more quarters, on average, than EUC08/EB recipients during the three year follow-up period after recipients' initial UI claim quarters. Among those with any employment during the three-year period after the claim quarter, EUC08/EB recipients became first reemployed about two quarters later than UI-only recipients, on average.

Figure IV.5. Employment during the three years after the initial UI claim quarter



Source: Merged survey respondent data file

Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the employment measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test). All employment measures are based on quarterly administrative wage data.

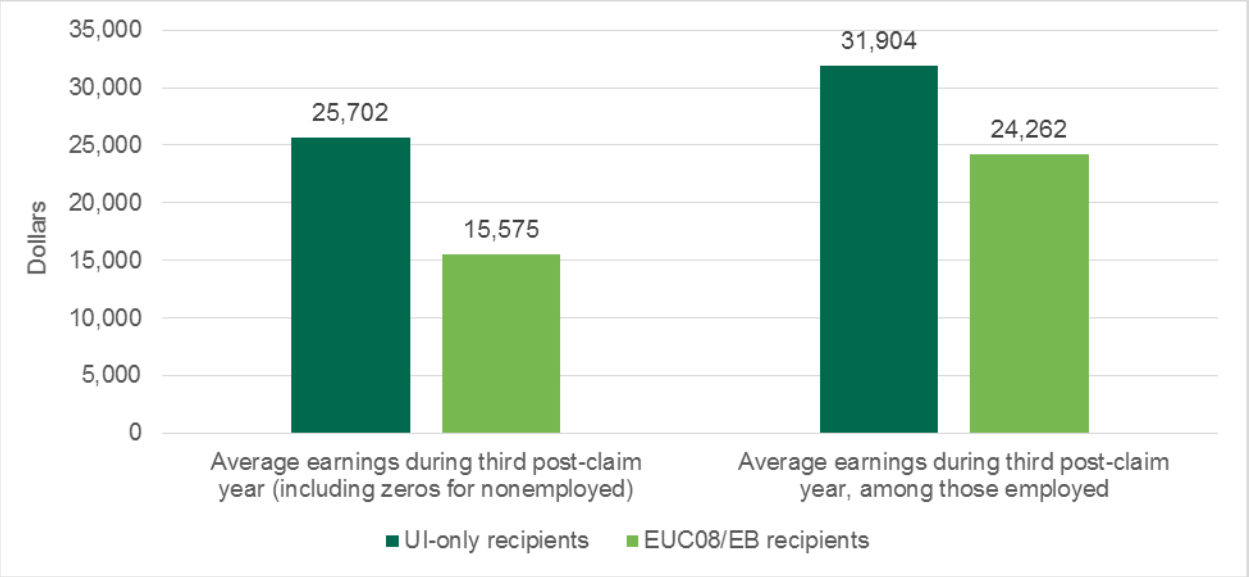
During the third post-claim year, EUC08/EB recipients continued to experience lower employment rates and had lower earnings than UI-only recipients (Figures IV.5 and IV.6, Appendix Tables D.12 and D.13)**.** Specifically:

- Roughly 64 percent of EUC08/EB recipients and 81 percent of UI-only recipients were employed in the third year after the initial UI claim quarter.
- EUC08/EB recipients earned around 61 percent as much as UI-only recipients ($15,600 versus $25,700) over the third post-claim year, on average, which is partly due to the difference in employment rates between the two groups. Among those who were employed during the third post-claim year, the average third-year earnings of employed EUC08/EB

recipients was 75 percent as large as that of employed UI-only recipients ($24,300 versus $31,900).

Many recipients collecting full entitlements of UI, EUC08, and EB benefits (up to 99 weeks) stemming from their initial UI claim would exhaust their available benefits by the third post-claim year. However, recipients who had interruptions in their benefit collection due to partial employment or short-lasting jobs might still be collecting EUC08 or EB benefits during the third year after the initial UI claim.

Figure IV.6. Earnings during the third year after the initial UI claim quarter



Source: Merged survey respondent data file

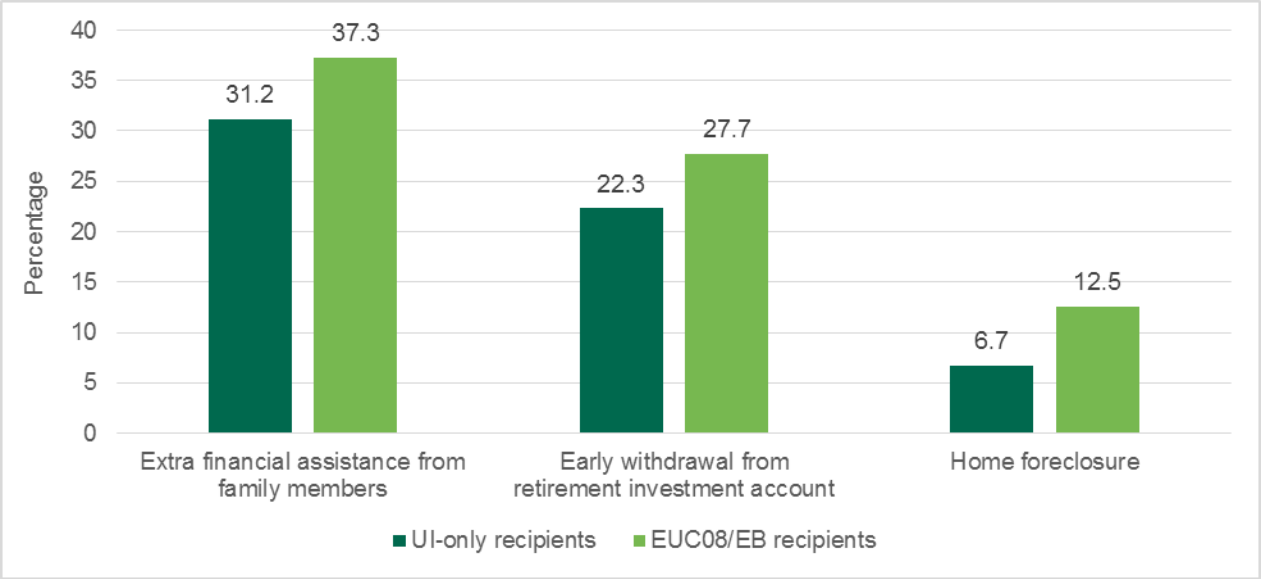
Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the earnings measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test). The earnings measure are based on quarterly administrative wage data.

EUC08/EB recipients were more likely than UI-only recipients to face financial difficulties in the years following their initial UI claims (Figure IV.7, Appendix Table D.14). EUC08/EB recipients were more likely than UI-only recipients to receive extra financial assistance from family members or to make an early withdrawal from a retirement investment account. In addition, the rate of home foreclosure among EUC08/EB recipients was 13 percent, which was almost double the rate among UI-only recipients.

Although they experienced worse employment outcomes, EUC08/EB recipients reported a higher job-search intensity and greater training participation than did UI-only recipients. As shown in Figure IV.8, EUC08/EB recipients reported having spent almost two more hours each week looking for work following their job separations than did UI-only recipients (17 hours versus 14 hours). This was true for both those workers who expected to be recalled to their prior jobs and those who did not (Appendix Table D.15). Almost two-thirds of recipients who searched for work contacted an American Job Center, a state employment center, or another government agency as part of their search efforts (Appendix Table D.15), and EUC08/EB recipients were significantly more likely than UI-only recipients to have done so (69 percent versus 61 percent). In addition, almost 37 percent of EUC08/EB recipients participated

in employment and training programs after their job loss, as compared to 32 percent of UI-only recipients (Figure IV.8, Appendix Table D.16).

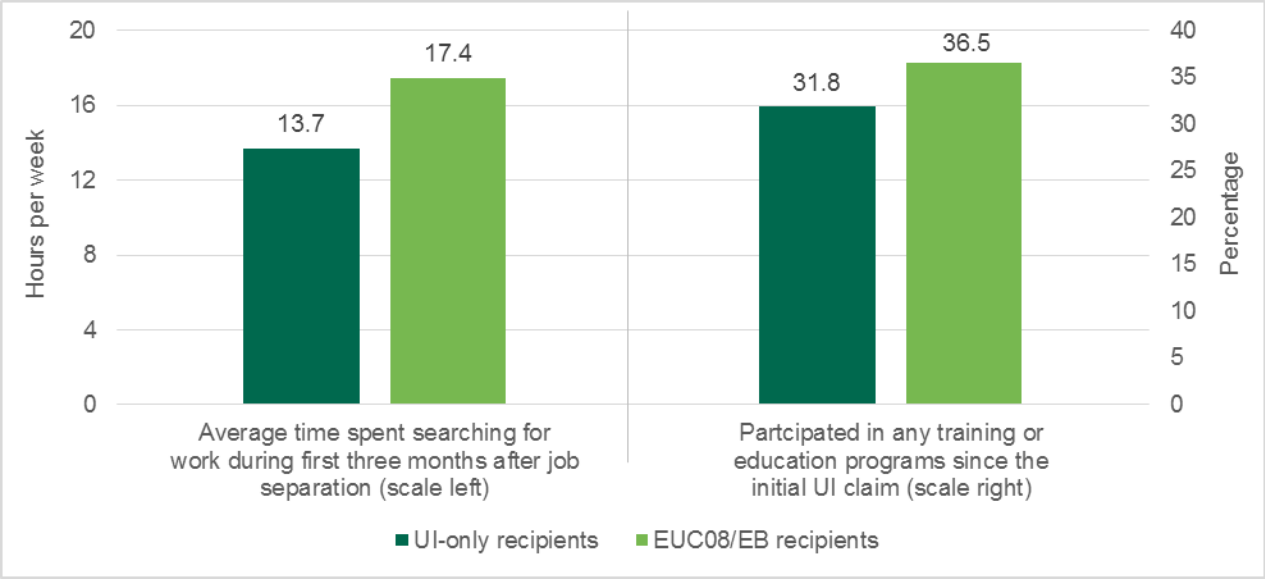
Figure IV.7. Post-claim financial outcomes



Source: Merged survey respondent data file

Note: Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test).

Figure IV.8. Job search intensity and training participation



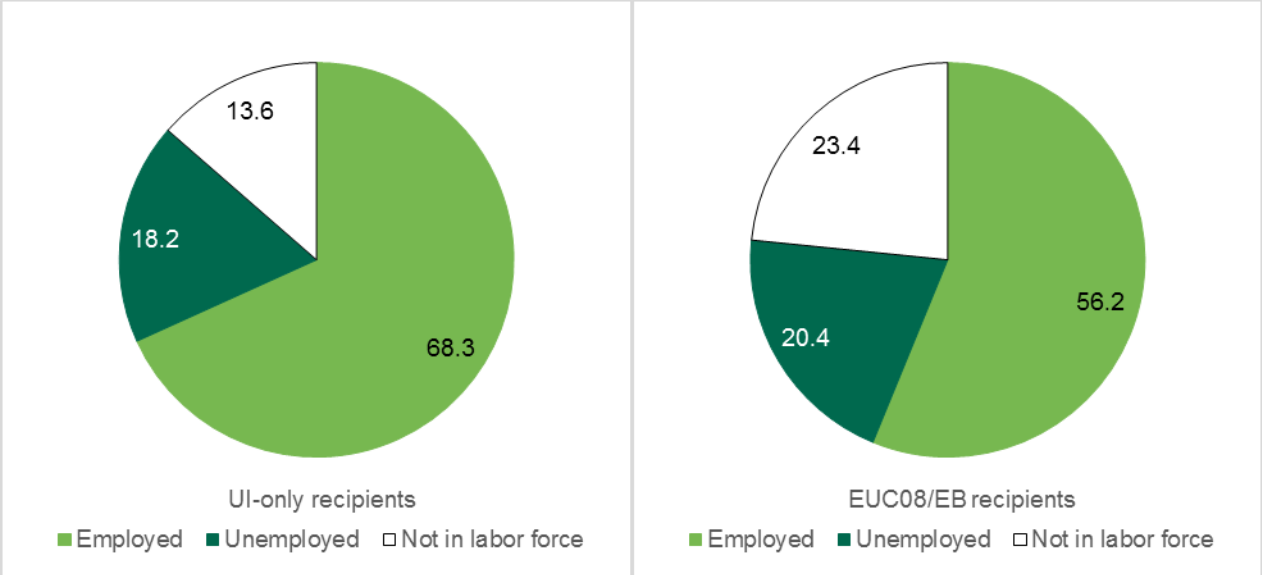
Source: Merged survey respondent data file

Note: Averages of the number of hours spent searching per week include zeroes for recipients who reported that they did not search for work during the first three months after separating from their pre-UI job. Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients for the measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test).

C. How recipients fared at the time of the survey (four to six years after their initial UI claims)

EUC08/EB recipients had lower employment and labor force participation rates in the week before the survey interview than those who received UI only (Figure IV.9, Appendix Table D.17). Approximately 56 percent of those who had collected EUC08/EB were employed at that time, compared to 68 percent of former UI-only recipients. This difference largely reflects a higher rate of labor force exit among EUC08/EB recipients, as compared to UI-only recipients. At the survey date, 23 percent of EUC08/EB recipients were not participating in the labor force versus 14 percent of those who had collected UI benefits only. The overall difference between groups in the share who were unemployed was small (20 percent versus 18 percent). Focusing on those participating in the labor force, the unemployment rate was 26 percent [= 20 / (100 – 23)] among EUC08/EB recipients and 21 percent [= 18 / (100 –14)] among UI-only recipients.

Figure IV.9. Labor force participation at the time of the survey



Source: Merged survey respondent data file

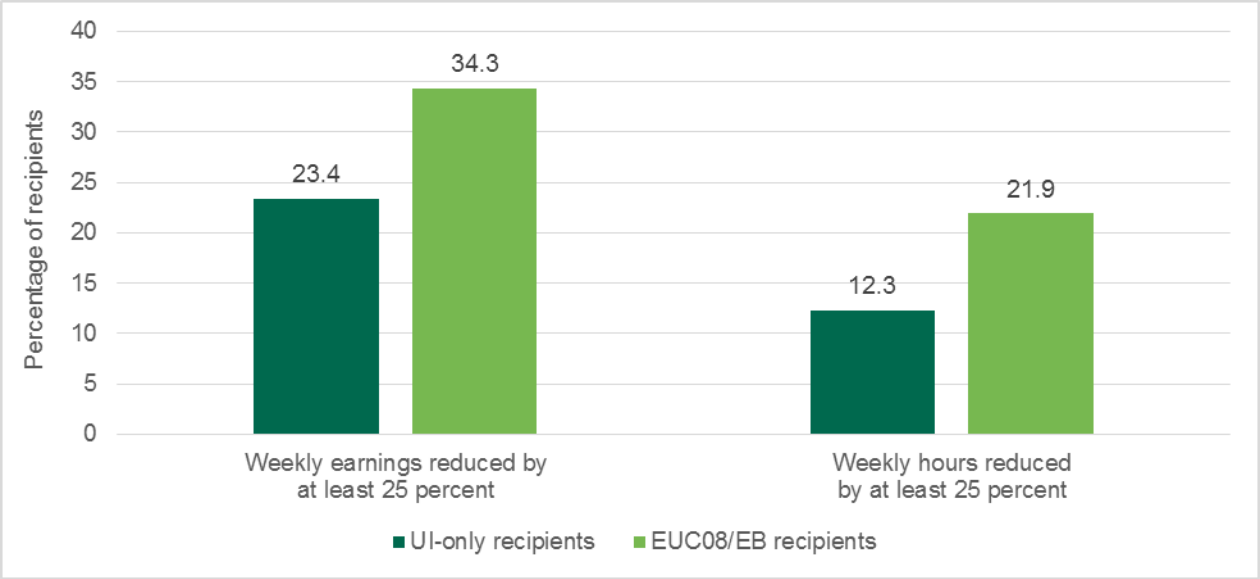
Note: Categories were defined based the main work-related activity during the week before the interview. Estimates have been adjusted for survey nonresponse. Differences in the shares of EUC08/EB and UI-only recipients employed and not in the labor force are statistically significant ($p < 0.05$, two-tailed test).

Among those employed at the time of the survey, EUC08/EB recipients tended to hold less well-paid jobs than recipients who claimed UI only. In comparison to UI-only recipients, EUC08/EB recipients averaged 13 percent less in weekly earnings and were less likely to receive health insurance or retirement benefits from their jobs (Appendix Table D.18).

EUC08/EB recipients were also more likely to have experienced reductions in earnings and hours in their post-claim job compared to their pre-UI job (Figure IV.10, Appendix Table D.19). For example, relative to UI-only recipients, EUC08/EB recipients were 1.5 times as likely (34 percent versus 23 percent) to experience a reduction in their earnings of 25 percent or more. In addition, as indicated in Appendix Table D.19, EUC08/EB recipients were more likely than those who only received UI to have found reemployment in a different job (68 percent

versus 52 percent) or occupation (59 percent versus 51 percent) than the pre-claim job. This might reflect career changes or job downgrading necessitated by a permanent dislocation.

Figure IV.10. Reductions in earnings and hours from pre-claim job to main job at the time of the survey



Source: Merged survey respondent data file

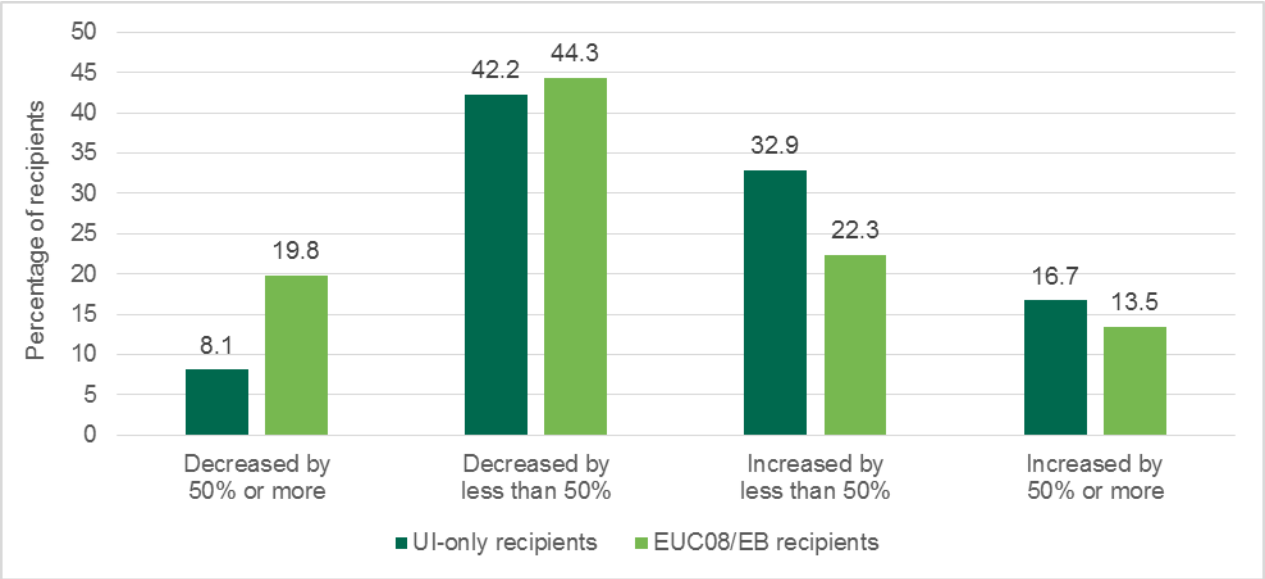
Note: Estimates have been adjusted for survey nonresponse. The percentages portrayed in the figure were calculated for respondents who were employed at the time of the interview. All differences between EUC08/EB and UI-only recipients for the measures displayed in the figure are statistically significant ($p < 0.05$, two-tailed test).

The economic well-being of EUC08/EB recipients declined more than that of UI-only recipients from the year before the initial UI claim to the time of the survey.

- Compared to UI-only recipients, EUC08/EB recipients were more likely to experience a large (50 percent or more) reduction in their household income between the year before the claim and 2013 (Figure IV.11, Appendix Table D.20). This was associated with a significant increase in poverty rates among EUC08/EB recipients over that timeframe that was not observed among UI-only recipients (Figure IV.12, Appendix Table D.8).
- The families of EUC08/EB recipients also experienced larger increases in the take-up of SNAP and SSDI/SSI benefits from the pre-claim year to the time of the survey. At the time of the survey, 17 percent of EUC08/EB households participated in SNAP and 11 percent participated in SSDI; these figures are about 1.5 times the comparable participation rates of the households of UI-only recipients (Figure IV.12, Appendix Table D.9).

The income support provided by EUC08 and EB surely helped reduce the extent to which some recipients fell into poverty while collecting such benefits. However, the survey was fielded four to six years after the initial UI claims of the recipients we studied. Hence, these findings could indicate longer-lasting effects of the financial hardships faced by EUC08/EB recipients during the recession or simply be the cumulative result of their more limited job prospects in comparison to UI-only recipients.

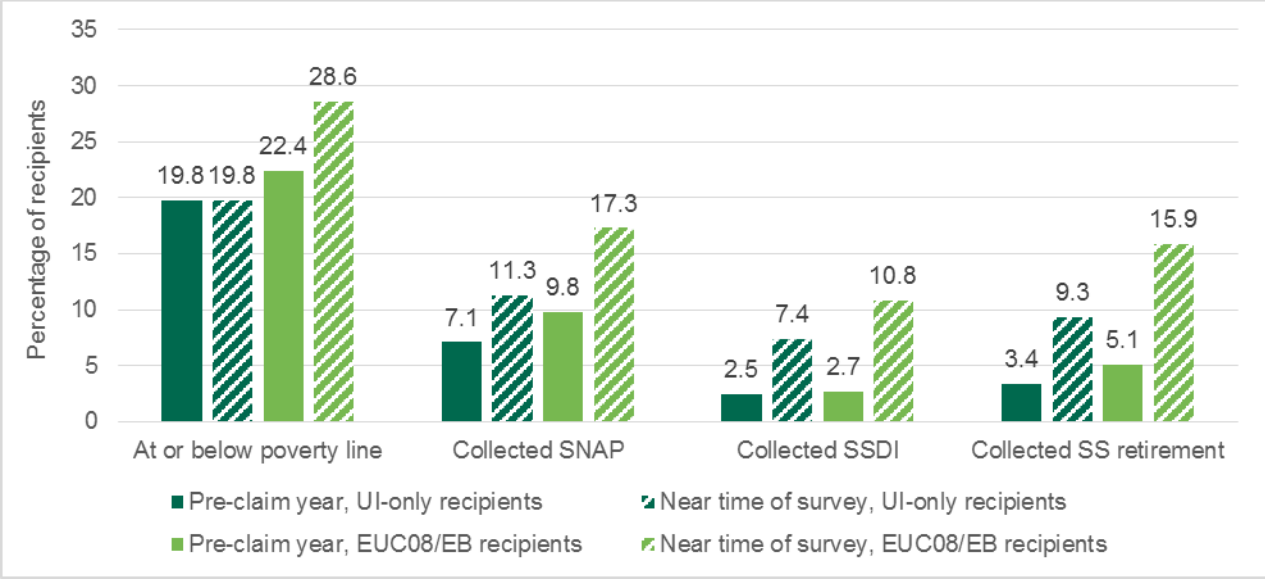
Figure IV.11. Change in household income from the pre-claim year to 2013



Source: Merged survey respondent data file

Note: The pre-claim year was either 2007 or 2008, depending on the respondent's initial UI claim date. Household income in the pre-claim year and from 2013 are both expressed in 2014 dollars. Income change measures exclude information from individuals reporting zero income in either period or a change of more than 1,000 percent between years. Estimates have been adjusted for survey nonresponse. The distribution of income changes differs significantly ($p < 0.05$, two-tailed test) between EUC08/EB and UI-only recipients.

Figure IV.12. Changes in poverty and program participation over time



Source: Merged survey respondent data file

Note: See notes to Figure IV.11. Poverty near the time of the survey was determined based on respondents' household income in 2013, and program participation was measured on the date of the interview. Estimates have been adjusted for survey nonresponse. All differences between EUC08/EB and UI-only recipients near the time of the survey are statistically significant ($p < 0.05$, two-tailed test), as are differences between groups in the change from the pre-claim period.

SNAP = Supplemental Nutrition Assistance Program; SS = Social Security; SSDI = SS Disability Insurance, including disability-based Supplemental Security Income.

V. HOW WERE POTENTIAL BENEFIT DURATIONS RELATED TO OUTCOMES?

In this chapter, we describe the relationships between potential benefit durations and actual benefit durations, reemployment, and long-run economic well-being. As discussed in Chapter I, these relationships have been an important topic of research to understand the effects of the availability of additional UC benefits such as those available via the EUC08 and EB programs. Longer potential benefit durations are expected to result in longer actual durations of unemployment, which could translate further into differences in other economic outcomes. We therefore assess the extent to which recipients who could receive a larger number of weeks of benefits experienced more or less favorable outcomes after their initial UI claims. We characterize potential benefit durations using measures that account for (1) the total number of weeks available through the regular and recessionary programs combined, and (2) how soon additional weeks from EUC08 tiers and EB became available.

We use a statistical analysis to measure associations between potential durations and outcomes, adjusting for differences among recipients in pre-claim characteristics like those discussed in Chapter IV. However, the results cannot be interpreted as causal impact estimates because potential durations and outcomes are both likely to be affected by additional factors that cannot be controlled for in the statistical model. Most notably, relatively worse labor market conditions led to longer potential benefit durations, as higher tiers of EUC08 and the EB program triggered on, and also would have made it harder to recipients to find reemployment. All else being equal, this would tend to yield statistical estimates that overstate the disincentive effects (and understate the supportive effects) of UC benefits because our estimates reflect both the effect of greater benefit availability and worse economic conditions. Nonetheless, the results of this analysis may provide descriptive insights about the role that the availability of additional recessionary UC benefits might have played in recipients' lives.

Key findings

- The rollout of EUC08 and the triggering on/off of the EUC08 and EB programs resulted in a potential benefit duration that changed over time and differed across states
- Based on analytic measures that capture some of the key aspects of how benefit availability varied across recipients, we found that each extra week of potential duration
  - Was associated with 0.39 to 0.46 more weeks of benefits collected
  - Was associated with a similar reduction in the time spent employed over a three-year period following the initial UI claim
  - Was associated with a roughly 0.10 to 0.15 week increase in the length of the initial post-claim joblessness spell

  These associations were strongest among UC recipients who were displaced workers.
- Benefit availability did not have any significant association with labor force participation or employment at the time of the survey, receipt of income support at that point, or financial hardships since the initial UI claim date

A. Measuring potential UC benefit durations

The additional benefits available through the EUC08 and EB programs changed over time for recipients in each state and differed across states because of (1) changes to legislation

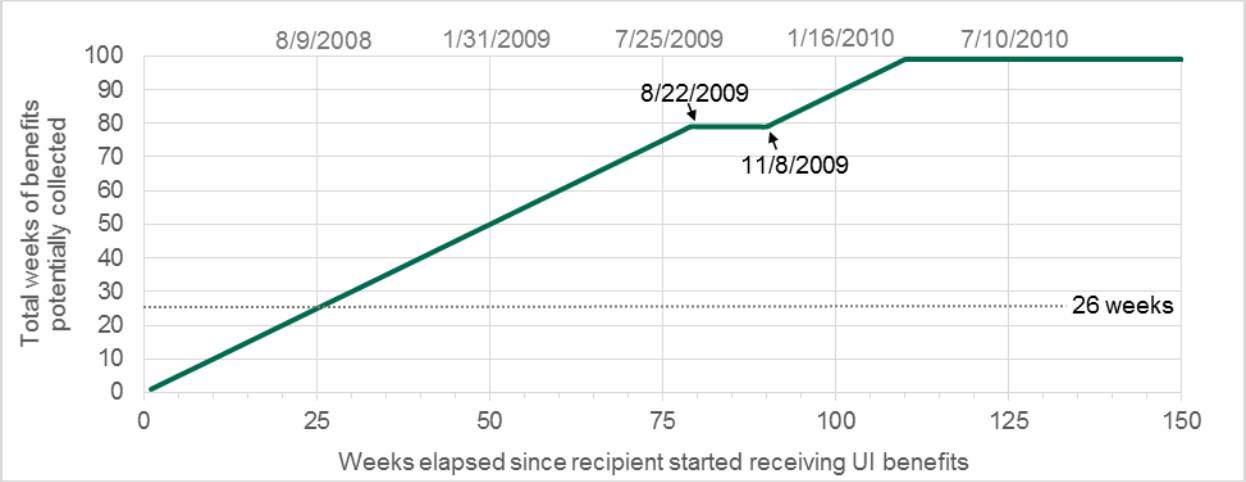
governing the programs and (2) changes in the state's unemployment rate that "triggered on" tiers or programs. As discussed earlier in this report, the EUC08 program was rolled out in stages, resulting in an expansion over time of the total potential weeks of benefits to a peak of 99 weeks and, later, a contraction of these benefits. Over this period, national legislation created additional tiers of EUC08 benefits and changed the multiplier used to determine the number of EUC08 weeks available to a recipient based on potential durations of her or his regular UI claim. In addition, EB and some tiers of EUC08 were subject to an unemployment rate trigger. Hence, the trajectory of UC benefits available to recipient varied by the number of weeks of UI benefits to which they were entitled, the state, and the date of their first claim. Figures V.1 to V.4 illustrate how these trajectories could vary.

Figure V.1 illustrates the cumulative total number of UC weeks that could be collected by a recipient in a hypothetical high-unemployment state at each point in time after his or her initial UI claim date. This recipient is assumed to have been (1) eligible for 26 weeks of regular UI benefits starting in mid-February 2008 and (2) continuously and fully unemployed in a state that triggered onto all EUC08 tiers and EB. Figure V.1 shows the following patterns of cumulative benefits potentially collected by this individual:

- The 45-degree slope in the figure for the first 79 weeks indicates that each calendar week of full unemployment, up to 79, were covered by a week of available UC benefits without any interruption. The first 26 weeks were covered by regular UI benefits, after which the recipient was eligible for 20 weeks of EUC08 tier 1 benefits, 13 weeks of EUC08 tier 2 benefits, and 20 weeks of EB benefits.
- The flat portion that starts after the 79th week reflects no further EUC08 benefits being available at that point in time—which corresponds in the example to late August 2009. Thus, even though the recipient remained unemployed, she or he could not collect additional weeks of UC and experienced a gap in benefit coverage.
- The line starts rising again in the 90th week of unemployment (early November 2009) when new legislation was passed that: (1) added a week of benefits to EUC08 tier 2 and (2) created two new tiers providing 13 and 6 weeks of benefits, respectively, in high-unemployment states. The 45-degree slope between calendar weeks 90 and 110 reflects the 20 additional weeks of benefits based on the new legislation—which allowed the hypothetical recipient to collect the 80th through 99th weeks of UC benefits.
- Then, in week 110 of his or her unemployment spell, the hypothetical recipient exhausted the 99th week of benefits provided by regular UI, all four EUC08 tiers, and EB; no further benefits on this claim were available.

A recipient eligible for fewer than 26 weeks of regular UI benefits in the same state would have a different trajectory than that illustrated in Figure V.1. For example, if he or she were eligible for 13 weeks of UI benefits only, the recipient would be entitled to about half as many EUC08/EB weeks as the first hypothetical recipient. This recipient would exhaust his or her benefit entitlement earlier and would tend to have more and longer gaps in benefit availability.

Figure V.1. Cumulative weeks of benefits potentially collected over time for a hypothetical UC recipient

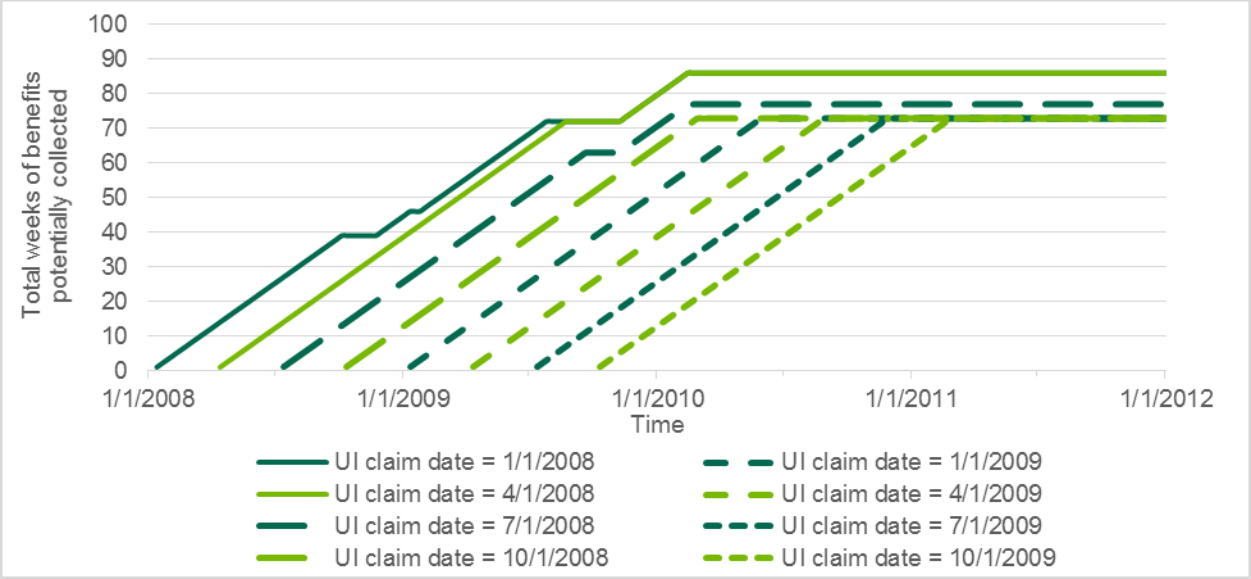


Note: The values represent the total number of weeks that could have been cumulatively collected by each successive week after a recipient began collecting benefits. The hypothetical recipient depicted is assumed to (1) be entitled to 26 weeks of regular UI starting on February 17th, 2008, (2) not find reemployment; and (3) claim the full weekly benefit amount each week in a state that triggered onto all EUC08 tiers and EB.

Figures V.2, V.3, and V.4 depict how benefit-collection trajectories could have differed across recipients with different initial UI claim dates in three illustrative states (Arkansas, Colorado, and Ohio). All three figures show trajectories for hypothetical recipients who had 26 weeks of regular UI available, did not find reemployment, and collected a full WBA each week after the claim date. Every benefit-collection trajectory has a 45-degree slope in the graph for at least the first 26 weeks through regular UI. However, the shapes and ultimate height of these trajectories vary by state and initial UI claim date based on variation in which tiers of EUC08 were available and whether EB was triggered on. In particular:

- Most differences in the maximum total number of weeks of benefits that could eventually be collected by recipients eligible for 26 weeks of regular UI benefits arose from differences across states, rather than by the date of their initial UI claims. This can be seen by comparing the highest flat line segments across UI claim dates. Most states in our sample were like Colorado and Ohio (Figures V.3 and V.4), in which all individuals with 26-week UI claims could have eventually claimed up to 99 weeks of total UC benefits through all tiers of EUC08 and EB. In a few states, such as Arkansas (Figure V.2), the total maximum number of weeks of benefit receipt varied by the initial UI claim date because a tier of EUC08 or (more commonly) EB only triggered on for a short period of time.
- Most differences in the extent of the benefit gaps—depicted in the figures by flat segments that come before each line reaches its maximum—stem from differences in the timing of recipients' initial UI claim dates. In Colorado, for example, recipients who started collecting UI in January 2008 would have experienced five gaps in benefit receipt, while those who applied in January 2010 would not have experienced any gaps (Figure V.3). More generally, recipients with earlier initial claim dates experienced gaps in benefit availability because of the phased rollout of EUC08 tiers. And in some states, gaps resulted for earlier claimants if new tiers did not trigger on immediately or if EB triggered on relatively late in the recession.

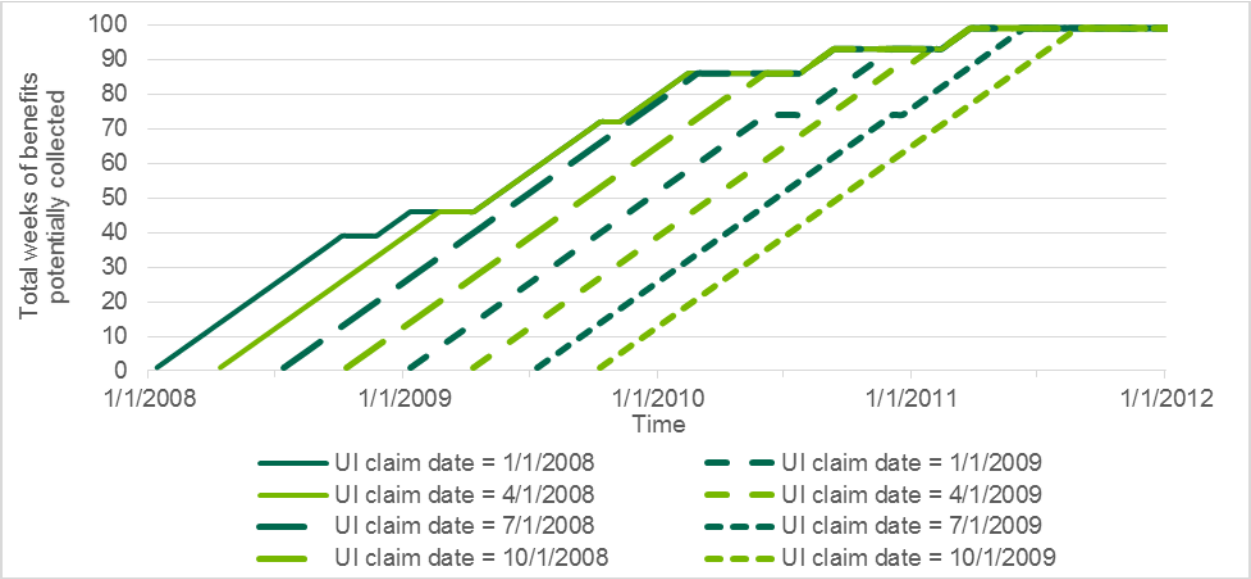
Figure V.2. Cumulative weeks of benefits potentially collected over time in Arkansas by recipients eligible for 26 weeks of regular UI benefits



Source: EUC08 and EB trigger notices (http://www.oui.doleta.gov/unemploy/claims_arch.asp)

Note: Each line corresponds to a separate group of recipients filing a 26-week initial UI claim on the dates indicated by the legend after being laid off in Arkansas. The values represent the total number of weeks that they could have cumulatively if they claimed the full weekly benefit amount each week.

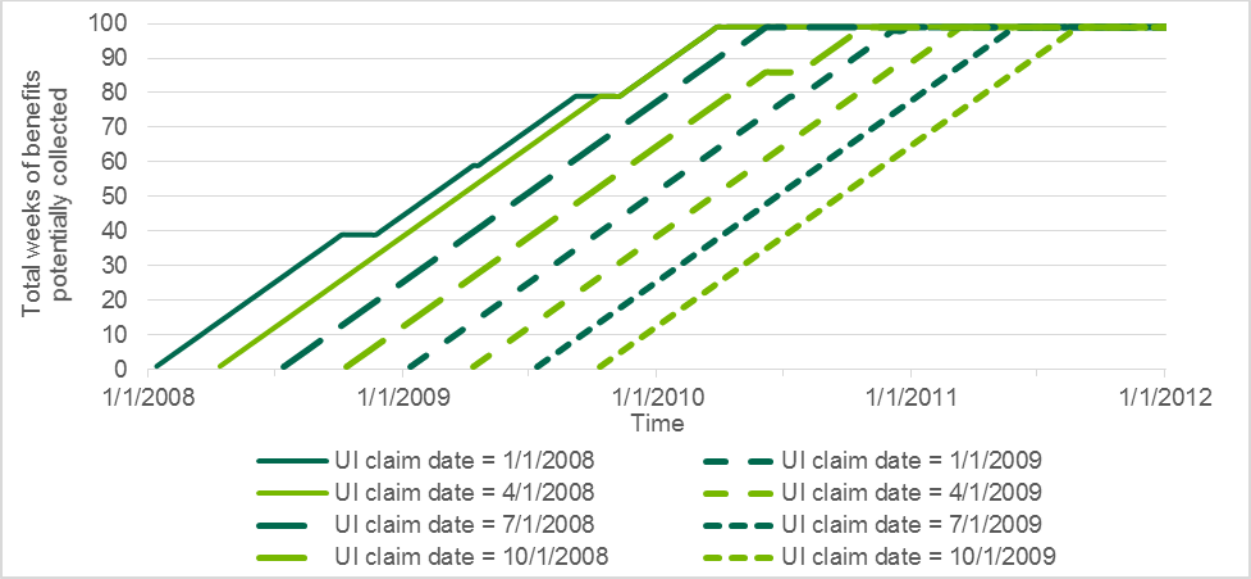
Figure V.3. Cumulative weeks of benefits potentially collected over time in Colorado by recipients eligible for 26 weeks of regular UI benefits



Source: EUC08 and EB trigger notices (http://www.oui.doleta.gov/unemploy/claims_arch.asp)

Note: Each line corresponds to a separate group of recipients filing a 26-week initial UI claim on the dates indicated by the legend after being laid off in Colorado. The values represent the total number of weeks that they could have cumulatively if they claimed the full weekly benefit amount each week.

Figure V.4. Cumulative weeks of benefits potentially collected over time in Ohio by recipients eligible for 26 weeks of regular UI benefits



Source: EUC08 and EB trigger notices (http://www.oui.doleta.gov/unemploy/claims_arch.asp)

Note: Each line corresponds to a separate group of recipients filing a 26-week initial UI claim on the dates indicated by the legend after being laid off in Ohio. The values represent the total number of weeks that they could have cumulatively if they claimed the full weekly benefit amount each week.

These graphs suggest four measures of the potential duration of UC benefits that encapsulate important dimensions of benefit availability over time:

1. **Total potential duration** measures the total number of weeks that a recipient would ultimately have available if he or she were collecting a full WBA each week. This corresponds to the maximum height of the graph. For the hypothetical recipient depicted in Figure V.1, in a state with the maximum number of weeks made available, this number is 99 weeks.

2. **Potential consecutive weeks** is the number of weeks an individual could have collected UC benefits before encountering the first gap in benefits availability. This is represented by the height of the graph where the first flat portion begins. In the example depicted in Figure V.1, the hypothetical recipient had 79 consecutive weeks of benefits available. However, as shown in Figures V.2 through V.4, recipients who began collecting a 26-week entitlement of UI in early 2008 typically would have had 39 consecutive weeks available.

3. **Potential gap weeks** indicates the total number of weeks during which an individual who remained unemployed would have experienced a gap in UC coverage. We define "gaps" as time spans in which (1) all available benefits were exhausted, (2) additional benefits would subsequently become available, and (3) no compensation could be received for the intervening period. Our definition of gaps does not include the 2010 lapses in the EUC08 legislation because later renewal of the program specified retroactive payment of benefits for weeks of unemployment that had occurred while the legislation had (temporarily) expired. The number of potential gap weeks equals the sum of all flat portions of the line before it reaches its maximum height. For example, the hypothetical recipient depicted in Figure V.1

had a gap of 11 weeks before additional weeks of EUC08 became available through new legislation.

4. **Potential post-gap weeks** is the remainder of the total potential duration that an individual could collect after encountering the first gap in benefit availability. On the graph, this corresponds to the vertical distance between the first flat portion of the graph and the maximum height. Potential post-gap weeks for the hypothetical individual depicted in Figure V.1 would be 20 [= 99 – 79], which corresponds to the additional weeks available through the November 2009 legislative changes to the EUC08 program.

B. Patterns of potential UC benefit durations for survey respondents

Among the survey respondents, we found the following patterns of potential UC benefit durations (Table V.1):

- The majority of UC recipients—almost 57 percent—were ultimately eligible for 99 weeks of benefits. Of those with total potential durations of less than 99 weeks, approximately two-thirds [= (100 – 71)/ (100 – 57)] were limited by regular UI entitlements providing less than 26 weeks of benefits. The other one-third had initial UI claims in states or time periods that did not allow them to claim higher tiers of EUC08 benefits and/or EB.
- The average total potential duration was 88 weeks. Almost 76 of those weeks were available consecutively after the initial UI claim date; the remainder were additional weeks that became available only after a gap in potential benefit availability.
- Recipients in the survey sample experienced a potential benefit gap of a little over 7 weeks, on average, and only 39 percent of recipients experienced no gap in potential benefits.

EUC08/EB recipients also tended to have more consecutive weeks of benefits available, and they were less likely to experience a long gap in potential benefits than those who collected UI only. This pattern could reflect a lower take-up rate of EUC08/EB benefits if individuals with gaps in the benefits available to them (1) were more likely to seek employment after encountering a gap, and/or (2) were less aware of higher tiers that later became available to them as their connection to the UC system faded. But, these patterns were also driven by differences in economic conditions facing recipients. For example, recipients with more consecutive weeks available to them were typically those with later initial UI claim dates, given the rollout of the EUC08 program. These later claimants might have been more likely to collect EUC08/EB benefits because they faced higher unemployment rates while receiving UI benefits and were, therefore, more likely to exhaust them. (The survey sample covered initial UI claims from January 2008 through September 2009—a period during which the economy was steadily worsening.) Similarly, states with higher unemployment rates tended to have a larger share of recipients move onto EUC08/EB and provided more weeks of additional benefits available through those programs.

Table V.1. Potential durations of benefits (percentages, unless stated otherwise)

	Total	UI-only recipients[a]	EUC08/EB recipients
Regular UI potential duration			
Less than 13 weeks	2.6	2.0	3.3
13 to 18 weeks	8.8	9.7	7.7
19 to 25 weeks	17.5	16.8	18.3
26 weeks	71.1	71.5	70.1
Average (weeks)	24.0	24.0	24.0
Total potential duration			†
Less than 52 weeks	4.6	5.1	4.0
52 to 77 weeks	19.4	21.7	16.6*
78 to 98 weeks	19.1	19.2	19.1
99 weeks	56.9	54.0	60.3*
Average (weeks)	88.0	86.8	89.4*
Potential consecutive weeks			†
Less than 52 weeks	19.1	22.8	14.7*
52 to 77 weeks	19.7	20.9	18.1
78 to 98 weeks	39.9	36.4	44.2*
99 weeks	21.3	19.9	23.0
Average (weeks)	75.5	73.2	78.3*
Potential gap weeks			
0 weeks	37.4	36.0	39.0
1 to 12 weeks	44.5	43.6	45.5
13 to 25 weeks	10.1	11.0	9.0
26 to 51 weeks	5.8	6.6	4.9
52 weeks or more	2.2	2.8	1.5*
Average (weeks)	7.4	8.2	6.4*
Potential post-gap weeks			†
0 weeks	37.7	36.3	39.4
1 to 12 weeks	21.4	20.6	22.4
13 to 25 weeks	28.4	28.2	28.6
26 to 51 weeks	6.9	7.9	5.8
52 weeks or more	5.6	7.0	3.9*
Average (weeks)	12.5	13.7	11.0*
Unweighted sample size	2,122	1,151	971

Source: Merged survey respondent data file

Note: Potential duration measures were assigned to the categories displayed in the table after rounding to the nearest week. Estimates have been adjusted for survey nonresponse.

[a]Total potential duration, potential consecutive weeks, and potential post-gap weeks all include weeks available through the EUC08 and EB programs. UI-only recipients, however, collected no more than 26 weeks of benefits.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

C. Measuring the association between potential duration and outcomes

We used regression analysis to determine how outcomes were associated with three measures of potential benefit availability—consecutive, gap, and post-gap weeks—controlling for other factors that might affect outcomes. We examine (1) post-claim benefit collection; (2) and labor-market outcomes measured using UI wage records; and (3) outcomes at the time of the survey, such as employment status and receipt of income support. For ease of exposition, our reported results for both binary and continuous variables are based on linear regression models.

In unreported results, we analyzed select binary outcomes for the survey sample using nonlinear probit models, obtaining nearly identical estimates to the results of the linear regression models.

Each regression model includes controls for the following individual-level factors measured using administrative and survey sources:

- Demographic characteristics and pre-claim sources of income support
- Base-period wages, characteristics of the pre-claim job, and recall expectations
- Whether the worker's separation reason would qualify him or her as a displaced worker, according to the definition used by the BLS
- The industry and occupation of the worker prior to the UI claim
- The regular claim's WBA and whether it included UCX and/or UCFE benefits

We also control for the state unemployment rate in the month preceding the claim in all regressions. In addition, because earnings and employment outcomes derived from the administrative data are measured as of the first calendar quarter after the claim (see Chapter III), analyses of those outcomes also include a control for the timing of the initial UI claim date within the claim quarter. A full list of control variables is included in Appendix Table D.21; our regression analysis sample includes only survey respondents with complete data on all of those variables.

Our estimates of the relationships between outcomes and benefit availability must be interpreted cautiously because both variables may also have been affected by factors unaccounted for in our analysis. Although the estimated associations might partially reflect a causal effect of benefit availability on outcomes, they might also pick up those other factors. Of particular note are two potential sources of bias:

1. **The potential duration of benefits was longer in states and time periods with higher unemployment rates due to the EUC08/EB triggering rules.** This would result in a bias toward finding more negative (or less positive) associations between outcomes and potential duration because recipients searching for work in a weaker economy tended to have substantially more weeks of benefits available to them. The study's modeling framework allowed for only a limited capacity to control for this potentially confounding role of economic conditions.[16]
2. **Individuals with a stronger past connection to the workforce are likely to be eligible for more weeks of regular UI benefits**, **and hence more weeks of EUC08/EB.** This tendency would result in a bias toward finding less negative (or more positive) associations between outcomes and potential duration because individuals with greater past success would be more

[16] This study's approach was not well suited to including controls for fixed state- and time-specific factors like in recent studies of recessionary benefits (Rothstein 2011; Farber and Valletta 2013) that analyzed reemployment at multiple points over individuals' unemployment spells. For this study, it was only feasible to use statistical models with one data point for each individual and outcome. In this framework, state and time "fixed effects" would account for most of the independent variation in potential durations (per the previous subsection) leaving little remaining variation to correlate with outcomes. Appendix Tables D.22 through D.27 present estimates from regression models that include such fixed effects, but we do not discuss these results in the text of the report.

likely to have greater future success in the labor market. However, we expect that the rich individual-level data included in the regression models will substantially reduce the potential for this type of bias. Particularly notable is that we control for the two main determinants of regular UI potential durations (base period wages and the WBA), as well as pre-UI job tenure and whether the recipient was regularly laid off in the past.

Because the extent of these biases is unknown, the associations we estimate cannot be interpreted as causal impacts. However, the most substantial increases in potential duration were driven by the availability of the higher tiers of EUC08 and EB, which tended to trigger on for UI recipients facing higher post-claim unemployment rates and, therefore, who were likely to have had a more difficult job search. As a result, we expect that our estimates will tend to overstate any negative effects (and understate any positive effects) of potential durations on outcomes.

D. Potential benefit durations and labor market outcomes

Each extra week of potential benefits available was associated with 0.39 to 0.46 more weeks of benefits actually collected. Each consecutive week of potential benefits was associated with 0.46 additional weeks of UC collection, and each post-gap week was associated with 0.39 additional weeks of UC collection (Table V.2). The difference between these two estimates was not statistically significant. In addition, the association between weeks collected and the number of potential gap weeks was also insignificant. We found a similar pattern for the results of statistical tests throughout most of the regression analysis. Consequently, in the rest of this chapter, we (1) focus on relationships between outcomes and the two measures of potential benefit availability (consecutive and post-gap weeks), describing them as a range of estimated associations; and (2) do not discuss additional results for the potential gap week measure.

Extra weeks of consecutive and post-gap potential benefits were associated with 0.029 to 0.041 fewer quarters of employment in the three-year period following the UI claim quarter (Table V.2). This estimated reduction in employment is similar in magnitude to the increase in benefit collection associated with longer potential durations. For example, given approximately 13 weeks per calendar quarter, a 0.029 to 0.041 quarter decrease in employment corresponds to 0.37 to 0.53 weeks. This suggests that recipients' increased use of additional weeks of available benefits was linked to lower rates of reemployment or employment in relatively shorter-lasting jobs. However, as noted above, the analysis design does not allow us to determine whether these represent cause-and-effect relationships.

Among those who were reemployed at any point during the three-year post-claim period, longer potential durations were associated with longer initial jobless spells. We estimate the association between one consecutive or post-gap week of benefits and the number of quarters elapsed until reemployment to be 0.011 to 0.013, which corresponds to between 0.14 and 0.17 weeks (Table IV.2). In a separate analysis (not reported), we found that each week of potential benefits was associated with an approximately 0.024-quarter reduction in employment over the three-year period after the quarter of the initial UI claim among those with any post-claim employment.[17] This estimate is larger in magnitude than the increase in time until first

[17] For this analysis, we ran the same regression model as used in the second column of Table V.2 (with quarters of employment as the dependent variable), but limited the sample to the recipients included in the third column (i.e.,

reemployment (0.011 to 0.013 quarters) that was associated with each extra potential consecutive and post-gap benefit week. This suggests that reemployed individuals who had more weeks of benefits available were more likely to have a post-claim job end, as compared to those with lower potential durations.

Table V.2. Association between potential durations and outcomes measured in administrative records

	Total weeks of UC benefits collected	Number of post-claim quarters employed[a]	Number of post-claim quarters until first employment[a]	Employed during third post-claim year	Total earnings in third post-claim year
Potential duration measures					
Consecutive weeks	0.457*	-0.029*	0.013*	-0.002*	-102*
	(0.051)	(0.008)	(0.005)	(0.001)	(42)
Gap weeks	-0.053	0.004	-0.005	0.000	16
	(0.065)	(0.010)	(0.005)	(0.001)	(51)
Post-gap weeks	0.391*	-0.041*	0.011	-0.003*	-125*
	(0.066)	(0.010)	(0.006)	(0.001)	(53)
Additional regression information					
Unweighted sample size	1,835	1,835	1,606	1,835	1,835
R-squared	0.19	0.14	0.09	0.09	0.23
Standard error	29.361	4.078	2.324	0.426	23,949
Mean of dependent variable	35.929	7.383	2.316	0.754	22,802

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE benefits, and the demographic and pre-claim characteristics listed in Appendix Table D.21. The regressions for earnings and employment outcomes additionally control for whether the initial UI claim date was in the first, second, or third month of a calendar quarter. Robust standard errors are in parentheses.

[a]Quarterly employment measures were calculated over the three years following the initial UI claim quarter. The number of post-claim quarters until first employment was defined only among those who were employed at some point during the three-year period.

*Significantly different from zero at the .05 level, two-tailed test.

Potential benefit durations were negatively related to labor market outcomes in the third post-claim year, which is likely to partly reflect ongoing UC collection. For every additional 13 weeks of potentially available benefits, the regression estimate indicates a 2.6 to 3.9 percentage point [= (0.002 to 0.003)×13×100%] decrease in the likelihood of employment during the third post-claim year (Table V.2). There was a negative association between each extra week of potential benefits and total earnings in the third year after the quarter of the initial

those who were employed at any point during the three-year period following the initial UI claim quarter). Based on this analysis, a one-week increase in consecutive weeks was associated with 0.024 fewer quarters of employment (standard error = 0.007), and a one-week increase in post-gap weeks was also associated with 0.024 fewer quarters of employment (standard error = 0.009).

UI claim: –$102 for each consecutive week and –$125 for each post-gap week (Table V.2). Alternatively put, 13 extra weeks of potential benefits would correspond to a reduction in third-year earnings of $1,326 to $1,625 (or 6 to 7 percent, relative to the average). However, these negative associations might not necessarily represent long-run declines in employment/earnings related to benefit availability. Because up to 99 weeks were available, individuals with gaps in their benefits and/or who had intermittent employment could still be collecting UC during their third post-claim year.

Potential benefit availability had weaker associations with earnings and employment, as measured at the time of the survey. Each consecutive week of benefits was associated with a decrease in weekly earnings of $2.37 at the time of the survey (Table V.3). This corresponds to a reduction of $123 in annualized earnings four to six years after the UI claim, which is similar to the estimate of $125 reported above for the third post-claim year. However, the association between post-gap weeks of benefits and earnings at the time of the survey was not statistically significant, and none of the potential duration measures was significantly associated with labor force participation or employment at the time of the survey. In combination with the previously discussed results for employment in the three-year period following the initial UI claim, this could suggest that the relationship between potential durations and outcomes grew less strong over time. For example, individuals whose reduced employment was related to additional benefit availability early on would have had a longer time to return to work by the time of the survey. The weakened association could also be the product of fewer recipients still having benefits available to them at the time of the survey, as compared to their third post-claim year. Alternatively, these findings might simply reflect differences between how outcomes were measured in the survey and administrative data sources (Appendix B).

Table V.3. Association between potential durations and labor market outcomes at time of survey

	Participated in labor force during week before survey	Held a job at time of survey	Weekly earnings from main job at time of survey[a]
Potential duration measures			
Consecutive weeks	0.000 (0.001)	-0.001 (0.001)	-2.37* (0.93)
Gap weeks	0.000 (0.001)	-0.001 (0.001)	0.21 (1.27)
Post-gap weeks	0.000 (0.001)	0.000 (0.001)	-1.55 (1.15)
Additional regression information			
Unweighted sample size	1,832	1,835	1,799
R-squared	0.20	0.15	0.33
Standard error	0.347	0.458	503.90
Mean of dependent variable	0.811	0.597	488.62

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. Robust standard errors are in parentheses.

[a]The weekly earnings measure includes zeros for those not employed at the time of the interview. Individuals reporting more than $5,000 were omitted from this analysis.

*Significantly different from zero at the .05 level, two-tailed test.

Associations between benefit availability and employment differ between displaced workers and other UC recipients. As discussed in Chapter IV, 58 percent of survey respondents were displaced workers who reported losing their jobs for reasons such as a layoff, a plant or facility closing, or downsizing. The other 42 percent of UC recipients reported other separation reasons such as having a temporary job end, having quit, and having been fired. The results in Tables V.4 and V.5 indicate that:

- Relative to other UC recipients, the magnitude of the association between potential durations and weeks of benefits collected was substantially higher among displaced workers
- Virtually all significant associations between potential durations and employment/earnings outcomes appear to be driven by the displaced workers included in the survey sample
- There was no systematic and significant relationship between consecutive or post-gap weeks of potential benefits and labor market outcomes among other UC recipients during that period who were not displaced workers

This pattern is consistent with displaced workers being less likely to enter or maintain employment than other UC recipients when more weeks of benefits are available. Such individuals might be more likely to take advantage of the extra weeks of benefits to look for a new "permanent" job that more closely matches their expectations based on pre-claim employment. In contrast, the separation reasons of other UC recipients—for example, ending a temporary seasonal job or quits to follow a relocating spouse—might be associated with a shorter search or lessened need to claim benefits while searching for a suitable job match.

Associations between benefit availability and employment also differed across states included in an analysis of administrative-only data. In Appendix C, we find that estimates based on a large sample of recipients from the 12 survey states are within the margin of error of the estimates presented in this chapter based on survey respondents. Associations between potential duration and reemployment based on the administrative-only analysis file for all 17 study states were negative, but they were significantly smaller in magnitude than associations based on the 12 survey states. This suggests caution in applying the analysis results beyond the areas covered by the study's data.

Table V.4. Association between potential durations and outcomes measured in administrative records, by displaced worker status

	Total weeks of UC benefits collected	Number of post-claim quarters employed[a]	Number of post-claim quarters until first employment[a]	Employed during third post-claim year	Total earnings in third post-claim year
Potential duration measures: displaced workers					
Consecutive weeks	0.549*	-0.041*	0.019*	-0.003*	-123*
	(0.064)	(0.010)	(0.006)	(0.001)	(55)
Gap weeks	0.038	-0.011	0.003	-0.001	-52
	(0.083)	(0.014)	(0.006)	(0.002)	(74)
Post-gap weeks	0.400*	-0.049*	0.009	-0.004*	-133
	(0.082)	(0.014)	(0.007)	(0.001)	(74)
Potential duration measures: other UC recipients					
Consecutive weeks	0.352*	-0.015	0.005	-0.001	-79
	(0.065)	(0.011)	(0.008)	(0.001)	(52)
Gap weeks	-0.156	0.021	-0.014	0.001	100
	(0.090)	(0.012)	(0.008)	(0.001)	(55)
Post-gap weeks	0.396*	-0.032*	0.016	-0.001	-112
	(0.103)	(0.014)	(0.010)	(0.002)	(70)
Additional regression information					
Unweighted sample size	1,835	1,835	1,606	1,835	1,835
R-squared	0.20	0.14	0.10	0.09	0.23
Standard error	29.339	4.076	2.322	0.425	23,953
Mean of dependent variable	35.929	7.383	2.316	0.754	22,802

Source: Merged survey respondent data file

Note: See notes to Table V.2.

[a]Quarterly employment measures were calculated over the three years following the initial UI claim quarter. The number of post-claim quarters until first employment was defined only among those who were employed at some point during the three-year period.

*Significantly different from zero at the .05 level, two-tailed test.

Table V.5. Association between potential durations and labor market outcomes at time of survey, by displaced worker status

	Participated in labor force during week before survey	Held a job at time of survey	Weekly earnings from main job at time of survey[a]
Potential duration measures: displaced workers			
Consecutive weeks	-0.001 (0.001)	-0.002 (0.001)	-3.22* (1.28)
Gap weeks	-0.001 (0.001)	-0.003* (0.002)	-1.82 (1.66)
Post-gap weeks	-0.001 (0.001)	0.000 (0.001)	-1.70 (1.57)
Potential duration measures: other UC recipients			
Consecutive weeks	0.001 (0.001)	0.000 (0.001)	-1.34 (1.12)
Gap weeks	0.001 (0.002)	0.003 (0.002)	2.69 (1.57)
Post-gap weeks	0.001 (0.001)	-0.001 (0.002)	-1.32 (1.59)
Additional regression information			
Unweighted sample size	1,832	1,835	1,799
R-squared	0.21	0.16	0.33
Standard error	0.347	0.458	503.74
Mean of dependent variable	0.811	0.597	488.62

Source: Merged survey respondent data file

Note: See notes to Table V.3.

[a]The weekly earnings measure includes zeros for those not employed at the time of the interview; individuals reporting more than $5,000 were omitted from this analysis.

*Significantly different from zero at the .05 level, two-tailed test.

E. Potential benefit durations and economic well-being at the time of the survey

We did not find evidence of a relationship between the main potential duration measures and survey measures of economic well-being such as having experienced financial hardships, changes in household income, or participation in assistance programs besides the UC program.

- There were no statistically significant relationships between consecutive or post-gap weeks of benefits on any of the financial hardship outcomes, such as having utilities disconnected or missing a rent or mortgage payment (Table V.6).
- We found no statistically significant association between consecutive or post-gap weeks of potential benefits and either (1) a change in household income from the pre-claim year to 2013 (Table V.6) or (2) SNAP or SSDI participation at the time of the survey (Table V.7).
- Gap weeks was positively and significantly related to the likelihood of having been evicted or foreclosed upon and negatively related to changes in household income from the pre-

claim year to 2013. However, these findings could reflect limitations of our analysis design, which does not include controls for post-claim economic conditions.[18]

We explored this issue further by looking at whether significant association could be found within several types of subgroups, including displaced workers, younger and older workers, parents with dependent children, and recipients with low base-period wages. Potential durations were not significantly related to financial hardships (or receipt of other assistance) in any of the subgroups we considered.

Table V.6. Association between potential durations and post-claim financial difficulties

	Utilities disconnected[a]	Missed a rent or mortgage payment[a]	Was evicted or had house foreclosed[a]	Proportional change in household income from pre-claim year to 2013[b]
Potential duration measures				
Consecutive weeks	-0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	0.000 (0.002)
Gap weeks	-0.001 (0.001)	0.001 (0.001)	0.002* (0.001)	-0.004* (0.002)
Post-gap weeks	0.000 (0.001)	-0.001 (0.001)	0.000 (0.001)	0.003 (0.002)
Additional regression information				
Unweighted sample size	1,829	1,835	1,835	1,672
R-squared	0.11	0.11	0.05	0.07
Standard error	0.334	0.446	0.256	0.814
Mean of dependent variable	0.137	0.311	0.065	0.080

Source: Merged survey respondent data file

Note: See notes to Table V.2.

[a]Indicates whether recipient experienced the given financial difficulty between the initial UI claim date and the time of the survey.

[b]Calculated as the difference between household income in 2013 and household income in the year prior to the claim date, divided by the household income in the year prior to the initial UI claim date. Excludes individuals reporting zero income in either period or a change of more than 1,000 percent between years.

*Significantly different from zero at the .05 level, two-tailed test.

[18] As discussed already, gaps in benefit availability typically occurred for those whose initial UI claims fell in early 2008, and (as shown in Figure II.2) the labor market worsened drastically during late 2008 and early 2009.

Table V.7. Association between potential durations and participation in income support programs at time of survey

	Receiving SSDI payments or SSI payments for a disability	Receiving food stamp or SNAP benefits
Potential duration measures		
Consecutive weeks	0.000 (0.001)	0.000 (0.001)
Gap weeks	0.000 (0.001)	0.001 (0.001)
Post-gap weeks	-0.001 (0.001)	0.000 (0.001)
Additional regression information		
Unweighted sample size	1,833	1,834
R-squared	0.17	0.25
Standard error	0.264	0.306
Mean of dependent variable	0.093	0.133

Source: Merged survey respondent data file

Note: See notes to Table V.2.

SSDI = Social Security Disability Insurance, SSI = Supplemental Security Income, SNAP = Supplemental Nutrition Assistance Program.

*Significantly different from zero at the .05 level, two-tailed test.

These findings could potentially arise due to the very long follow-up period and the nature of the regression analysis. Although recipients derived substantial income from EUC08/EB while claiming benefits, the economic downturn was severe and the recovery was slow. As a result, additional benefits might have helped many recipients only temporarily in avoiding hardships or a need to turn to other programs for income support. Outcomes were measured four- to six-years after the initial UI claim, which would be at least two years after the end of benefit receipt for many recipients. As a result, the relatively long-term follow-up period might mask a potentially positive shorter-term association between benefit availability and financial status.[19] Also, as noted previously, more weeks of benefits were generally available in the states that were hardest hit by the recession—that is, states that likely had relatively high foreclosure rates and families experiencing greater hardships. Thus, longer potential durations might truly improve the financial position of households over the long run, but economic factors that cannot be accounted for in our statistical model could prevent the estimated association from reflecting this.

[19] The regression results might also seem to contrast with the finding in Chapter IV that EUC08/EB recipients experienced larger decreases in financial well-being than UI-only recipients. However, the tabulations in Chapter IV could simply reflect individuals with greater employment barriers being more likely to make use of EUC08/EB and do not capture how the availability of extra weeks of UC benefits was associated with outcomes.

VI. HOW MUCH MONETARY SUPPORT DID RECIPIENTS DERIVE FROM THE FAC PROGRAM AND THE ARRA INCOME TAX EXEMPTION?

Although the most significant expansion of UC benefits during the Great Recession was the quadrupling of potential durations, the ARRA also contained two important provisions increasing the effective monetary value of UC benefits:

1. The FAC program offered an extra $25 per week to all UC benefit recipients between February 22, 2009, and December 11, 2010.
2. A tax exemption specified that the first $2,400 of UC benefits received during 2009 be disregarded for the purposes of federal income taxes.

Based on DOL program data, almost $20 billion was paid out through the FAC program, and the U.S. Joint Committee on Taxation (2009) estimated that the income tax exemption would result in $4.7 billion of tax relief. Both programs enhanced the "automatic stabilizer" aspect of UC benefits mentioned in Chapter I. In this section, we use data from the recipient survey to assess the likely individual-level financial implications of the FAC and the income tax exemption. We estimate the amount by which these provisions increased the effective WBA and the total amount of benefits received, examining differences across high and low earners.[20] We also use estimates from existing literature on UC benefits and wage-replacement rates to assess the likely effect of these monetary enhancement on unemployment durations.

Key findings

- Most survey respondents received enhancements from these programs for some but not all of the weeks they collected UC benefits
- We estimate that the FAC program increased the total value of benefits by almost 6 percent, with recipients with the lowest base period wages realizing the greatest proportionate increases
- The tax exemption led to a smaller and more uniform increase of about 1 percent in the value of benefits received
- Based on past estimates of the relationship between WBA and the duration of unemployment spells, both policies likely resulted in only minor increases in spell length

A. Monetary support derived from the FAC program

Recipients in our survey sample received FAC payments in 70 percent of the weeks in which they collected UC benefits (including weeks of unemployment both before and after the FAC program started). As shown in Table VI.1, we estimate that they received FAC payments for a little over 25 weeks, whereas they collected UC benefits for a total of almost 36 weeks, on

[20] Because date information was sometimes missing or imperfectly recorded in the administrative claims data, we imputed the number of compensated weeks for each survey respondent that fell within the periods relevant for the FAC and income tax exemption. This imputation allocated the total number of weeks receiving benefits recorded in the administrative file for survey respondents to calendar periods based on the assumption that recipients received a full weekly amount of UC benefits during each consecutive calendar week after the initial UI claim.

average. Thus, although the FAC program provided an extra $25 per week to UC recipients, the effective weekly FAC enhancement was $17.60 when averaged over all UC-compensated weeks.

Table VI.1. Financial implications of Federal Additional Compensation (FAC) for survey respondents

		Base period wages		
	Total	Less than $15,000	$15,000 to $49,999	$50,000 or more
UC benefits collected				
Number of compensated weeks	35.8	32.5	37.2	35.5
Dollars of benefits received (excluding FAC payments)	$11,387	$5,553	$12,400	$15,808
Effective weekly benefit amount (excluding FAC payments)[a]	$318	$171	$333	$445
Estimated enhancement from FAC				
Weeks receiving FAC[b]	25.2	21.6	26.3	26.2
Total FAC collected[c]	$629	$540	$658	$654
FAC enhancement per compensated UC week[d]	$17.6	$16.6	$17.7	$18.4
Percentage change in benefits from FAC[e]	5.5%	9.7%	5.3%	4.1%
Unweighted sample size	**2,108**	**475**	**1,218**	**415**

Source: Merged survey respondent data file

Note: FAC provided an additional $25 per week to recipients collecting benefits from February 22, 2009, to December 11, 2010. All table entries use nonresponse-adjusted averages and totals for the survey sample, excluding individuals with missing data on base period wages.

[a]Calculated as the ratio of UC dollars to the number of compensated weeks.

[b]Calculated as the number of compensated weeks (as recorded in the administrative data) falling in the FAC period, assuming recipients received a full week of UC benefits during each consecutive calendar week after the initial UI claim.

[c]Calculated as $25 times the estimated number of weeks receiving FAC.

[d]Calculated as the total FAC payment divided by the total number of compensated UC weeks.

[e]Calculated as the percentage share of total UC dollars represented by the total FAC payment.

Our estimates in Table VI.1 also imply that, on average, respondents collected a total of almost $630 each in FAC payments [= 25.2 weeks × $25 per week]. This corresponded to 5.5 percent of the $11,387 in total UC benefits they would have received without the FAC program. The program represented a greater percentage increase to recipients with low base-period wages since they generally also tended to qualify for lower WBA through the regular UI program. For the same reason, the FAC would also have represented a proportionately greater increase in the weekly benefits collected by recipients filing UI claims in states using formulas resulting in lower average WBAs. FAC payments added almost 10 percent to the UC dollars received by recipients with base-period wages lower than $15,000, whereas it represented an enhancement of just over 4 percent among those who had base period wages of at least $50,000.

B. Monetary support derived from the ARRA income tax exemption

Although the ARRA tax exemption applied to the first $2,400 in UC benefits, the average UC dollars exempted for the sample of recipients we studied was estimated to be $1,642 (Table

VI.2). This difference arose because 23 percent of the sample did not receive UC benefits in 2009 and another 16 percent did not receive enough benefits to take advantage of the full $2,400 exemption. To determine the monetary value of the tax relief derived from the exemption, we use Congressional Budget Office estimates of average tax rates on UC benefits by household income level (Whittaker 2013).

Table VI.2. Financial implications of the ARRA income tax exemption for survey respondents

		Base period wages		
	Total	Less than $15,000	$15,000 to $49,999	$50,000 or more
UC benefits collected				
Number of compensated weeks	35.8	32.5	37.2	35.5
Dollars of benefits received (including estimated FAC payments)[a]	$12,016	$6,093	$13,057	$16,463
Effective weekly benefit amount (including estimated FAC payments)[b]	$336	$188	$351	$463
Estimated enhancement from the ARRA income tax exemption				
Dollars exempted from taxation[c]	$1,642	$1,474	$1,673	$1,763
Effective tax rate[d]	8.1%	5.5%	8.1%	11.2%
Dollars of tax relief[e]	$133	$81	$135	$198
Dollars of tax relief per compensated week	$3.7	$2.5	$3.6	$5.6
Tax relief as a percentage of total pretax dollars[f]	1.1%	1.3%	1.0%	1.2%
Unweighted sample size	**2,108**	**475**	**1,218**	**415**

Source: Merged survey respondent data file

Note: Under the ARRA income tax provision, first $2,400 of UC benefits received in 2009 were exempted from taxation. All table entries use nonresponse-adjusted averages and totals for the survey sample, excluding individuals with missing data on base period wages.

ARRA = American Reinvestment and Recovery Act of 2009.

[a]Calculated as the sum of (1) the number of UC dollars received, as recorded in the administrative data; and (2) estimated total FAC payments collected, based on the method described in the notes to Table VI.1.

[b]Calculated as the ratio of UC dollars to the number of compensated weeks.

[c]Calculated as the lesser of $2,400 or the estimated dollars of UC benefits received in 2009. The latter number was calculated as the total dollars of UC benefits received times the estimated proportion of compensated weeks falling in 2009, based on the assumption that recipients received a full week of UC benefits during each consecutive calendar week after the initial UI claim.

[d]Calculated as a weighted average of estimated income tax rates for UC benefits. Each recipient's tax rate was assigned according to their estimated post-claim household income assigned using the schedule listed in Whittaker (2013). Estimated post-claim household income was determined as pre-claim household income less base-period wages plus UC benefits. We imputed values for individuals with missing data on income using the nonresponse-adjusted mean in the sample. In the averages reported, each individual's tax rate is weighted by the estimated dollar amount of her or his tax exemption in 2009.

[e]Calculated as dollars exempted from taxation times the effective tax rate.

[f]Calculated as the percentage share of total pretax UC dollars represented by the dollar value of the tax relief.

For members of the survey sample, we estimate that the average relief provided by the tax exemption was $133, given an 8.1 percent average effective tax rate on exempted UC benefits (Table VI.2). We put the magnitude of the tax relief in context in two ways:

1. Amortizing the total across all compensated weeks in recipients' spells implies a weekly tax relief of almost $4.
2. The total savings also represent just over 1 percent of pre-tax benefits, with little variation in this figure across individuals with differing levels of base-period wages. This finding occurs because recipients with higher base-period wages experienced both greater tax relief on the tax-exempt benefits (due to a higher effective tax rate) and have a lower proportion of their UC benefits exempted; these two effects offset each other.

We also note that the estimated per-recipient amount of tax relief was approximately one-fifth as large as the average total amount of FAC collected [$133 / $630 = 0.21]. This is similar to, although slightly smaller than, the relative overall sizes of these programs implied by national estimates (cited previously) of the ARRA-based UC tax relief and FAC payments [$4.7 billion / $20 billion = 0.24] calculated using other methodologies.

C. Likely effects of the ARRA UC monetary enhancements on the duration of unemployment

Both the FAC and the tax exemption enhancements effectively resulted in a higher wage-replacement rate, since they increased the monetary value of benefits for any level of pre-UI earnings. Based on prior research on the impacts of benefit amounts (Decker 1997), a 10 percentage point increase in the replacement rate was historically associated with a 0.5 to 1.5 week increase in the length of unemployment spells. However, the ARRA-based monetary enhancements were substantially smaller than 10 percentage points. For example, given that the average weekly earnings of our sample members was $817 on their pre-UI jobs (Appendix Table D.6), the FAC enhancement corresponded to a 2.2 percentage point increase in the replacement rate [= 100 × $17.6 / $817]. Applying the estimate from Decker (1997), this increase in the wage-replacement rate induced by the FAC would be expected to increase unemployment durations by a total of 0.1 to 0.3 weeks or one to two days. The effect of the tax exemption would be expected to be even smaller.

VII. CONCLUSIONS

In response to the onset of the Great Recession Congress enacted the EUC08 program and included UC-related provisions in the ARRA to provide support for unemployed workers and state workforce agencies. An earlier report from this project (Mastri et al. 2015) examined how federal funding through the ARRA played a role in states' adoption of permanent provisions to expand UI eligibility or increase benefit payouts. In this report we examined the implications of additional recessionary UC benefits for recipients and their outcomes. A substantial focus was on the increases in potential durations of benefits arising from the EUC08 and EB programs, but we also examined monetary enhancements to UC benefits arising from the FAC program and the ARRA income tax exemption.

The UC recipients we studied collected benefits for long periods—36 weeks on average—through entitlements stemming from their initial UI claims, but there was substantial variability in their benefit-collection and reemployment outcomes. Our study included individuals facing particularly challenging labor market conditions, given that the survey was fielded to recipients who lost jobs while the economy was in recession and in 12 states that had relatively high unemployment rates. However, aggregate program statistics suggest that UC recipients nationwide also collected a relatively large number of weeks of UC benefits—33 weeks, on average—over the entire period during which the EUC08 program was in effect.[21] The recipients we studied also showed sharp differences in their durations of UC receipt that are less readily apparent in aggregated data. For example, around 30 percent received at least 52 weeks of benefits and another 30 percent collected for fewer than 13 weeks. In addition, over half of the recipients we studied received payment on a second UI claim by the end of 2012. This variability is also seen in recipients' employment patterns in the years following the UI claim quarter. Approximately 73 percent had become reemployed by the end of the first post-claim year, but around 14 percent had not entered into employment at all over the three-year period we studied. In addition, almost a quarter of the recipients started a job that subsequently ended within that timeframe.

In this concluding chapter, we summarize our findings related to the two sets of research questions posed in Chapter I: (1) who collected EUC08/EB benefits and how did they fare; and (2) how was the availability of additional recessionary UC benefits related to recipients' outcomes? We also provide additional discussion to place our results into context using findings from studies of past recessionary programs and/or nationwide studies of unemployment during the Great Recession.

A. Who collected EUC08/EB benefits and how did they fare?

Over 45 percent of the recipients we studied collected EUC08/EB benefits, a larger fraction of UC recipients than served by past emergency benefits programs. This estimate is

[21] This figure is based on the aggregate UC program statistics from 2008 to 2013 cited in Table II.2. As noted there, the average duration of UI benefits was 17.5. In addition, the average duration of EUC08 was 32.4 weeks, but there were only 42 percent as many EUC08 first payments as UI first payments. Similarly, the average duration of EB was 15.4 weeks and EB first payments totaled less than 12 percent of UI first payments. Thus, we estimate the average number of weeks of EUC08/EB benefits collected to be $17.5 + 32.4 \times 0.42 + 15.3 \times 0.12 = 32.9$.

based on survey respondents but is similar to our estimate of national share of UI first payments (43 percent) that led to EUC08 receipt based on aggregated program data for the whole six-year period when EUC08 was available. As discussed in Chapter III, a substantially smaller share of UI claims progressed to receiving emergency benefits during the previous three recessions—30 percent during the early 1980s and 38 percent during both the early 1990s and early 2000s. This increase over time was not matched by a rise in long-term unemployment during successive recessions (prior to the Great Recession) and could be related to other factors such as EB triggering rules and states' increased adoption of UI modernization provisions. As shown by Mastri et al. (2015) and Lindner and Nichols (2012), these provisions tended to expand eligibility for workers with lower earnings and more irregular employment. Greater use of recessionary benefits might also reflect longer-term increases in the shares of recipients of regular UI benefits who are members of groups that have tended to face greater labor market barriers, for example racial/ethnic minorities and older workers (Michaelides and Mueser 2012).

Recipients who eventually collected EUC08/EB benefits were more likely than those who collected UI only to have pre-claim characteristics associated with difficulties in securing or maintaining employment. Our analysis suggests that EUC08/EB recipients were less well positioned to cope with layoffs than UI-only recipients. For example, recipients of recessionary benefits were less likely to have experienced layoffs in the past and were also less likely to have been in a unionized job before they started collecting UI. Relative to UI-only recipients, EUC08/EB recipients were also more likely to have been permanently displaced from their pre-claim job. In addition, EUC08/EB were more likely to be members of demographic groups that historically had less success in the labor market—females, African Americans, and older workers. These patterns of differences between recipients of recessionary benefits and other workers starting UI claims at the same time were also found in studies of the 1980s FSC program (Corson et al. 1986) and the 1990s EUC program (Corson et al. 1999). Recent analyses of national data (Krueger, Cramer, and Cho 2014; Kosanovich and Sherman 2015) showed similar differences by gender and age between the long-term and short-term unemployed as a whole (including both UC recipients and nonrecipients).

EU08/EB recipients were, in fact, significantly less likely than UI-only recipients to become and stay reemployed and more likely to experience financial hardships. Around 78 percent of EUC08/EB recipients were reemployed at some point during the three years after the UI claim quarter, as compared to 93 percent of recipients who collected UI only. Among those who became reemployed, EUC08 recipients first became employed six months later than UI-only recipients, on average, and they were significantly less likely to retain their employment. At the time of the survey—that is four to six years after the initial UI claim—EUC08/EB recipients were also significantly less likely to be employed than UI-only recipients (56 percent versus 68 percent). In addition, EUC08/EB recipients were more likely than UI-only recipients to have exited the labor force by the time of the survey (23 percent versus 14 percent). If the work-search requirements of the UC program induced recipients to remain in the labor force, these exits would likely have come after benefit exhaustion, although this cannot be confirmed with the data. EUC08/EB recipients who were employed at the time of the survey were also more likely than UI-only recipients to experience reductions in earnings and hours, relative to their pre-claim jobs. These differences in post-claim labor-market trajectories could have contributed to the markedly higher rates of poverty and SNAP receipt observed among EUC08/EB recipients, relative to UI-only recipients, at the time of the survey. In light of the initial differences between

the two groups of recipients in their characteristics and pre-claim jobs, the gap in employment and income between them is likely to reflect ongoing labor market difficulties and should not be interpreted as an effect of receiving EUC08/EB benefits. In fact, an analysis of national data by Rothstein and Valletta (2014) suggests that (1) reemployment rates did not shift substantially as UC recipients exhausted their benefits and (2) the poverty rates of former recipients' families went up by a factor of 1.75 in the months after benefit exhaustion.

The recipients we studied fared better in the labor market than the broader population of long-term unemployed workers, although this might reflect other important differences between UC recipient and nonrecipients. The long-term unemployed are those with unemployment durations lasting longer than 26 weeks; this population would include most EUC08/EB recipients plus others not collecting UC benefits. An analysis of national data on individuals who entered into long-term joblessness during the recession found that 36 percent were employed again four to five years after their unemployment spells had started, and another 35 percent were out of the labor force at that point. (Hilesenrath 2014). In contrast, our study of UC recipients in states with particularly challenging labor market conditions found substantially higher employment (56 percent) and lower labor-force nonparticipation (23 percent) rates four to six years after they started to receive benefits. However, this simple comparison should not be interpreted as a cause-and-effect relationship between UC recipiency and outcomes. As discussed in Chapter II, the distribution of demographic characteristics and pre-separation industries differs substantially between the national population of UI recipients and the national population of unemployed workers. And other studies have found similar differences in the UI application and recipiency rates related to demographic characteristics and job separation reasons (Vroman 2009).

B. How was the availability of additional recessionary UC benefits related to recipients' outcomes?

We estimated that each extra week of potential benefits was associated with 0.39 to 0.46 more weeks of UC benefits collected by recipients who responded to the survey. We also found that EUC08/EB recipients collected 41 weeks of recessionary benefits (beyond what they received through their regular claims), on average, and around one-third of them exhausted all UC benefits to which they were entitled based on their initial UI claims. The association between potential and actual benefit durations was substantially stronger among displaced workers, relative to other UC recipients, a pattern we also found in our analysis of how number of weeks of benefits available were related to employment outcomes during the three years following recipients' initial UI claims. However, one difficulty in interpreting the estimated association between benefit availability and benefit receipt is that both are likely to be affected by additional factors that cannot be controlled for in the statistical models used in our analysis. Of particular concern are increases in job finding difficulties after the initial UI claim that would have led to more weeks of EUC08/EB benefits triggering on, while also increasing recipients' need to collect additional weeks of UC benefits. All else being equal, this would result in estimated associations that overstate the potential disincentive effects (and understate the potential supportive effects) of additional weeks of UC benefits on recipients' outcomes.

Our estimates of the association between potential durations and the length of initial joblessness spells are similar to those in earlier analyses of UC recipients, but they are

larger in magnitude than more recent estimates from studies of the Great Recession. In our regression analysis, we found that each extra week of benefits was associated with initial joblessness spells that were 0.08 to 0.17 weeks longer, depending on the control variables included in the regression and the set of states we examined.[22] Although our estimated association might in part reflect the effects of unmeasured post-claim labor market conditions rather than clear cause-and-effect estimates, this range is similar to what was found in earlier studies of UC recipients' potential durations in the 1980s and 1990s (Chapter I). Our estimates are also larger in magnitude than the range suggested by more recent studies of unemployed workers during the Great Recession using the Current Population Survey. For example, Farber and Valletta (2015) found that extra weeks of benefits were associated with increase in unemployment spells of 0.06 weeks. Differences between our results and other recent studies are likely partially attributable to differences in research design. For a given sample of UC recipients, our modeling framework would probably tend to overstate the true effects of extra benefit availability on the actual duration of joblessness (Chapter V), whereas the CPS-based studies would probably tend to understate the true effects of increases in potential duration (Chapter I). In addition, our analysis concentrated on recipients claiming benefits during the recession in relatively hard-hit states, whereas the CPS studies used national data on the unemployed over a longer period of time. Hence these results, along with those from earlier studies, provide complementary information that might be used to bound the range of likely effects of additional EUC08/EB benefits stemming from a UI entitlement on the length of recipients' unemployment spells. However, a common feature between our study and other studies is an analysis approach that uses each initial UI claim or unemployment spell as the unit of analysis. This approach does not account for any additional EUC08/EB benefits available to individuals with more than one initial UI claim. Hence, care should be taken in applying these results to assess the person-level effects of recessionary benefits or their implications for outcomes in the labor force as a whole.

We also found that longer potential durations of benefits were associated with more job instability, lower long-term earnings, and no change in long-term employment, although the causality of these relationships is not clear. Across a range of different regression models, we found that each extra week of available benefits was associated with 0.14 to 0.53 fewer weeks of employment over a three-year period following the initial UI claim quarter. The magnitudes of these reductions in employment over the whole period we studied are larger than the increases in initial joblessness spells associated with each extra week of benefits. That is, longer potential durations were associated not only with a slower return to work, but less continued employment in subsequent periods (among those who became reemployed). These patterns of reduced or more-unstable employment might explain why extra weeks of benefits were also associated with reductions in earnings from the main job held at the time of the survey. However, they also seem to stand at odds with the lack of association between potential benefit durations and employment or labor force participation status at the survey date. A limitation of the study's analysis framework is that we cannot establish the direction of causation between employment, job stability, and longer potential benefit durations, given that more benefits were generally available in states hit harder by the recession. In addition, our analysis of

[22] In our analysis of the survey data from 12 states (Chapter V) we estimated a range of 0.14 to 0.17 weeks, whereas in the administrative-only analysis of data from 17 states (Appendix C) we estimated a range of 0.08 to 0.09 weeks.

administrative-only data indicates a stronger negative association between benefit availability and employment in the 12 states included in the survey, as compared to a broader set of 17 states with lower unemployment rates. Other research of the Great Recession's effects using national data for the United States have not examined job stability or reemployment earnings, so these topics would benefit from additional study.

The recipients we studied derived a modest amount of financial support from the ARRA provisions that increased the monetary value of benefits. They received weekly payments of $25 through the FAC program, but only for a subset of the weeks in which they collected UC benefits. Similarly, although the ARRA exempted the first $2,400 in UC benefits received in 2009, only a subset of recipients collected enough benefits to realize the full tax savings from this exemption. All told, the average benefit enhancements from the FAC program and the tax exemption were approximately $18 and $4 per week, respectively, when amortizing across all weeks of UC benefits recipients collected. Our estimates suggest that the FAC program increased the total monetary value of benefits received by 5.5 percent, with the greatest proportionate increases realized by recipients with the lowest base period wages (who experienced gains of nearly 10 percent). The tax relief from the ARRA income tax exemption amounted to just over 1 percent of the value of the pretax benefits they collected, with little variation across recipients with differing base period wages. Based on past estimates of how weekly benefit amounts are related to the duration of unemployment spells, both policies likely resulted in very minor increases in unemployment spell lengths.

The relationship between the extent of UC benefit availability and economic well-being needs to be clarified through additional research. We examined a range of measures of economic well-being, including the financial hardships experienced by recipients, household income, and receipt of government assistance from non-UC sources. Our research design did not allow us to examine how these outcomes were related to the monetary enhancements provided through the ARRA, but we found no association between the potential duration of benefits and economic well-being measured at the time of the survey. This finding might, again, be related to the study's limited capacity to account for more benefits being available to recipients in states that were harder hit by the recession, but it could also reflect the very long follow-up period over which economic well-being was measured—four to six years after the initial UI claim. For example, the shorter-term income security recipients derived from additional weeks of UC benefits might have dissipated over the longer term if joblessness outlasted their benefits. As noted above, Rothstein and Valletta (2014) found a sharp increase in poverty and the receipt of other government assistance as recipients exhausted benefits, and an ongoing DOL study will provide further insights about the long-run outcomes of exhaustees. However, additional analysis is needed to better understand the dynamics of economic-wellbeing over the course of long unemployment spells and how this is related to the availability of UC benefits. Potential sources of data for such an analysis include the Survey of Income and Program Participation, which was used in the analysis of Rothstein and Valletta, a longitudinal survey of UI recipients currently being piloted by DOL, and linked longitudinal administrative databases that have been sponsored by DOL and other government agencies.

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APPENDIX A
STATE SAVINGS FROM THE ARRA WAIVER ON UNEMPLOYMENT TRUST FUND LOAN INTEREST

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An overarching goal of the UC-related provisions of the ARRA was to better help unemployed workers and states workforce agencies weather the recession that began in late 2007. The main chapters of this report focus on provisions of the ARRA and related legislation that were specifically targeted towards unemployed workers eligible for UI benefits. However, the ARRA also included a provision that temporarily waived the accrual of interest on Title XII loans to states that otherwise would have had insolvent unemployment trust fund (UTF) accounts.[23] Interest accrual was waived for loan balances held between February 2009 and December 2010, and state interest payments were also suspended during this period. In this appendix, we provide an estimate of the interest payments that states were able to avoid due to this ARRA-based waiver.

Key findings

- Monthly balances on Title XII loans averaged less than $1 billion during the last quarter of 2008 and rose to more than $40 billion during the last quarter of 2010
- Absent the ARRA waiver of interest, states would have had to pay up to $2.2 billion more in interest on their trust fund debt during 2009 and 2010
- This estimate is double the projection of saved interest made by the Congressional Budget Office in 2009 before the severity of the recession and its aftermath were fully understood
- Without the ARRA interest waiver, states likely would have paid Title XII loans back more quickly; thus, our estimate is likely higher than the true interest savings realized by states

A. Overview of UTF borrowing[24]

Because UI is a federal-state partnership, states have wide latitude in how they operate their programs within broad parameters specified by the federal government. States are responsible both for financing UI benefits through payroll taxes they impose on UI-covered employers and for establishing and implementing criteria for the payout of benefits to UI-eligible unemployed workers. States' tax collections are deposited in state-specific trust funds, which are maintained at the U.S. Treasury. The state-specific account is the source of the benefits paid to the eligible UI claimants within a state.

During recessions, trust fund balances decrease because UI benefit payouts naturally grow as a result of an increase in the number of UI claimants and the number of weeks of benefits they collect. In addition, tax revenues also naturally decrease, given declines in the employer payrolls upon which UI taxes are based. Nonetheless, states must pay benefits in a timely manner even if their trust fund reserves are depleted because eligible claimants are entitled to UI benefits. Historically, states that have not had sufficient trust fund reserves to pay benefits have typically

[23] As in the main text of the report, we use "state" in this appendix to refer to any of the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. The results we present on borrowing and interest liabilities include data from all 53 of these UI jurisdictions.

[24] Additional details about UI financing and federal requirements for states' repayment of trust fund loans can be found on the U.S. Department of Labor website (http://workforcesecurity.doleta.gov/unemploy/pdf/partnership.pdf) and in a report by Whittaker (2012).

borrowed funds from the federal government. Such loans are referred to as Title XII advances because they are authorized by Title XII of the Social Security Act (U.S. DOL 2014). However, to finance benefit payments when the trust fund is depleted, states also may raise funds other ways, such as from general revenues or the private bond market (Barnow et al. 2012).

Under most circumstances, states need to pay interest to the federal government on their outstanding trust fund loan balances by September 30 of each year. The interest rate is based on the earnings yield rate in the fourth quarter of the previous calendar year on the total UTF reserves held by the U.S. Treasury (Oates 2011). However, because some short-term fluctuations in trust fund balances can be expected, the federal government does not charge states interest for loans that states take out on a short-term basis to manage their cash flow. Specifically, with a "cash flow loan," a state may borrow funds on an interest-free basis from January 1 through September 30 of a calendar year if (1) the entire loan balance is paid back by September 30 and (2) no additional loan is taken out for the remaining three months of the calendar year.

Although states may delay or defer the payment of interest on loans under some circumstances, such as during periods of unusually high unemployment rates in the state, they generally must pay the interest in a timely manner (U.S. DOL 2014). States that fail to do so face automatic increases in the net federal Unemployment Tax Act (FUTA) tax rates imposed on employer payrolls within a state and these increases can be large (Whittaker 2013). Hence, without the ARRA waiver, states would have had a strong incentive to make the required interest payments in a timely manner.

B. The ARRA interest waiver

As a provision of the ARRA, the federal government temporarily waived the payment of interest that states owed on their trust fund loan balances, as well as the accrual of interest. According to UI Program Letter (UIPL) 14-09, the waiver became effective after the enactment of the ARRA on February 17, 2009; thus, interest that would have accrued between February 17, 2009, and December 31, 2010, was deemed to have been paid by the state.[25] The provision was expected to provide financial relief to states by allowing states to avoid the interest payments. It also reduced the net cost of borrowing, which might have encouraged states to delay the adoption of measures to improve and maintain trust fund solvency.

At about the time the ARRA was passed, the Congressional Budget Office (CBO) projected that states would ultimately avoid about $1.1 billion in interest as a result of the ARRA provision (CBO 2009). This estimate was based on projections from early 2009 about the severity of the recession and subsequent borrowing.

C. Analysis of trust fund balances and interest avoided

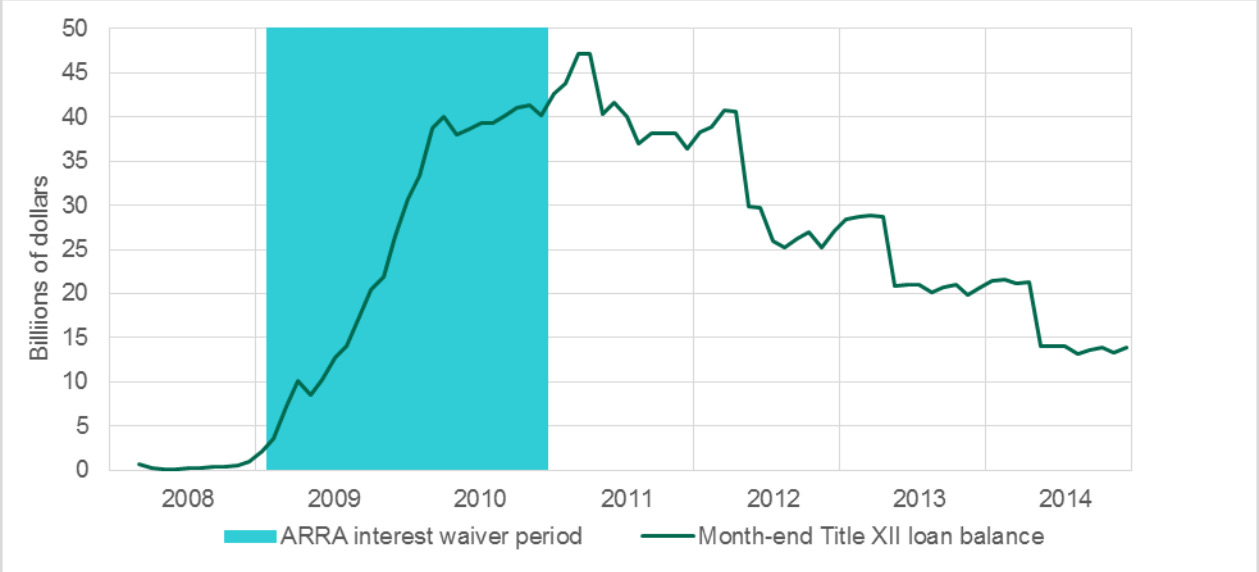
State borrowing increased substantially over the course of the recession and early recovery period, declining in 2011 as the economy eventually strengthened (Figure A.1, Table A.1):

[25] UIPL 14-09 is available at http://wdr.doleta.gov/directives/attach/UIPL/UIPL14-09.pdf.

- During the last quarter of 2008, only 3 states carried Title XII debt and their monthly loan balances averaged less than $1 billion.
- Title XII borrowing rose dramatically over the ARRA waiver period. By the last quarter of 2010, 33 states carried debt, and the average monthly total across them was $41 billion.
- Balances peaked in early 2011 at a total of $47 billion. As with other peaks early in each calendar year, some of the post-waiver increase likely reflects at least some cash-flow borrowing (as described above.) After April 2011, it took about one year for the balance to drop to about $30 billion and about another two years for it to drop below $15 billion.

State borrowing over this recession and early recovery period was considerably larger than the amount of employer contributions typically used to finance UI benefits for unemployed workers in these states during nonrecessionary times. As indicated in Table A.1, among states with balances during late 2010, the average amount of this debt was 149 percent of employer contributions in these states during 2007, a year that mostly preceded the start of the recession.

Figure A.1. Total month-end balances on Title XII loans, nationwide



Source: Monthly data on Title XII advances were provided by DOL.

Note: The line graph indicates month-end balances based on nationwide data that include all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands. No balance information was available for January and February of 2008 or October 2011. For the purposes of this graph, the October 2011 value was filled in by averaging the values from September and November of that year.

Table A.1. Title XII advances to Unemployment Trust Fund (UTF) accounts and interest waived due to the ARRA provision

	Total dollar amount	States in which total dollar amount is greater than zero	
		Number of states	Average percentage of 2007 contributions
Average monthly Title XII loans balances during the fourth quarter			
2008	0.6 billion	3	27.5%
2009	23.0 billion	26	94.4%
2010	40.9 billion	33	149.3%
Interest waived on Title XII loan balances held over the year			
2009	0.5 billion	26	2.2%
2010	1.7 billion	34	6.0%
2009 and 2010	2.2 billion	34	8.0%

Source: Monthly data on Title XII advances were provided by DOL, quarterly UTF yield rates are based on figures from the U.S. Treasury Department (https://www.treasurydirect.gov/govt/rates/rates_tfr.htm), and annual data on contributions are from the ET Financial Handbook 394 (http://ows.doleta.gov/unemploy/hb394.asp).

Note: Loan balances are measured at the end of each month. Interest waived is calculated for each month as the monthly interest rate times the average of balances at the end of that month and the prior month. Given the federal rules for interest accrual: (1) the monthly interest rate was set equal to the annual interest rate times the number of days in the month divided by the number of days in the year, and (2) the annual interest rate was set equal to the UTF yield rate from the final quarter of the prior year. The calculation only accounts for potential interest from February 17, 2009, to December 31, 2010, when the ARRA legislation was in effect, and it assumes that no interest would have accrued on cash-flow loans, as defined in the text.

Using DOL data on month-end Title XII balances, we estimated the interest owed in the absence of the ARRA waiver using the following steps:

1. For each state and month, we assumed that the daily loan balance during a month equaled the average of the loan balances during the end of the previous month and the end of the month for which we would make the estimate.
2. We determined the calendar-year interest rate based on the U.S. Treasury Department's UTF yield rate during the last quarter of the prior calendar year, as discussed in Section A. This rate was 4.6375 percent for 2009 and 4.3646 percent for 2010.[26]
3. We derived a daily interest rate by dividing the annual interest rate by 365 because it is uniform within a calendar year and across states (Oates 2011).
4. We calculated the interest liability for each month and state by taking the product of the estimated state's monthly balance, the number of days in the month, and the daily interest rate.
5. We summed the monthly liability across states and over the months that the ARRA waiver was in effect—February 2009 to December 2010.

[26] Quarterly UTF yield rates were downloaded from https://www.treasurydirect.gov/govt/rates/rates_tfr.htm.

In our calculations, we assumed that no interest would have been owed due to cash-flow borrowing. From the monthly data, it appears that no states had cash flow loans during 2009, although three states (New Hampshire, South Dakota, and Tennessee) had cash flow loans during 2010. However, we did not take into account other special conditions under which a state may delay or defer the payment of interest. Our reason for this is that they do not affect the accrual of interest on the outstanding loan balance, which is the focus of our analysis.

The results of our analysis suggest that **34 states would have owed a total of $2.2 billion in interest** on the Title XII loan balances during the ARRA waiver period, had the wavier not been in place (Table A.1). This amount:

- Is about double the projection of $1.1 billion made by the CBO, a projection that was made before the depth and duration of the recession were fully known
- Represents about 8 percent of the total trust fund contributions made in those 34 states during the mostly pre-recessionary 2007 calendar year

However, an important limitation of this analysis is that it does not take into account how states' might have adjusted their loan payments over time in response to the ARRA waiver. Our calculations are of interest waived based on actual loan balances with the ARRA policy in place. Yet, if states had been responsible for payment of interest between when the ARRA passed in 2009 and the end of 2010, they likely would have paid their Title XII loans back more quickly and, hence, would have paid less interest than indicated by our calculation. It is therefore likely that our estimate is higher than the true interest savings realized by states.

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APPENDIX B
DEVELOPMENT OF MAIN ANALYSIS DATA FILES

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This appendix provides additional details about how the analysis files for this study were developed, supplementing the overview given in Chapter II of the main report. In Section A, we describe the state administrative records we collected for the study to obtain data on UC claims and UI-covered wages that were used in all of the study's analysis files.[27] In addition to discussing the data collection and cleaning process, we explain how we created key analysis measures used throughout the study. In Section B, we discuss the fielding methods we used for the survey that was conducted with UC recipients from a subset of states providing administrative data, as well as the adjustments we made for survey nonresponse. In Section C, we summarize findings from a comparative analysis of the strengths and limitations of the administrative and survey data sources for measuring post-claim employment.

A. State administrative claims and wage records

1. Data collection and validation

We requested and received UC administrative claims and wage data from 20 states covering a target period beginning in January 2008 and up until the time when states extracted the data from their databases. States provided the extracts during the time from early 2013 through late 2014. As mentioned in Chapter II, these 20 states were sampled to achieve diversity along measures of benefit availability, growth in UI receipt over the recession, and geographic region; they are listed in Table B.1. Our data request to each state was for:

- **Administrative UC claims records** on all regular UI and EUC08/EB claims for which the state was liable during the target period. Key data elements used in the analysis included:
  - Financial and date information about each claim, including the job separation date, the benefit-year begin (BYB) date, the weekly benefit amount (WBA), the maximum benefit amount (MBA), and the remaining balance
  - A social security number (SSN), which could be used along with the BYB date to link and aggregate benefit collection information about UI, EUC08, and EB claims in a given UC benefit collection "spell" stemming from the same UI entitlement
  - Demographic information about the recipient at the time the initial UI claim was filed
  - Information about base-period earnings, job separation reason, and the industry and occupation of employment before the claim
- **Administrative wage records** on all UI-covered employment in the state during the target period. These extracts included quarterly records of earnings for all UI-covered workers at each employer, with SSNs and federal employer identification numbers to identify unique individuals and firms.

Our requests for administrative data also included several additional data items that were not ultimately used in this report because they were not available for all states and/or they had inconsistencies in some study states that would have resulted in unreliable analysis measures.

[27] As in the main text, we use "UI recipients" to refer to those receiving benefits both through the UI program and through similar programs for federal employees (UCFE) and ex-servicemembers (UCX). About one percent of recipients in the study states collected benefits through the UCFE and/or UCX programs, and our regression models include a flag variable to account for any differences associated between these types of claims and UI claims.

Table B.1. Availability of study data, by state

State	Administrative Data Extracts			Included in administrative-only analysis file	Included in the survey
	Complete set of paid UI claims with information about recipients' characteristics and UI benefit amounts	Complete set of paid EUC08/EB claims with distinct data on benefit collection for each claim[a]	Complete set of quarterly UI-covered wage records		
Arkansas	X	All claims	X	X	X
California	X	All claims	X	X	X
Colorado	X	Survey cases only	X	X	X
Florida	X	All claims	X	X	X
Georgia	X	All claims	X	X	X
Illinois	X	Survey cases only	X	X	X
Louisiana			X		
Minnesota	X				
New Hampshire	X		X	X	
New Jersey	X	All claims	X	X	X
New York	X		X	X	
North Carolina	X		X	X	
North Dakota	X		X	X	
Ohio	X	All claims	X	X	X
Pennsylvania			X		
South Dakota	X	All claims	X	X	X
Texas	X		X	X	
Virginia	X	All claims	X	X	X
Washington	X	All claims	X	X	X
Wisconsin	X	Survey cases only	X	X	X
Total	18	9 for all claims; 3 for survey cases only	19	17	12

Note: UC recipients from three of the states listed in the table were excluded from all of the study's analysis files due to limitations in their capacity to access older administrative records. Within the timeframe needed for the study, it was not feasible for Louisiana and Pennsylvania to extract archived claims, and Minnesota could not extract wage data covering the earlier portion of the study period.

[a]This column indicates whether the claims extracts contained program- and tier-specific information on EUC08/EB benefit collection that could be linked to each distinct initial UI claim. Entries of "survey cases only" indicate that a manual review and recoding of the records was needed to achieve reliable measures of EUC08/EB collection. This was done for the full set of recipients we sought to interview, including respondents and nonrespondents.

We validated state administrative data extracts based on a series of external and internal diagnostic and validation checks. External checks included, for example, determining whether the range of WBAs, MBAs, and potential durations of regular UI claims aligned with information about state monetary UI policies maintained by DOL.[28] We also assessed whether claims and wage extracts appeared to be complete, as compared to UI first-payments data from the Employment and Training Administration and quarterly employment estimates from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW).[29] Internal consistency checks included assessing distributions of financial and date variables and how they compared to one another. For example, a key check was that EUC08 benefit entitlement amounts matched what would be expected based on the UI entitlement and legislatively-specified multipliers (as discussed in Chapters III and V of the report).

Based on the diagnostic assessments of data consistency, we identified a portion of claims and wage records with discrepancies in the recorded financial information. For example, the claims extracts included otherwise-duplicated records with differing dollar amounts in one or more of the financial fields, as well as records with WBAs or MBAs that were outside the range that would be expected based on state/federal policies and laws. We developed computer programs to resolve the most-prevalent data discrepancies based on input from the state staff who had originally extracted the data, and we made additional adjustments based on a manual review of cases included in the survey. When developing the large administrative-only analysis files, we dropped a small number of claims that had a data discrepancy that could not be remediated in this fashion. These excluded records amounted to no more than 2 percent of the claims in any state's extract and less than 0.2 percent of claims in most states' extracts.

We worked extensively with states to remediate the issues identified with their data extracts, but only a subset of the originally sampled 20 states were ultimately able to provide all of the main administrative data elements indicated above in a way that met the needs of the study. As indicated in Table B.1, within the timeframe needed for the study:

- It was infeasible for two states to access older UI claims data that had been archived, particularly those covering the study's focal period, covering UI claim start dates ranging from January 2008 to September 2009.
- A little over half the states (11 out of 20) were unable to provide administrative data on EUC08/EB benefits that could be readily analyzed at the level of detail required for this study. However, we were able to create key analysis measures of benefit collection for subsamples of recipients in 3 additional states included in the survey using the additional steps discussed in the next subsection.
- One state could not provide UI wage records for the earlier portion of the study's desired window of follow-up for recipients, which was 2008:Q1 through 2012:Q3.

[28] This information was drawn from the annual *Comparison of State Unemployment Laws*, available at http://workforcesecurity.doleta.gov/unemploy/statelaws.asp

[29] Counts of UI first payments were obtained from http://workforcesecurity.doleta.gov/unemploy/claimssum.asp, and counts of EUC08/EB first payments were obtained from http://workforcesecurity.doleta.gov/unemploy/euc.asp. QCEW data were accessed from http://www.bls.gov/cew/data.htm.

The table also indicates which states provided the administrative records in a way that allowed us to develop administrative-only analysis samples, as well as those that were able to extract all of the main study data element in time for the survey (discussed in Section B of this appendix). Based on our interactions with state UI staff, the main challenge they faced in extracting administrative data for the study appears to have been issues in how their data systems accounted for the complexities of the EUC08 program and/or the changes to the program over time.

Although the 20 states from which we requested data were randomly selected to be representative of the nation as a whole, we recommend caution in generalizing the study's results beyond the subset of states ultimately included in the analysis. Administrative-only data analysis could be conducted using data from 17 of the 20 states and recipients from 12 states could be included in the survey. As discussed in Chapter II of the main text, unemployment rates in the states included in the study's analysis were substantially higher than the nation as a whole during the recession and recovery period, particularly so in the survey states. More critically, from 2008 to 2009, the unemployment rate was 1.2 percent higher in the 17 states providing all required data in a format that could be used for the study, compared to the 3 states that were unable to do so. Similarly, the unemployment rate over that period was 1.4 percent higher in the 12 survey states than in the 8 states not included in the survey. Both differences were statistically significant. Because of these nonrandom differences, data from the states included in the study cannot be analyzed in a way that produces nationally representative estimates from a statistical standpoint. In addition, as shown in Table B.2, the characteristics of the recipients in the 12 survey states differed somewhat from that of the national population of UI recipients in 2008 and 2009. For example, recipients identified in the administrative extracts from those 12 states were more likely to be Hispanic (22 percent versus 17 percent) and less likely to be African American (18 versus 21 percent) than the national population of recipients over that timeframe. Differences in recipient characteristics are even less pronounced when comparing the population of recipients across all 17 study states to the national population of UI recipients over that time period (Table B.2). Moreover, the study states reflect a varied range of labor market conditions and include a substantial share of the nation's recipient population. Thus, the study's analysis can provide important insights about the characteristics and outcomes of a diverse set of individuals who began collecting UI during the recession.

Table B.2. Characteristics of the national population of UI recipients and the population of UI recipients included study's administrative claims data extracts (percentages)

	Population of Recipients in the 12 survey states	Population of Recipients in all 17 study states	National Population of UI recipients
Gender			
Female	39.1	39.4	39.7
Male	60.9	60.6	60.3
Ethnicity			
Hispanic or Latino	22.3	21.9	17.2
Not Hispanic or Latino	77.7	78.1	82.8
Race/ethnicity			
Black or African American	17.9	19.7	20.5
White	76.1	74.7	74.3
Other	6.0	5.6	5.2
Age at the initial UI claim date			
Younger than 25	10.8	10.7	9.5
25 to 34	24.0	24.1	23.7
35 to 44	24.3	24.4	24.1
45 to 54	24.8	24.6	24.8
65 or older	16.2	16.2	17.8
Industry			
Natural resources and mining	3.7	3.3	2.8
Construction	15.8	15.5	15.5
Manufacturing	19.5	19.0	18.3
Trade, transportation, and utilities	17.0	17.3	17.9
Information	2.4	2.4	2.6
Financial activities	4.6	5.0	5.2
Professional and business services	18.2	18.4	17.4
Education and health services	8.2	8.5	8.4
Leisure and hospitality	6.2	6.4	7.3
Other services	2.6	2.5	2.8
Public administration	1.7	1.7	1.7

Source: ETA Form 203 data (http://workforcesecurity.doleta.gov/unemploy/chariu.asp) and administrative data files collected for this study.

Note: The first and second columns present information on the full population of UI first payments occurring from January 2008 to September 2009 in the states indicated by the column header. The final column is based on ETA 203 data for the national population of individuals filing a continued UI claim on the 19th of each month from January 2008 to December 2009. For all three columns, the summary statistics presented in the table are based only on records with complete data.

2. Construction of key analysis measures derived from administrative data

We restructured the administrative claims and wage datasets to create one analysis record per initial UI claim. In addition to data on recipients' characteristics, our analysis files included constructed measures of (1) all regular and recessionary UC benefits that were actually collected based on entitlements stemming from initial UI claims resulting in a UI first payment; (2) the

potential duration of benefits that could have been collected based on the initial UI claim; and (3) measures of post-claim earnings and employment.[30]

Summarizing UC benefit collection information across claims stemming from the same regular UI entitlement. We combined benefit-collection data from UI, EUC08, and EB claims that were derived from the same initial UI claim into summary measures of the dollars and weeks of benefits collected, as discussed in Chapter II. Table B.3 shows how the number of weeks of UC benefits collected would be calculated for a hypothetical recipient who exhausted a 26-week entitlement of UI, exhausted the first three tiers of EUC08 tiers, and collected part of the EB benefits available to him or her. Based on these data, we define the total UC duration for this recipient as 78 weeks, which equals the total dollars received for the UI, EUC08 and EB claims ($31,200) divided by the WBA ($400). As noted in Chapter II, if this hypothetical recipient had first payments on more than on initial UI claim, separate summary information would be constructed for each one.

Table B.3. Observed benefit-collection data and constructed measures for a hypothetical UI recipient

Data elements in administrative claims records				Constructed measures	
Claim type	Maximum benefit amount (dollars)	Weekly benefit amount (dollars)	Balance (dollars)	Dollars received	Week-equivalents collected
UI	10,400	400	0	10,400	26
EUC08 tier 1	8,000	400	0	8,000	20
EUC08 tier 2	5,600	400	0	5,600	14
EUC08 tier 3	5,200	400	0	5,200	13
EB	8,000	400	6,000	2,000	5
Total for constructed measures	n.a.	n.a.	n.a.	**31,200**	**78**

n.a. = not applicable.

Additional steps were needed to create benefit-collection measures from the claims data provided by three states (Colorado, Illinois, and Wisconsin) in which the survey was fielded. Among individuals who received first payments on more than one initial UI claim, the state data systems did not allow the claims extracts to readily be created in a way that allowed EUC08 payments to be consistently linked to the initial UI claim from which the EUC08 entitlement stemmed. We developed a series of computer programs to adjust the data so that separate UC collection measures could be created for each distinct initial UI claim, resolving remaining inconsistencies for the survey sample based on a careful case-by-case review.

Imputing potential durations. We imputed the potential duration of benefits available through all potential regular and recessionary benefits stemming from an initial UI claim, as

[30] Because the analysis includes only initial UI claims resulting in a first payment, the terms "UI first payment" and "initial UI claim" may be used interchangeably when describing the study's regular UI benefits data and the file construction process. We use "initial UI claim" for convenience throughout the rest of this discussion.

discussed in Chapters II and V. This imputation strategy was necessary because the administrative data generally contained only information about programs/tiers from which recipients actually collected benefits. For example, the total potential duration of benefits available to the hypothetical recipient in Table B.3 would depend on whether EUC08 tier 4 triggered on in the individual's state after s/he stopped receiving EB benefits—information not recorded in the administrative record of the recipient.

Due to inconsistencies in claim payment dates in some states' extracts, our imputation was based on the assumption that recipients collected a full WBA every week starting either at the BYB date or one week later (depending on whether the state had a waiting week). Based on this assumption, we used a "counting forward" algorithm to calculate recipients' total potential duration based on collection trajectories similar to those depicted in Figures V.1 through V.4 in the main text. This algorithm determined the amount of benefits remaining to a recipient in each calendar week based on a combination of:

- Recipient-level information about the BYB date and number of weeks available through the initial UI claim
- Whether the state's UI program required recipients to serve a waiting week
- National legislation specifying the weeks of benefits available through each EUC08 tier
- DOL trigger notices about which EUC08 tiers were active in each state and calendar week
- DOL trigger notices for the EB program about (1) whether it was active in each state and calendar week; and (2) the number of benefit available through the program, if active

In addition, per the federally-specified program rules, we assumed that (1) the EUC08 entitlement for a given tier remained available to a recipient even after his or her state's unemployment rate fell below the trigger threshold for that tier, and (2) EUC08 benefits were paid first in any week in which a recipient had both EUC08 and EB benefits remaining.

Based on this algorithm, we calculated the total potential duration as the sum of the number of calendar weeks in which the recipient had at least one benefit week left in the UI, EUC08, and or EB entitlements stemming from his or her initial UI claim. We also added a fractional amount to the total potential duration for any calendar weeks in which the recipient would have had less than one week of benefits remaining. In implementing this algorithm, we also subdivided the total potential duration into the main analysis measures used in Chapters V and VI of the report. That is, we indexed separately the number of weeks of UI, EUC08, EB benefits that could have been collected consecutively, the number of additional weeks that could have been collected only after a gap, and the total number of gap weeks between a temporary exhaustion of available benefits and when more EUC08/EB benefits would subsequently become available.

Developing post-claim earnings/employment measures from the wage records. We created quarterly measures of earnings and employment in each of 12 post-claim quarters for all recipients included in the study's analysis files. For example, the employment/earnings data for the first post-claim quarter of a recipient whose UI claim was in August 2008 would be determined based on his or her employment/earnings during the fourth quarter of 2008. Quarterly earnings were calculated as a total across states and/or employers for individuals who worked in

multiple state or for multiple firms. We then developed quarterly employment indicators according to whether quarterly earnings were greater than zero.

B. Fielding of the UC recipient survey

The survey was fielded to a random sample of individuals receiving a first payment on an initial UI claim identified in the administrative records of 12 states that had provided claims extracts meeting the study requirements by late 2013 (Table B.1). The survey was administered using a mixed-mode telephone/web design and took approximately 30 minutes to complete. It was completed by 2,150 respondents, and the final response rate was 39 percent. In the following subsections, we discuss (1) the content of the survey, (2) how the sample was allocated across states and time periods, (3) methods used to reach potential respondents, (4) adjustments we made for survey nonresponse, and (5) additional steps we took to clean the survey response data. As explained subsequently, the cleaned survey file excluded a small number of individuals providing inconsistent responses, resulting in a final file containing data on 2,122 respondents.

1. Survey content

The recipient survey was designed to yield information unavailable from administrative sources on characteristics, employment, and financial wellbeing of UC recipients prior to the initial UI claim, as well as their experiences during and after the period when they collected UC benefits. The major content areas of the survey were:[31]

- **Demographic and socioeconomic characteristics**, including items such as age, gender, race and ethnicity, education, marital status, and household composition and size.
- **Employment before and after recipients began collecting UI benefits**, including details about the job held prior to the initial claim; start and stop dates of up to 10 post-claim jobs; and specific information about 3 post-claim jobs: (1) the first job held after the initial UI claim date, (2) the job that served as the main source of income and benefits in the post-claim period (if different from #1), and (3) the main current job (if different from #1 or #2).
- **Other labor-market activities after the start of UI receipt**, including job search activities and participation in education and training activities in the post-claim period, as well as labor force participation at the time of the survey.
- **Economic well-being before collecting benefits, since the start of UI receipt, and at the time of the survey.** The survey included questions about household income, sources of federal and state income support, and the types of assets held before the job loss, as well as questions about income and sources of income support in 2013. It also included indicators of financial distress since the initial UI claim, such as whether recipients experienced delinquencies on credit, mortgage, and rent payments; foreclosures and evictions; or personal bankruptcy.

Given the timing of the survey, there was a very long recall period for some of these questions. The survey was fielded from December 2013 through August 2014, but covered recipients who

[31] A more detailed listing of survey content areas and the specific topics it covered can be found in Part A of the supporting statement of the study's information collection request to the Office of Management and Budget, which is available at http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201110-1225-001.

began collecting UI benefits between January 2008 and September 2008. Thus, most respondents were interviewed 4 to 6 years after their initial UI claim dates.

2. Allocation of the survey sample across states and time periods

As discussed in the main text, the survey sample was selected from the population of UI claims that were initiated between January 2008 and September 2009 in one of the 12 states listed in Table B.1. We allocated the sample to capture a wide range of experiences of UC recipients in those states during the target timeframe.

- We sampled to achieve a greater number of survey responses from more populous states, since such states tended to show higher diversity in the characteristics of UC recipients. However, we also sought to have a minimum number of responses from each of the 12 survey states to ensure each was adequately represented.
- To ensure adequate representation of recipients who began receiving UI benefits earlier and later in the recession, we also sought to have the UI claim start dates of the survey sample equally distributed across three time periods: (1) January 2008 through September 2008, (2) October 2008 through March 2008, and (3) April 2008 through September 2009. As shown in Figure II.2 of the main text, first of these time periods corresponds to when the unemployment rate began rising most steeply, and the third time period corresponds to when growth in the unemployment rate tapered off.

To achieve this allocation, we released the survey sample in waves, updating the distribution released in each wave based on the cumulative response rate at that time. Table B.4 shows how the final distribution of survey respondents compares with the share of UI first payments occurring in each of the 12 states and each of the three time periods covered by the survey.

Table B.4. Distribution of survey respondents across states and time periods (percentages)

	Share of all UI first payments occurring in the 12 survey states, January 2008 through September 2009	Share of survey respondents
State		
Arkansas	2.5	6.6
California	32.5	21.5
Colorado	2.8	6.2
Florida	11.3	8.7
Georgia	6.6	4.6
Illinois	10.9	9.7
New Jersey	7.8	7.8
Ohio	8.6	7.6
South Dakota	0.2	6.0
Virginia	3.9	6.9
Washington	5.5	7.2
Wisconsin	7.5	7.2
Time period		
January 2008 through September 2008	31.8	32.9
October 2008 through March 2009	39.1	33.7
April 2009 through September 2009	29.1	33.4
Total	100.0	100.0

Source: Administrative claims data and paradata from UI recipient survey

3. Methods used to reach potential respondents

The design of the survey resulted in challenges to reaching the UC recipients we sought to survey. There was no prior connection between potential respondents and our research organization, so the survey research team planned to start searching for them using the last-known contact information from state administrative claims data. However, as already mentioned, the survey was fielded four to six years after recipients initially began receiving benefits, so this contact information was outdated or invalid for a substantial share of sample members. To address this, we used several standard practices for locating and establishing contact with potential recipients:

- We verified and updated the contact information provided by states using online public-records databases that include addresses and phone numbers. If initial batch searches of these databases were not fruitful, we conducted more intensive locating efforts on a case-by-case basis.
- Among those with valid postal addresses, we sent an initial contact letter on DOL letterhead, following it with subsequent reminder postcards. We also sent reminder emails to potential respondents for whom we could identify an email address from the administrative records or public records databases. All such contact included login information for the web version of the survey and details about how to complete the survey via the telephone.
- Although incoming calls from potential respondents were accepted throughout the survey fielding effort, the survey team began making outgoing calls three to four weeks after the initial contact letter was sent. This two-phased approach was used to allow potential respondents time to complete the survey through the Internet before outgoing phone call efforts were made.
- We offered incentive payments to potential respondents for completing the survey. Specifically, respondents were offered (1) $40 if they completed the survey via the web or initiated contact with the evaluation team to complete the survey by phone; or (2) $30 if they completed the survey by phone after being contacted by the evaluation team.

Despite the efforts to find potential respondents, the response rates were lower than expected for the initial waves of the survey. As a result, we assessed whether prepaying $5 of the promised incentive could be an effective way to boost response rates in the later waves. As discussed in Hock, Anand, and Mendenko (2015), we used an experimental design in three states to test the effects of a $5 prepayment, finding that it increased response rates by approximately 3.6 percentage points. This increase represented over one-tenth of the 34 percent response rate of the control group in the states included in the experiment. Additional calculations in Hock et al. (2015) suggest that the prepayment was also cost-effective, in comparison to the likely yield results from further intensifying efforts to locate potential respondents.

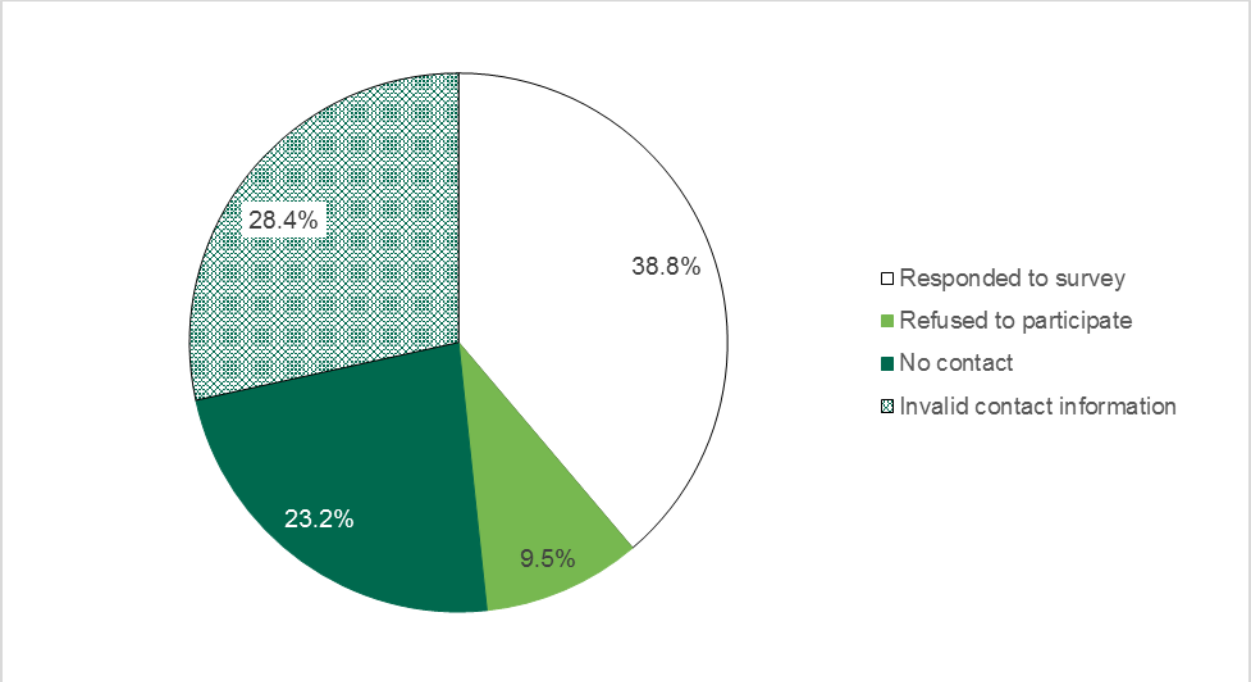
4. Adjustments for survey nonresponse

We received responses from 2,150 of the 5,541 UC recipients we attempted to survey—a response rate of 39 percent.[32] Survey nonresponse was largely driven by a limited capacity to locate sample members based on the outdated contact information, as discussed previously. Based on the final distribution of response statuses among survey-eligible recipients (Figure B.1, Appendix Table D.28):

- We could not find any valid contact information for 28 percent of the sample, despite extensive database searches and other locating efforts
- Another 23 percent could not be reached by phone or email after repeated attempts
- Ten percent of the sample refused to participate

Our main analyses survey respondents is based on weights that adjust for survey nonresponse using information on all potential respondents available from the administrative data.

Figure B.1. Final response status of survey-eligible cases



Source: Paradata from UI recipient survey

Note: Percentages in the figure are calculated on a base that excludes cases deemed to be ineligible for the survey after they were released to the field. Survey-ineligible cases include individuals who, at the time of the survey, were determined to be deceased, incarcerated, or suffering from a physical or cognitive impairment that prevented their participation in the survey.

The administrative data allowed us to use regression analysis to identify potentially important differences between responders and nonresponders in their measured characteristics

[32] These figures exclude a small fraction of survey-ineligible individuals who were determined to be deceased, incarcerated, or suffering from a physical or cognitive impairment that prevented their participation in the survey.

and outcomes (Appendix Table D.29). For example, we found that the likelihood of response varied by gender, race/ethnicity, age, base-period wages, industry, and state. Although nonresponse was unrelated to the duration of benefit receipt and employment during the first two years after the quarter of the initial UI claim, we found significantly higher response rates (by over 6 percentage points) among recipients who were working during their third post-claim year. Results from an additional exploratory analysis (not shown) suggest that this is largely because we were more likely to be able to locate recipients who had worked during their third post-claim year. We found no significant relationship between post-claim outcomes and responses rates among those for whom valid contact information could be obtained.

Using the administrative claims data, we developed nonresponse weights that adjusted for difference between respondents and nonrespondents according to both pre-claim characteristics and outcomes after the initial UI claim. We developed these weights using a two-step process that used logistic propensity models to estimate factors associated with (1) our success at locating sample members and (2) their likelihood of response, conditional on our locating them. Nonresponse weights were developed separately for groups of states with similar unemployment rates. We used a statistical decision-tree algorithm within each group of states to identify the subset of variables and interactions between them that most significantly could explain whether the sample member could be located and whether he or she responded.

To validate the nonresponse weights, we compared (1) weighted estimates of the characteristics and outcomes of those who responded to the surveys and (2) unweighted estimates for the full set of survey-eligible UC recipients (both those who did and did not respond to the survey). Our cross-validation revealed that the nonresponse weights:

- Led to a weighted distribution of pre-UI characteristics for the respondent sample that was similar to that of the full set of cases according to baseline characteristics; the few statistically significant differences are small in magnitude (Appendix Table D.30).
- Resulted in estimates of the distribution of total weeks collected and EUC08/EB receipt that were nearly identical for survey responders and all survey-eligible UC recipients (Appendix Table D.31).
- Resulted in estimates of the labor market outcomes, as measured through the administrative data, that were similar for survey respondents and all survey-eligible UC recipients (Appendix Table D.32).

It is particularly noteworthy that the distribution of earnings is so similar, since no post-claim earnings measures were used to develop the nonresponse weights. This suggests that the weighted estimates might provide accurate results for additional outcomes not included in the nonresponse adjustments, such as those measured only through the survey.

5. Additional steps to clean the survey response data

Although survey respondents generally provided answers to most or all survey questions asked of them, some respondents declined to provide answers to one or more questions and others provided responses that did not align with our pre-specified response codes. We reduced missing data arising for these reasons by (1) examining responses to "other, specify" questions and recoding them, if possible, to standard categories; and (2) filling in information about

industry, occupation, and race/ethnicity from the administrative records, if such information was available. After these adjustments, the rate of missing data due to item nonresponse (that is, setting aside logical skips questionnaire) was less than 5 percent for most analysis constructs developed from the survey and less than 10 percent for each of them.

When cleaning the data, we also found that 28 respondents provided a UI claim start date that was substantially different than what was recorded for them in the administrative records. Certain survey questions used the initial UI claim date as an anchoring device to focus respondents on the time of their job losses and/or when they began receiving benefits. Such questions were pre-filled using BYB dates from the administrative data, but 28 respondents asked that their UI claim start date be revised to a value that was more than 60 days earlier or later than the recorded BYB date. These respondents were excluded from the main analysis because of the potential for misalignment between (1) what they perceived to be "pre-claim" or "post-claim" experiences and (2) the actual timing of their experiences. As a result, the final UI recipient survey file included 2,122 of the 2,150 survey responders.

C. Comparison of employment measures derived from administrative and survey data

The administrative and survey data potentially provide complementary information about post-claim employment:

- The survey could capture more types of employment than the administrative data. Employment measures derived from the administrative records we collected can measure only UI-covered employment in the 19 states providing wage data for the study. Based on data from DOL's ET Financial Handbook 394 (http://workforcesecurity.doleta.gov/unemploy/hb394.asp), these states contained 64 percent of all UI-covered employment nationwide from 2008 to 2012.
- However, survey response data might be less accurate than administrative data in measuring such UI-covered employment retrospectively. The accuracy of self-reported measures of past employment is likely hampered by recall bias because, as already discussed, respondents were surveyed four to six years after receiving a first UI payment.

Our comparative analysis suggests that the administrative UI wage records offer more-nearly complete measures of employment shortly after respondents' initial UI claims, although the survey is likely to be a reliable source of information in time periods closer to the date of survey completion.

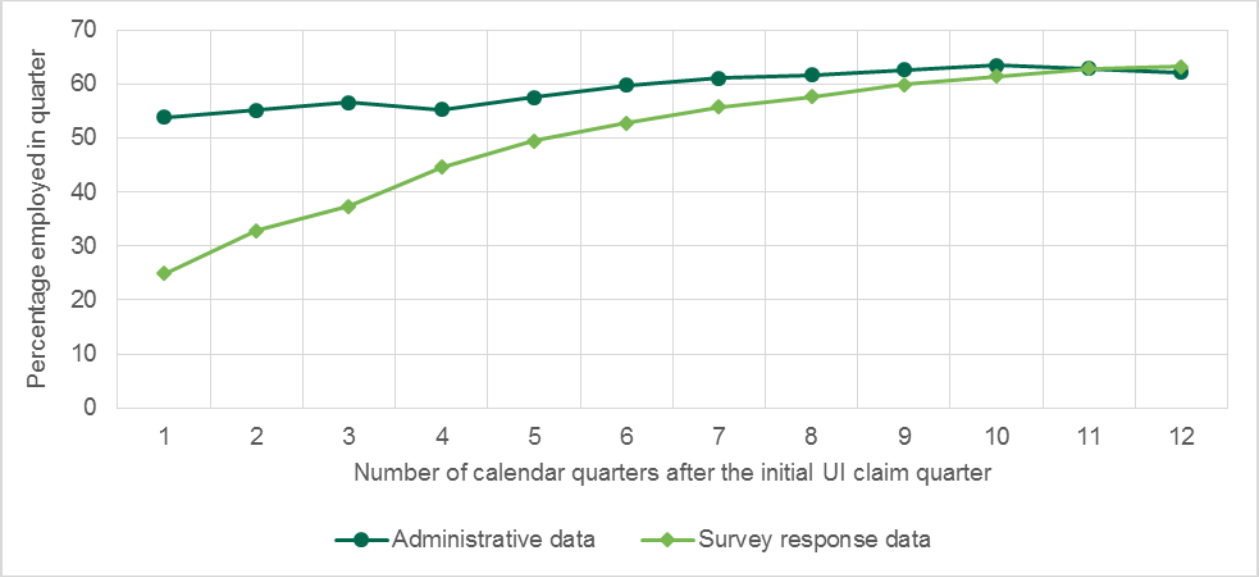
We compared quarterly employment rates from the two data sources using a subset of respondents whose self-reported information was judged to be the most consistent and complete. To boost comparability, administrative measures counted only quarters after the initial UI claim quarter in which the individual's wage records indicated at least $100 in earnings. In addition, survey measures counted only jobs that started after the quarter of the UI claim. Our results in Figure B.2, Figure B.3, and Appendix Table D.33 indicate that:

- There was substantial underreporting of employment by survey respondents for the periods shortly following the UI claim.

  - Survey-based measures of employment rates for the first and second post-claim quarters are half as large as the rates calculated from administrative data
  - Relative to the administrative data, survey measures would overstate the average time to first employment by 1.5 quarters; this translates to approximately 4.5 months. Similarly, survey measures would understate the total time spent employed during a three-year period after the quarter of the initial UI claim by 1.1 quarters (or a little over 3 months) on average
- Employment rates across the two data sources converge toward the end of the three-year window after the UI claim quarter. This suggests relatively small survey recall bias in periods closer to the interview date.

As a consequence of the substantial bias from survey underreporting of retrospective employment, we rely exclusively on administrative data to form analytic employment measures during the first few years after the claim. However, we also analyze survey measures of employment and earnings near the time of the survey because our comparative analysis suggests that they are likely to provide reliable information.

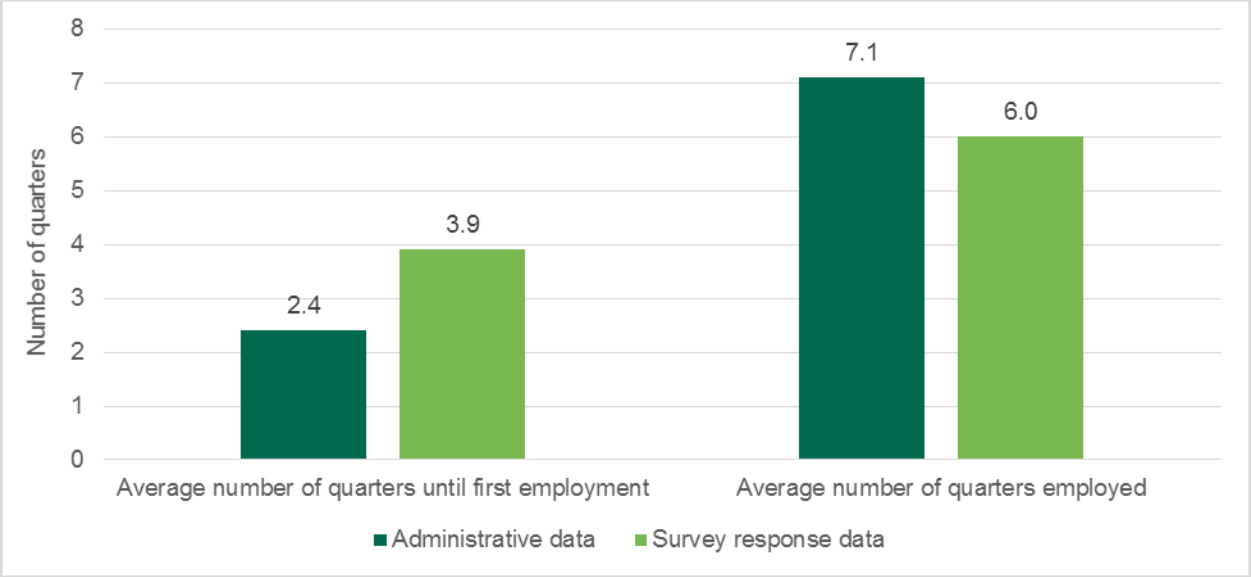
Figure B.2. Quarterly post-claim employment measures based on administrative and survey response data



Source: Merged survey respondent data file

Note: The measures of employment reported in the figure are unweighted and were calculated for a common set of respondents who confirmed the initial UI claim date recorded in the administrative data, provided job start dates after the claim date, and provided end dates for non-current employment. Administrative measures of employment are based on earnings of at least $100 according to the UI wage records for the quarters following the initial UI claim quarter. For comparability with measures derived from administrative data, survey measures exclude employment that ended before the start of the first post-claim quarter.

Figure B.3. Summary measures of post-claim employment based on administrative and survey response data



Source: Merged survey respondent data file

Note: The underlying quarterly employment measures used to produce the summary measures in this figure are defined in the same way as those in Figure B.2.

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APPENDIX C
ANALYSIS OF ASSOCIATIONS BETWEEN POTENTIAL DURATIONS AND OUTCOMES USING ADMINISTRATIVE-ONLY DATA

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In this appendix, we assess whether the study's estimated associations between outcomes and potential durations might differ when using administrative-only data from the full set of 17 states, as compared to the results based on the survey respondents from 12 states reported in the main text. As discussed in Chapter II of the report, the administrative-only analysis file includes a larger number of recipients from the 12 states included in the survey, as well as recipients from 5 additional states that were not included in the survey (for a total of 17).[33] However, as compared the merged survey data file, the administrative-only analysis file contains fewer measures of recipients' characteristics and job histories that could be used as control variables in the regression analysis. Each of these differences between the analysis files might (or not) result in differences in the size and direction of regression estimates of how potential durations were related to labor market outcomes. Therefore, we used a staged comparison approach in which we (1) assessed whether the results based on the survey respondent data file differ from results based on administrative-only data for a larger set of claims from the same 12 states, and then (2) assessed whether the results differ when comparing large samples of administrative-only data on claims from the 12 survey states and the full set of 17 study states.

Key findings

- The distribution of characteristics among recipients in the administrative-only analysis file differed slightly compared to the sample who responded to the survey
- Recipients included in the administrative-only analysis file tended to have fewer consecutive weeks of potential benefits and longer potential gaps, on average, than the recipients included in the survey, but post-claim employment/earnings outcomes were similar across the two groups
- Associations between potential duration and employment outcomes based on the administrative-only analysis file for the 12 survey states were not statistically different from our estimates based on the merged survey respondent data file
- We found that associations based on the administrative-only analysis file for all 17 study states were negative, but smaller in magnitude than associations based on the 12 survey states; this suggests caution in applying the analysis results beyond the areas covered by the study

A. Comparison of analysis samples

The administrative-only analysis file includes a large sample of randomly selected UI claims initiated during the same time period covered by the recipient survey: January 2008 through September 2009. However, compared to the survey sample respondents, the administrative-only analysis file included a higher proportion of recipients that experienced less severe recessions. This is partly because the survey was designed to have more respondents from high-population states, whereas the administrative-only sample was more evenly distributed across states; less populous states tended to fare better during the recent recession. In addition, as discussed in

[33] A comparison between the two sets of states in Appendix B indicates that the distribution of demographic characteristics of UI recipients in the full set of 17 states was more similar to that of the national population of UI recipients over study period, as compared to all recipients in the 12 states where the survey was fielded. However, as indicated in Chapter II, the weighted distribution of characteristics of recipients included in the survey sample were also broadly similar to the those of UI recipients in the nation as a whole in 2008 and 2009.

Chapter II, the five extra states included in the administrative-only analysis file experienced less severe recessions, as measured by the unemployment rate.

To better understand the potential differences, we compared the characteristics, potential durations, and outcomes between (1) administrative-only data for survey respondents, (2) the sample of recipients from the 12 survey states included in the administrative-only analysis file, and (3) the sample of recipients from all 17 study states included in the administrative-only analysis file. Based on this comparison, we found broad similarities between the recipients across the different samples, with a few notable exceptions.[34]

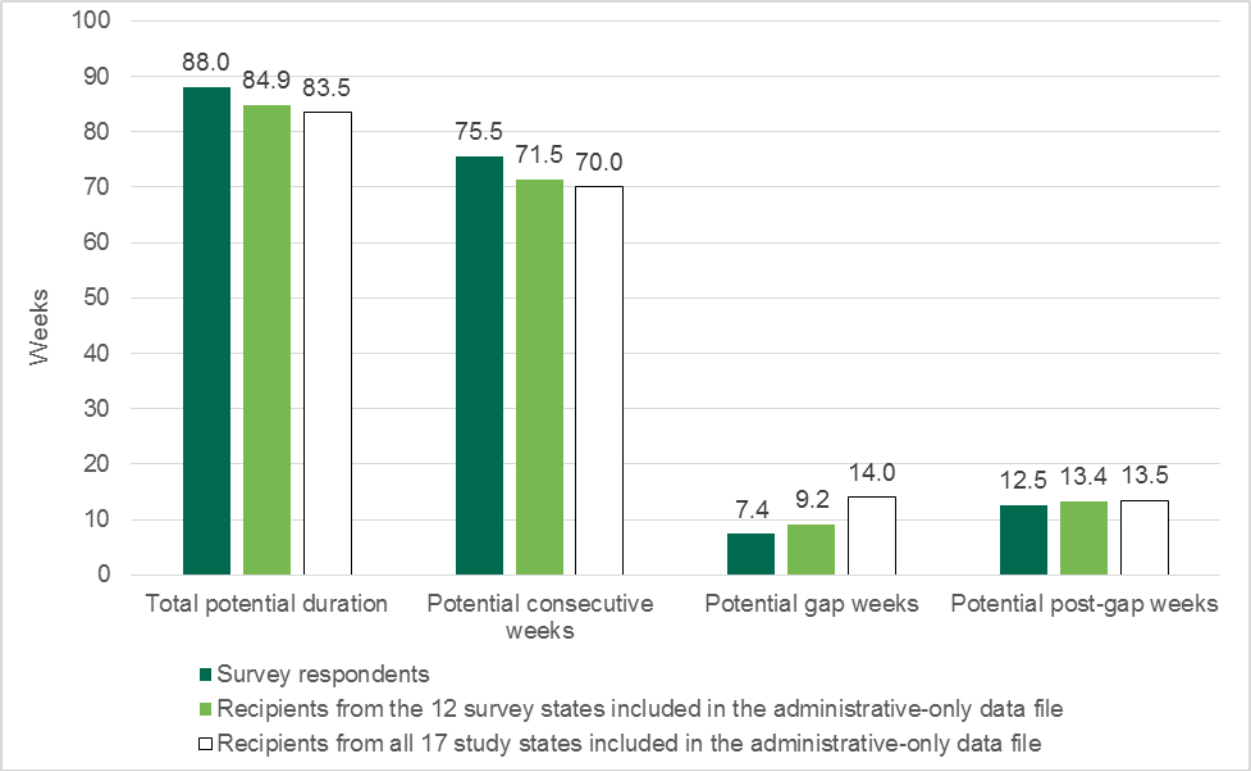
- We found no meaningful differences in the distributions of gender, age, and the industry of the pre-UI job. However, base period earnings were around 5 percent lower, on average, among the large samples of recipients (from both the 12 survey states and all 17 study states) included in the administrative-only analysis file, as compared to the sample who responded to the survey. In addition, WBAs were slightly lower among recipients in the large administrative-only samples than for survey respondents.[35] (Appendix Table D.34.)
- The sample of recipients in the administrative-only analysis file averaged three to five fewer weeks of total potential benefits than did the sample of survey respondents (Figure C.1, Appendix Table D.35).
  - This difference is partially based on the lower average number of weeks available through the regular UI program for recipients in the administrative-only analysis file; this, in turn, is likely to reflect the difference in base-period wages already noted.
  - The higher total potential durations observed among the administrative-only samples arises largely because of the additional weight placed relatively on recipients living in states that were less hard-hit by the recession and, therefore, eligible for fewer EUC08/EB benefits. Arkansas and New Hampshire did not trigger onto tier 4 of EUC08, and North Dakota, and South Dakota triggered onto neither tier 3 nor tier 4. Recipients from those states constituted 24 percent of the recipients in the 17-state administrative-only sample but were only 17 percent of survey respondents (which excluded North Dakota and New Hampshire).
- The average length of potential gaps in benefits was also substantially higher among the samples of recipients in the large administrative-only analysis file, compared to the sample responding to the survey (Figure VI.1, Appendix Table D.35). This is particularly evident in the 17-state sample because of a relatively late triggering-on of EUC08 tier 4 in two states (New York and Texas). The average number of gap weeks among recipients in our administrative-only samples from those two states were 23 and 79, respectively.

[34] The exceptions we note are based on the estimated means and proportions of administrative-data measures constructed for the sample of survey responders and for the large samples of recipients included in the administrative-only analysis files. We do not statistically test the differences because our goal is to assess how the samples differ, not whether they were drawn from a population with an identical distribution of characteristics.

[35] There were also apparently large differences in the reason for job separation reason across the samples (Appendix Table D.34). However, our cleaning and validation of the data suggested that this was largely driven by differences across states in the coding of separation reasons and the share of records with missing data.

- Employment and earnings outcomes, however, were not substantially different across the samples of recipients we compared. For example, the average number of quarters employed over a three-year period was virtually identical and the annual employment rates differed by one to two percentage points, at most, across samples (Appendix Table D.36).

Figure C.1. Potential duration measures, by analysis sample



Source: Merged survey respondent data file and administrative-only analysis file

Note: Estimates for survey respondents have been adjusted for survey nonresponse. The administrative-only sample from the 12 survey states includes 252,000 recipients, and the administrative-only sample from all 17 study states includes 357,000 recipients.

B. Regression models for administrative-only data

We used a regression modeling framework similar to that described in Chapter V to analyze the association between outcomes and potential UC duration among using administrative data only. We estimated separate regression models for each of several outcomes, in each case using one observation per sampled claim. The main difference from Chapter V is that the explanatory variables throughout the administrative-only analysis are a subset of those available for the survey file: age, gender, race/ethnicity, base period wages, the industry of the pre-separation job, whether the individual received UCX and/or UCFE, and whether the initial UI claim date was in the first, second, or third month of a calendar quarter; our analysis samples included only claims with complete data on every explanatory variable.[36] This more limited set of explanatory

[36] For the large samples of recipients included in the administrative-only analysis file, we preserved the total number of records to the extent possible by adding additional, randomly-sampled claims with complete data to replace the claims that were dropped because of missing data.

variables could reduce the extent to which our regression estimates adequately control for the tendency of recipients with a stronger pre-claim connection to the labor market to have both longer regular-UI potential durations and better post-claim outcomes. As with the survey-based regressions, our administrative-only regressions also include a control for unemployment rates shortly before the initial UI claim date.

For the reasons described in Chapter V, caution must continue to be applied in interpreting the associations estimated using this regression framework. Unmeasured economic conditions affecting both outcomes and the extent of EUC08/EB triggering across states and time could limit the extent to which our estimates reflect causal impacts. This issue is particularly problematic for comparing the estimates for potential gap weeks across the survey and administrative-only samples, given that (1) gaps were largely associated with the timing and location of the initial UI claim, and (2) large sample sizes will tend to result in even small associations being found to be statistically significant. As a result, we do not discuss the relationships between gap weeks and outcomes observed in the administrative-only regression analysis, although we reported them for consistency with the presentation of earlier results.

C. Results of the administrative-only regression analysis

We present regression results based on both (1) the large samples of recipients included in the administrative-only analysis file, and (2) survey respondents using only the administrative data available for them. The latter set of results was produced to serve as a reference point so that the administrative-only regression results could be compared to the findings of Chapter V. Focusing on the total number of post-claim quarters employed (Table C.1), we found that:

- **Administrative-only data for survey respondents yielded associations between outcomes and potential duration measures similar to what we found in Chapter V.** The estimates reported in the first column of Table C.1 imply that an extra week of available benefits were associated with 0.025 to 0.036 fewer quarters of employment or, given 13 weeks per quarter, a reduction in employment of 0.33 to 0.47 weeks. This range is only slightly below what we found in Chapter V when adjusting for the additional characteristics available for survey respondents (Table V.2), and the difference is statistically insignificant.
- **Associations between potential duration and outcomes based on the large administrative-only sample from the 12 survey states were smaller in magnitude than, but within the margin of error of, results based on the survey respondent sample.** Comparing the estimates across the first two columns of Table C.1, the relationship between the outcomes and potential duration measures are less negative when using the 12-state administrative-only sample, as compared to the results for the sample of survey respondents. These differences could be based on dissimilarities across samples in the distribution of claims across time periods and states or other factors including survey nonresponse. But, given the size of the survey respondent sample, we cannot statistically rule out that estimates based on the survey sample reflect the same underlying association as the estimates found using the larger administrative-only sample from the survey states.
- **Results using the large administrative-only samples indicate that associations were generally 25 to 40 percent smaller in magnitude when including data from all 17 states, as compared to the estimates found for the 12 survey states.** For example, estimates

based on the large administrative-only sample for the 12 survey states indicate that consecutive weeks of potential benefits were associated with 0.018 fewer quarters (or 0.23 fewer weeks) of employment during the three-year post-claim period. Considering all 17 states, extra weeks of consecutive potential benefit weeks were associated with 0.011 fewer quarters (or 0.14 fewer weeks) of employment over that period. All differences in the estimated associations across the 12- and 17-state samples from the administrative-only analysis file were statistically significant.

Table C.1. Association between potential durations and number of post-claim quarters employed based on administrative data only

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	-0.025* (0.009)	-0.018* (0.001)	-0.011* (0.000)
Gap weeks	0.000 (0.011)	-0.006* (0.001)	-0.002* (0.000)
Post-gap weeks	-0.036* (0.011)	-0.016* (0.001)	-0.012* (0.001)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.08	0.05	0.04
Standard error	4.135	4.256	4.257
Mean of dependent variable	7.617	7.490	7.546

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Quarterly employment was calculated over the three years following the quarter of the initial UI claim. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and whether the initial UI claim date was in the first, second, or third month of a calendar quarter. Regressions for survey respondents use nonresponse weights but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Our findings for other outcomes show a broadly similar pattern. For example, the large sample of administrative-only data from 17 states reveal less negative associations between potential duration and the duration of joblessness (Appendix Table D.37).[37] Each consecutive week of potential benefits was associated with an additional 0.007 quarters until first reemployment based on the large administrative-only sample from the 12 survey states. This translates to a 0.091 week increase in the duration of initial joblessness. Based on data from all

[37] Additional estimates based on the administrative-only data for employment and earnings in the third post-claim year are in Appendix Tables D.38 and D.39. Results from fixed-effects regression models for all outcomes are also included as Appendix Tables D.41 through D.43.

17 study states, each consecutive week of potential benefits was associated with an increase of 0.006 quarters (or 0.078 weeks) until first reemployment.

The differences in findings across the large samples of administrative-only data could reflect a different underlying relationship in the 5 additional states that could be analyzed using these data, as compared with the 12 states in which the survey was fielded. Unemployment grew more quickly over the recession and stayed higher in the 12 survey states than in the 5 additional states included in the large administrative-only samples (Appendix Table D.2). Total potential durations also tended to be lower in the 5 additional states, but they did not adjust proportionately with the unemployment rate because of EUC08/EB triggering rules. For example, at the end of the recession, the unemployment rate in the 12 survey states was 1.2 times as high as in the 5 other states (10.4 percent versus 8.7 percent). However, the total potential duration of benefits in the 12 survey states was only 1.06 times longer than in the 5 other states (85 weeks versus 80 weeks). Differences in the estimates across the two large samples may also have arisen because of differences across states in UI program rules and unmeasured economic factors, as discussed previously. In any case, the variability in the estimated associations across the large samples suggests that a measure of caution be applied in extrapolating the results to states beyond those included in the study.

APPENDIX D
TABLES OF CONTEXTUAL INFORMATION AND RESULTS FROM STATISTICAL ANALYSES

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Table D.1. Legislation affecting EUC08 and EB entitlements

Public law number[a]	Date signed into law	Last date to start EUC08 claim	Last date of any EUC08 payment	EUC08 weeks available[b]				Notes
				First tier	Second tier	Third tier	Fourth tier	
110-252	6/30/2008	Cannot occur for a week of unemployment ending after 3/31/2009	No payment for a week beginning after 6/30/2009	13	n.a.	n.a.	n.a.	Effective for weeks beginning 7/6/2008 and ending 7/12/2008 (in most states). Eligible claimants must have exhausted benefit year on or after 5/1/2007.
110-449	11/21/2008	Cannot occur for a week that begins after 3/31/2009	Last week for benefit collection is the week including 8/27/2009	20	13, for states with at least a 6% TUR	n.a.	n.a.	Additional weeks of benefits cannot be collected for weeks before date legislation signed into law (11/21/2008). Second tier added for high unemployment states
111-5	2/17/2009	Cannot occur for a week beginning after 12/31/2009	No payment for a week beginning after 5/31/2010.	20	13, for states with at least a 6% TUR	n.a.	n.a.	No change to the tiers
111-92	11/6/2009	Cannot occur for a week beginning after 12/31/2009	No payments could be made for weeks beginning after 5/31/2010	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	Second tier increased and made available to all states; third and fourth tiers added
111-118	12/19/2009	Cannot occur for a week beginning after 2/28/2010	No payments could be made for weeks beginning after 7/31/2010	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	No change to the tiers
111-144	3/2/2010	Cannot occur for a week beginning after 4/5/2010	No payments could be made for weeks beginning after 9/4/2010	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	No change to the tiers

Public law number[a]	Date signed into law	Last date to start EUC08 claim	Last date of any EUC08 payment	EUC08 weeks available[b]				Notes
				First tier	Second tier	Third tier	Fourth tier	
111-157	4/15/2010	Cannot occur for a week beginning after 6/2/2010	No payments could be made for weeks beginning after 11/6/2010	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	Lapse in first payments[c] from 4/5/2010 through 4/15/2010; no change to the tiers.
111-205	7/22/2010	Cannot occur for a week beginning after 11/30/2010	No payments could be made for weeks beginning after 4/30/2011	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	Lapse in first payments[c] from 6/2/2010 through 7/22/2010; no change to the tiers
111-312	12/17/2010	Cannot occur for a week beginning after 1/3/2012	No payments could be made for weeks beginning after 6/9/2012	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	Lapse in first payments[c] from 11/30/2010 through 12/17/2010; no change to the tiers; EB trigger look-back period increased (at the legislative option of state) from two years to three years until 12/31/2011[d].
112-78	12/23/2011	Cannot occur for a week beginning after 3/6/2012	No payments could be made for weeks beginning after 8/15/2012	20	14	13, for states with at least a 6% TUR	6, for states with at least an 8.5% TUR	No change to the tiers; three-year EB look-back period extended until 2/29/2012[d].

Public law number[a]	Date signed into law	Last date to start EUC08 claim	Last date of any EUC08 payment	EUC08 weeks available[b]				Notes
				First tier	Second tier	Third tier	Fourth tier	
112-96	2/22/2012	Cannot occur for a week beginning after 1/2/2013	No payments could be made for weeks beginning after 1/2/2013	20 for weeks ending 9/2/2012 or earlier 14 for weeks ending 9/3/2012 through 12/29/2012	14 for all states for weeks ending 6/1/2012 or earlier 14 weeks for states with at least a 6% TUR for weeks ending between 6/2/2012 and 12/30/2012	13, for states with at least a 6% TUR for weeks ending 6/1/2012 or earlier 13, for states with at least a 7% TUR for weeks ending between 6/2/2012 and 9/2/2012 9, for states with at least a 7% TUR for weeks ending between 9/3/2012 and 12/30/2012	6 in states on EB or 16 in states not on EB, for states with at least an 8.5% TUR for weeks ending 6/1/2012 or earlier 6 for states with at least a 9% TUR for weeks ending between 6/2/2012 and 9/2/2012 10 for states with at least a 9% TUR for weeks ending between 9/3/2012 and 12/30/2012	The change to Tier 4 could not result in potential extended benefits (from the EUC08 and EB programs together) to exceed 73 weeks; three-year EB look-back period extended until 12/31/2012[d].
112-240	1/2/2013	Cannot occur for a week beginning after 1/1/2014	No payments could be made for weeks beginning after 1/1/2014	14	14, for states with at least a 6% TUR	9, for states with at least a 7% TUR	10 for states with at least a 9% TUR	No change to the tiers; three-year EB look-back period extended until 12/31/2013.

Note: The table covers the features of the cited legislation that affected EUC08/EB entitlements, but does not describe other changes to UC law that were included in the same legislation.

[a]P.L. 110-252 = The Supplemental Appropriations Act, 2008, Title IV—Emergency Unemployment Compensation. P.L. 110-449 = The Unemployment Compensation Extension Act. P.L. 111-5 = The Assistance for Unemployed Workers and Struggling Families Act, of the American Recovery and Reinvestment Act of 2009 (ARRA), Section 2001 of Division B, Title II. P.L. 111-92 = The Worker, Homeownership, and Business Assistance Act of 2009 (Worker Assistance Act). P.L. 111-118 = Department of Defense Appropriations Act, 2010. P.L. 111-144 = Temporary Extension Act of 2010. P.L. 111-157 = Continuing Extension Act of 2010. P.L. 111-205 = Unemployment Compensation Extension Act of 2010. P.L. 111-312 = Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010; P.L. 112-78 = Temporary Payroll Tax Cut Continuation Act of 2011; P.L. 112-96 = Middle Class Tax Relief and Job Creation Act of 2012; P.L. 112-240 = American Taxpayer Relief Act of 2012.

[b]Technically, the calculation of the EUC08 maximum benefit amount (MBA) is the lesser of (1) a certain percentage of regular UI benefits and (2) a certain number of weeks times the regular average weekly benefit amount (WBA). The calculations to determine EUC08 entitlements are conducted before disqualifications, wage reductions, and other penalties are imposed upon regular benefits. Dependents' allowances are included in the calculation, but additional compensation (compensation totally financed by a state and payable under a state law by reason of high unemployment or other special factors) is not. When the table indicates 13 weeks of EUC08 benefits, the EUC08 MBA is the lesser of 50 percent of regular compensation and 13 weeks times the average of the regular WBAs. When the table indicates 6, 14, or 20 weeks of benefits, the EUC08 MBA is the lesser of (1) 24, 54, or 80 percent of regular compensation, respectively; and (2) 6, 14, or 20 weeks times the average of the regular WBAs, respectively. If the regular WBA varies over the course of the benefit collection period, it is possible that the recipient would get fewer than the full potential number of weeks, because the EUC08 WBA is set to the most recent regular WBA (which could be higher or lower than the average of the regular WBAs).

[c]There were three distinct "lapses" in the EUC08 program during calendar year 2010. During these lapse periods, individuals who had begun to collect benefits through any tier could continue to do so, but no recipient could move on to a new tier because of program expiration provisions contained in existing legislation. In each of those instances, the program was ultimately extended via new legislation that allowed payments be made retroactively to recipients who were otherwise eligible to start collecting a new tier of EUC08 benefits.

[d]P.L. 111-312 amended how states can compute if they qualify for EB (or must trigger off EB) by allowing them to use a greater number of prior years as their reference point for their historical experience. This period is called the "look-back period." Because of the sustained high unemployment rates in recent years, the legislation allowed states that adopted the three-year, look-back period to remain on the EB program for longer than would otherwise be the case. The longer reference period was not mandatory, and states had the option to pass legislation allowing for a three-year, look-back period for trigger calculations based the IUR, the TUR, or both.

EB = Extended Benefits, EUC08 = Emergency Unemployment Compensation Act of 2008, n.a. = not applicable, IUR = insured unemployment rate, TUR = total unemployment rate, UTF = unemployment trust fund.

Table D.2. Unemployment rate from 2007 to 2013, nationwide and for study states

			17 states included in administrative-only file	
	Nation	12 survey states	All 17 study states	5 states not included in survey
Average unemployment rate, 2007 to 2013 (percentage)				
Overall average for selected area	7.7	8.3	7.9	7.1
Interquartile range of jurisdiction-level means for jurisdiction included in selected area	(5.2, 8.5)	(5.4, 9.2)	(5.0, 8.9)	(4.2, 8.2)
Growth in unemployment rate, 2007 to 2009 (percentage points)				
Overall average for selected area	4.6	5.2	4.8	3.8
Interquartile range of jurisdiction-level means for jurisdiction included in selected area	(3.2, 5.2)	(3.9, 5.0)	(3.2, 5.0)	(2.7, 3.8)
Number of UI jurisdictions	**51**	**12**	**17**	**5**

Source: Local Area Unemployment Statistics (LAUS) data from the Bureau of Labor Statistics (http://www.bls.gov/lau/data.htm).

Note: Nationwide estimates include 50 states and the District of Columbia. The LAUS does not include data from Puerto Rico or the Virgin Islands.

Table D.3. Current and cumulative reemployment measures for survey respondents for select post-claim periods (percentages)

Reference period	Employed during reference period	Any post-claim employment by reference period
Administrative data measures:		
Post-claim quarter 1	54.9	54.9
Post-claim quarter 2	57.1	65.1
Post-claim quarter 3	57.8	69.8
Post-claim quarter 4	56.5	73.2
Post-claim quarter 5	58.5	76.1
Post-claim quarter 6	61.0	78.4
Post-claim quarter 7	60.9	80.2
Post-claim quarter 8	61.3	82.1
Post-claim quarter 9	62.3	83.9
Post-claim quarter 10	63.5	84.8
Post-claim quarter 11	62.3	85.5
Post-claim quarter 12	61.9	86.3
Week of survey (based on survey response data)	62.7	86.8
Unweighted sample size	**2,122**	**2,122**

Source: Merged survey respondent data file

Note: Administrative measures of earnings are based on quarterly administrative wage data and exclude employment during the quarter of the initial UI claim. Employment during the week of the survey is based on individuals who reported that, in the week before the interview, they were (1) working at a job for pay, (2) employed but on vacation, on leave, or not working for other reasons, or (3) self-employed or had started their own business. Respondents were coded as having any post-claim employment by the week of the survey if either (1) they reported having been employed during that period or (2) they reported having held a job that started after the date of their initial UI claim. Estimates have been adjusted for survey nonresponse.

Table D.4. Demographic characteristics (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Gender			†
Female	42.2	39.1	46.1*
Male	57.8	60.9	53.9*
Race/ethnicity			†
Hispanic, Latino, or Spanish origin	17.2	17.4	16.9
Non-Hispanic black or African American	15.8	12.1	20.4*
Non-Hispanic white	61.8	65.0	57.8*
Other	5.2	5.5	4.9
Age at the initial UI claim date			†
Younger than 25	9.1	9.9	8.1
25 to 34	24.8	26.1	23.3
35 to 44	23.2	23.1	23.2
45 to 54	26.1	26.4	25.6
55 to 64	13.4	12.0	15.1*
65 or older	3.5	2.5	4.6*
Marital status			†
Married	47.4	49.4	45.0
Living with a partner	6.3	7.6	4.6*
Separated, divorced, or widowed	18.9	16.8	21.6*
Never married	27.4	26.2	28.8
Household size (number)	2.7	2.7	2.6
Highest level of school or degree			
Less than high school or GED	12.2	13.2	11.0
High school/GED	32.5	32.0	33.2
Some college but no degree	22.7	22.7	22.6
Associate's degree	11.7	12.0	11.5
Bachelor's or more advanced degree	19.1	18.0	20.5
Other, including trade schools, certification and apprenticeship programs	1.7	2.2	1.2
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Marital status was determined at the time of the initial UI claim. Household size was assessed during the year prior to the claim. Educational attainment was determined at the time of the separation from the pre-claim job. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

GED = General Educational Development certificate

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.5. Industry and occupation of the pre-claim job (percentages)

	Total	UI-only recipients	EUC08/EB recipients
Industry			†
Natural resources and mining	2.2	3.3	0.9*
Construction	16.4	19.3	12.9*
Manufacturing	20.4	21.8	18.6
Trade, transportation, and utilities	15.1	14.8	15.5
Information	2.4	2.0	2.8
Financial activities	6.4	4.2	9.1*
Professional services and management	7.3	6.1	8.7*
Business support services	8.2	6.6	10.2*
Education and health services	10.1	10.4	9.8
Leisure and hospitality	7.2	7.3	7.1
Other services	2.3	2.0	2.7
Public administration	2.1	2.4	1.7
Occupation			†
Management, business, and finance	10.7	8.3	13.7*
Computer, engineering, and science	4.6	4.4	4.8
Community and social services	6.1	6.9	5.1
Health care practitioners and technical	1.2	1.4	1.0
Service	10.6	10.6	10.5
Sales	8.4	7.2	9.9*
Office and administrative support	14.6	10.5	19.4*
Farming, fishing, and forestry	0.9	1.3	0.4*
Construction and extraction	12.0	14.2	9.4*
Installation, maintenance, and repair	4.7	5.1	4.3
Production	15.0	17.8	11.7*
Transportation and material moving	10.7	12.0	9.2
Military	0.4	0.3	0.5
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Information about industry and occupation was filled in from the administrative data, if possible, for respondents who did not respond or whose responses could not be categorized. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.6. Characteristics of the pre-claim job (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Weekly earnings			
$300 or less	9.8	9.6	10.1
$301 to $500	21.6	22.2	20.9
$501 to $700	20.7	19.7	21.8
$701 to $900	17.4	17.5	17.3
$901 to $1,100	9.2	9.4	9.0
$1,101 or more	21.3	21.6	20.9
Average (dollars)	817	825	808
Hours worked per week			
20 or fewer	5.3	6.5	3.9*
21 to 30	6.5	5.5	7.6
31 to 39	6.5	6.6	6.4
40	50.1	49.5	50.9
More than 40	31.6	31.9	31.2
Average (hours)	41.6	41.5	41.8
Job tenure			
6 months or less	12.9	13.7	12.0
7 months to 1 year	12.7	12.4	13.2
1 year and 1 month to 2 years	16.9	15.8	18.2
2 years and 1 month to 3 years	10.9	10.1	11.8
3 years and 1 month to 6 years	16.8	17.6	15.9
6 years and 1 month to 9 years	9.3	9.6	8.9
More than 9 years	20.5	20.9	20.1
Average (years)	5.7	5.8	5.6
Available fringe benefits			
Health insurance or membership in an HMO or PPO	65.8	65.7	66.1
Paid vacation	58.8	55.3	63.0*
Retirement, pension benefits, 401(k) or 403(b)	56.5	57.5	55.3
Received health insurance through job	50.8	50.6	51.0
Had previous layoffs from job	25.3	30.1	19.5*
Had layoffs on a regular basis	13.4	17.6	8.2*
Was represented by a union	17.2	20.2	13.5*
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Weekly earnings, weekly hours, and months of job tenure were assigned to the categories displayed in the table after rounding to the nearest integer. Dollar amounts are expressed in 2014 dollars. Weekly earnings measures exclude respondents who reported earnings of more than $5,000. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

HMO = health maintenance organization. PPO = preferred provider organization.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.7. Pre-claim job separation reason and subsequent recall to the same job (percentages)

	Total	UI-only recipients	EUC08/EB recipients
Job separation reason			†
Layoff: any reason	75.3	73.6	77.5
Lack of work	38.0	43.3	31.8*
Job or shift eliminated	7.5	6.2	9.0
Plant/facility/company moved or closed	10.9	9.2	12.9*
Recession	6.7	4.6	9.1*
Company downsized or restructured	19.3	14.1	25.2*
Temporary worker or job	11.3	14.2	7.9*
Other reason for layoff	6.3	8.3	4.0*
Fired	12.9	11.4	14.7*
Quit or retired	6.9	8.4	5.0*
Other reason	4.9	6.6	2.8*
Displaced worker	58.3	53.8	63.7*
Expected to be recalled to job at the time of the separation	27.3	29.9	24.1*
Had been recalled to job by the time of the interview	18.1	25.0	9.8*
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Displaced workers are defined as recipients who were laid off from their pre-claim job due to lack of work, elimination of a job/shift, closing of a plant/facility/company, the recession, or downsizing/restructuring of their company. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.8. Household income and poverty status in the year before the claim and in 2013 (percentages unless stated otherwise)

	In the calendar year before the initial UI claim			In 2013		
	Total	UI-only recipients	EUC08/EB recipients	Total	UI-only recipients	EUC08/EB recipients
Household income			†			†
$10,000 or less	10.5	8.6	12.7*	13.3	10.3	17.0*
$10,001 to $20,000	12.8	13.0	12.6	13.2	12.0	14.6
$20,001 to $30,000	15.8	16.0	15.6	15.2	13.7	17.0
$30,001 to $50,000	22.8	23.2	22.4	20.7	20.8	20.6
$50,001 to $75,000	16.6	18.1	14.7*	17.0	19.3	14.4*
$75,001 to $100,000	10.4	11.0	9.7	10.1	12.0	7.8*
$100,001 or more	11.2	10.3	12.3	10.4	11.9	8.7*
Average (dollars)	51,543	51,782	51,257	48,324	53,690	41,897*
Household income, relative to the poverty threshold						†
50% or less	10.6	9.0	12.5*	12.2	9.7	15.2*
51% to 100%	10.4	10.8	9.9	11.6	10.1	13.4*
101% to 150%	14.0	13.6	14.4	12.7	11.5	14.2
151% to 200%	10.5	11.2	9.6	12.5	11.7	13.5
201% to 300%	18.9	19.7	17.9	17.3	18.3	16.1
301% to 400%	12.6	13.0	12.3	12.2	13.5	10.8
401% or higher	23.1	22.8	23.3	21.4	25.2	16.9*
Unweighted sample size	**2,036**	**1,098**	**938**	**2,055**	**1,108**	**947**

Source: Merged survey respondent data file

Note: Household income is expressed in 2014 dollars. Poverty was determined using income, household size, and the U.S. Census Bureau thresholds for householders under age 65 (http://www.census.gov/hhes/www/poverty/data/threshld/index.html). Household size in 2013 was assumed to be the same as the respondents' household size at the time they completed the survey. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.9. Income support from non-UI sources in the year before the claim and at the time of the survey (percentages)

Source	In the calendar year before the initial UI claim			At the time of the survey		
	Total	UI-only recipients	EUC08/EB recipients	Total	UI-only recipients	EUC08/EB recipients
Earned income tax credit	9.5	9.6	9.3	7.7	8.0	7.3
Food stamps or SNAP benefits	8.3	7.1	9.8*	14.0	11.3	17.3*
Payments from a 401(k), 403(b), or IRA	2.3	1.8	2.9	3.0	2.4	3.7
Pension benefits from a private or government employer	3.2	2.3	4.2*	7.8	6.5	9.3*
Social Security Retirement or Railroad Retirement payments	4.1	3.4	5.1	12.3	9.3	15.9*
SSDI payments or SSI payments for a disability	2.6	2.5	2.7	8.9	7.4	10.8*
TANF, General Assistance, or other welfare payments	1.3	1.5	1.0	1.3	1.4	1.1
Any other payments[a]	7.9	6.1	10.0*	10.9	9.5	12.7*
Unweighted sample size	**2,121**	**1,151**	**970**	**2,120**	**1,151**	**969**

Source: Merged survey respondent data file

Note: All of the variables in this table are household-level measures of income support; each is coded to equal one if any member of the recipient's household collected support from the listed source. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

[a]Other payments include workers compensation, private disability insurance, child support, alimony, rental income, dividends, and interest.

IRA = Individual Retirement Account, SNAP = Supplemental Nutrition Assistance Program, SSDI = Social Security Disability Insurance, SSI = Supplemental Security Income, TANF = Temporary Assistance for Needy Families.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.10. Savings at the time of the initial UI claim (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Savings in bank accounts			
Any savings	46.1	47.6	44.4
Enough savings to cover all living expenses for three months	20.2	20.3	19.9
Enough savings to cover all living expenses for six months	11.9	12.1	11.7
Any savings in a 401(k), 403(b), or IRA	41.6	41.3	41.9
Any savings in a CD, stock, or bond	14.3	14.6	13.9
Unweighted sample size	**2,121**	**1,151**	**970**

Source: Merged survey respondent data file

Note: Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

CD = Certificate of Deposit, IRA = Individual Retirement Account.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.11. Reemployment timing during the three years following the initial UI claim quarter (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Employed during the three years after the initial UI claim quarter			
Yes	86.3	92.8	78.3*
No	13.7	7.2	21.7*
Among those employed during the three-year period, quarters elapsed until first employment			†
1	63.6	80.1	40.0*
2	11.8	11.9	11.7
3 to 4	9.4	4.3	16.8*
5 to 8	10.3	1.9	22.3*
9 to 12	4.9	1.8	9.3*
Average (number of quarters)	2.3	1.5	3.5*
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Measures in the table are based on quarterly administrative wage data and exclude employment during the quarter of the initial UI claim. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.12. Employment patterns during the three years following the initial UI claim quarter (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Quarters employed during the three years after the initial UI claim quarter			†
0	13.7	7.2	21.7*
1 to 2	7.9	3.6	13.0*
3 to 4	8.8	6.2	11.9*
5 to 6	10.1	7.6	13.2*
7 to 8	10.5	8.8	12.5*
9 to 10	15.4	15.2	15.5
11 to 12	33.6	51.3	12.3*
Average (number of quarters)	7.2	8.8	5.2*
Employed during the first year after the initial UI claim quarter	73.2	89.4	53.6*
Employed during the second year after the initial UI claim quarter	72.9	84.0	59.6*
Employed during the third year after the initial UI claim quarter	73.2	80.6	64.2*
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Measures in the table are based on quarterly administrative wage data and exclude employment during the quarter of the initial UI claim. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.13. Earnings during the third year after the initial UI claim quarter (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Earnings during the third year after the initial UI claim quarter			†
No earnings	26.8	19.4	35.8*
$1 to $10,000	17.1	14.4	20.4*
$10,001 to $20,000	15.1	18.1	11.5*
$20,001 to $30,000	14.7	15.1	14.1
$30,001 to $40,000	9.7	11.3	7.8*
$40,001 to $50,000	5.5	6.9	3.8*
$50,001 or more	11.0	14.8	6.5*
Average, among those with earnings (dollars)	28,868	31,904	24,262*
Average, including those with zero earnings (dollars)	21,118	25,702	15,575*
Unweighted sample size	**2,122**	**1,151**	**971**

Source: Merged survey respondent data file

Note: Measures in the table are based on quarterly administrative wage data. Values of earnings were assigned to the categories displayed in the table after rounding to the nearest dollar. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.14. Post-claim financial difficulties (percentages)

	Total	UI-only recipients	EUC08/EB recipients
All respondents			
Since the initial UI claim date, the recipient:			
Had utilities disconnected	14.1	12.8	15.7
Was charged a late fee on a monthly credit payment	43.1	41.6	44.9
Declared personal bankruptcy	8.1	7.5	8.9
Postponed a major purchase that was planned or needed	49.3	46.7	52.5*
Received extra financial assistance from family members	34.0	31.2	37.3*
Received assistance from churches, food banks, or other private community organizations	18.0	15.3	21.1*
Since the initial UI claim date, anyone in the recipient's household:			
Made an early withdrawal from a retirement investment account	24.7	22.3	27.7*
Took early retirement to get benefits from a pension plan	4.2	3.7	4.7
Pre-claim housing status			
Owned a home	46.7	49.0	44.0*
Rented	28.8	29.0	28.5
Lived with family or friends and contributed to the rent or mortgage	13.4	11.8	15.3*
Lived with family or friends and did not contribute to the rent or mortgage	8.0	7.2	9.0
Lived in some other housing arrangement	3.1	3.0	3.2
Unweighted sample size	**2,121**	**1,151**	**970**
Homeowners			
Since the initial UI claim date, the recipient:			
Missed or had been late on a mortgage	30.7	29.0	33.1
Received a notice of mortgage default	20.6	18.6	23.2
Had a house foreclosed on	9.2	6.7	12.5*
Unweighted sample size	**1,045**	**598**	**447**
Renters			
Since the initial UI claim date, the recipient:			
Was charged a late fee or missed a rent payment	34.0	32.8	35.3
Received an eviction notice	12.1	11.1	13.2
Has been evicted	6.2	6.1	6.3
Unweighted sample size	**1,088**	**573**	**515**

Source: Merged survey respondent data file

Note: Mortgage and foreclosure information was collected for recipients who were homeowners at the time of their initial UI claim. Rent and eviction information was collected for recipients who were renters at any point from their initial UI claim date to the time of the survey. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

Table D.15. Work search activity during the three months after separating from the pre-claim job (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
All respondents			
Looked for work			
Yes	87.5	81.9	94.2*
No	12.5	18.1	5.8*
Among those who looked for work, hours per week spent searching:			.†
Between 1 and 5	16.1	19.6	12.4*
Between 6 and 10	21.2	21.7	20.8
Between 11 and 20	34.4	31.8	37.2*
Between 21 and 30	18.3	17.8	18.8
Between 31 and 40	8.0	7.2	8.7
More than 40	2.0	1.9	2.0
Average (hours)	17.6	16.7	18.5*
Contacted American Job Center, state employment center, and/or another government agency when looking for work[a]	64.7	60.5	69.2*
Unweighted sample size	**2,116**	**1,147**	**969**
Respondents who did not expect to be recalled			
Looked for work			
Yes	90.2	85.8	95.1*
No	9.8	14.2	4.9*
Among those who looked for work, hours per week spent searching:			
Between 1 and 5	14.9	17.7	12.1*
Between 6 and 10	20.8	20.6	21.0
Between 11 and 20	35.5	34.0	37.0
Between 21 and 30	18.3	17.7	18.9
Between 31 and 40	9.0	8.0	10.0
More than 40	1.5	2.0	1.0
Average (hours)	17.9	17.3	18.4
Contacted American Job Center, state employment center, and/or another government agency when looking for work[a]	65.0	60.9	69.2*
Unweighted sample size	**1,501**	**789**	**712**
Respondents who expected to be recalled			
Looked for work			
Yes	79.6	72.2	90.8*
No	20.4	27.8	9.2*
Among those who looked for work, hours per week spent searching:			†
Between 1 and 5	20.6	26.0	14.1*
Between 6 and 10	21.6	23.6	19.2
Between 11 and 20	32.8	26.4	40.5*
Between 21 and 30	17.8	16.8	18.9
Between 31 and 40	4.9	5.3	4.5
More than 40	2.3	1.9	2.8
Average (hours)	16.3	15.1	17.9*

	Total	UI-only recipients	EUC08/EB recipients
Contacted American Job Center, state employment center, and/or another government agency when looking for work[a]	64.6	58.9	71.5*
Unweighted sample size	**532**	**321**	**211**

Source: Merged survey respondent data file

Note: The numeric ranges listed in the table for hours per week spent searching correspond to the phrasing of the survey question. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

[a]Reported percentages apply to respondents indicating that they had searched for work during the three months after separating from their pre-claim jobs. Such respondents were subsequently asked if they had contacted an American Job Center, a state employment center, and/or another government agency during that three-month period.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.16. Post-claim participation in training or education programs (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Training or education programs participated in since the initial UI claim			
0	66.1	68.2	63.5*
1	19.2	17.6	21.2
2	7.3	6.6	8.1
3 or more	7.3	7.5	7.1
Average (number of programs)	0.7	0.7	0.7
Participating in a training or education program at the time of the survey	7.4	6.9	8.1
Unweighted sample size	**2,121**	**1,150**	**971**

Source: Merged survey respondent data file

Note: Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.17. Labor force participation at time of survey (percentages)

	Total	UI-only recipients	EUC08/EB recipients
Main work-related activity during the week before survey			†
Employed	62.8	68.3	56.2*
Unemployed	19.2	18.2	20.4
Not in the labor force	18.0	13.6	23.4*
Unweighted sample size	**2,118**	**1,148**	**970**

Source: Merged survey respondent data file

Note: The "employed" category includes recipients who reported that they were (1) working at a job for pay, (2) employed but on vacation, on leave, or not working for other reasons, or (3) self-employed or had started their own business. The "unemployed" category includes recipients who reported they were (1) unemployed but looking for work, (2) waiting for a new job to start, (3) expecting to be called back to a previous job, or (4) expecting a union to provide a job. The "not in the labor force" status includes recipients who reported they were (1) retired, (2) unable to work because of a disability, (3) attending school or a long-term training program, or (4) without a job and not looking for work, with a main reason for not looking for work that suggested they were out of the labor force (such as having family responsibilities or not looking due to facing discrimination). Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.18. Characteristics of the main job at time of survey (percentages unless stated otherwise)

	Total	UI-only recipients	EUC08/EB recipients
Weekly earnings			†
$300 or less	8.2	5.9	11.7*
$301 to $500	24.2	22.5	26.8
$501 to $700	23.3	23.2	23.4
$701 to $900	14.8	15.3	14.0
$901 to $1,100	8.6	8.8	8.3
$1,101 or more	20.9	24.3	15.7*
Average (dollars)	810	856	743*
Hours worked per week			†
20 or fewer	7.7	5.8	10.5*
21 to 30	8.2	6.3	11.0*
31 to 39	8.9	9.1	8.5
40	46.8	48.2	44.9
More than 40	28.3	30.5	25.1*
Average (hours)	40.3	41.4	38.7*
Available fringe benefits			
Health insurance or membership in an HMO or PPO	66.6	70.4	61.0*
Paid vacation	66.0	68.0	63.0
Retirement, pension benefits, 401(k) or 403(b)	63.4	65.8	59.8*
Represented by a union	15.0	17.6	11.1*
Employment status			†
Regular part-time or full-time employee	87.6	89.5	85.0*
Leased or contract employee	2.8	1.8	4.3*
Independent contractor, consultant, or self-employed	5.0	4.5	5.7
Causal or day laborer, on-call employee, or temporary employee	4.5	4.3	5.0
Industry			†
Natural resources and mining	2.8	3.8	1.3*
Construction	11.9	14.1	8.6*
Manufacturing	16.3	18.4	13.2*
Trade, transportation, and utilities	16.0	15.0	17.4
Information	2.4	2.7	2.1
Financial activities	6.6	6.1	7.2
Professional services and management	7.0	6.7	7.5
Business support services	7.3	5.6	9.8*
Education and health services	15.7	15.0	16.8
Leisure and hospitality	6.4	6.2	6.6
Other services	3.4	2.1	5.2*
Public administration	4.4	4.4	4.3
Occupation			†
Management, business, and finance	12.1	10.3	14.6*
Computer, engineering, and science	5.1	5.3	4.8
Community and social services	7.2	6.9	7.6
Health care practitioners and technical	1.7	1.1	2.6
Service	16.2	15.4	17.2
Sales	7.4	5.9	9.6*
Office and administrative support	13.2	12.0	15.0
Farming, fishing, and forestry[a]	NA	NA	NA
Construction and extraction	9.4	11.0	7.0*
Installation, maintenance, and repair	5.9	7.6	3.3*
Production	11.7	12.9	10.0

	Total	UI-only recipients	EUC08/EB recipients
Transportation and material moving	9.8	11.3	7.5*
Military[a]	NA	NA	NA
Unweighted sample size	**1,261**	**742**	**518**

Source: Merged survey respondent data file

Note: The table is based only on information about respondents who held a job at the time of the interview. Individuals with more than one current job were asked about the one they considered their "main source of income and benefits." Values of weekly earnings and hours were assigned to the categories displayed in the table after rounding to the nearest integer. Weekly earnings measures exclude respondents who reported earnings of more than $5,000. Information about industry and occupation was filled in from the administrative data, if possible, for respondents who did not provide this information or whose responses could not be categorized. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

[a]To protect respondent confidentiality, entries have been suppressed for farming, fishing, and forestry occupations and for military occupations because one or more of the percentages reported for these occupations would have been based on a cell count of fewer than three individuals. As a result, the remaining percentages for the occupation distribution in each column sum to a total that is less than 100.

HMO = health maintenance organization, NA = not available, PPO = preferred provider organization.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.19. Comparison of the pre-claim job to the main current job, among individuals employed at time of survey (percentages unless stated otherwise)

	Pre-claim job			Main job at time of survey		
	Total	UI-only recipients	EUC08/EB recipients	Total	UI-only recipients	EUC08/EB recipients
Earnings						
Weekly earnings						†
$300 or less	7.7	6.8	9.1	8.4	5.9	12.0*
$301 to $500	21.2	21.9	20.2	23.7	22.1	26.0
$501 to $700	20.7	21.2	19.9	22.8	22.5	23.4
$701 to $900	18.7	19.6	17.4	14.7	15.0	14.3
$901 to $1100	9.8	9.5	10.1	9.2	9.5	8.8
$1101 or more	21.9	20.9	23.3	21.1	25.0	15.5*
Average (dollars)	850	844	857	809	858	738*
Ratio of current to pre-claim weekly earnings						†
0.50 or lower	n.a.	n.a.	n.a.	11.9	8.6	16.7*
0.51 to 0.75	n.a.	n.a.	n.a.	15.9	14.8	17.6
0.76 to 0.90	n.a.	n.a.	n.a.	14.5	13.9	15.4
0.91 to 1.10	n.a.	n.a.	n.a.	22.6	22.3	23.1
1.11 to 1.25	n.a.	n.a.	n.a.	10.1	11.9	7.5*
1.26 or higher	n.a.	n.a.	n.a.	25.0	28.6	19.8*
Hours worked						
Hours worked per week						†
20 or fewer	4.8	5.7	3.5	7.7	5.8	10.5*
21 to 30	4.7	3.9	5.9	8.2	6.4	11.0*
31 to 39	5.8	5.4	6.4	8.8	9.0	8.5
40	54.1	54.9	53.1	46.9	48.2	44.9
More than 40	30.5	30.2	31.1	28.3	30.5	25.1*
Average (hours)	41.8	41.7	41.8	40.3	41.4	38.7*
Ratio of current to pre-claim weekly hours						†
0.50 or lower	n.a.	n.a.	n.a.	6.9	5.1	9.5*
0.51 to 0.75	n.a.	n.a.	n.a.	9.3	7.2	12.4*
0.76 to 0.99	n.a.	n.a.	n.a.	16.6	15.8	17.9
1.00	n.a.	n.a.	n.a.	44.0	46.7	40.0*
1.01 to 1.25	n.a.	n.a.	n.a.	13.6	14.8	11.8
1.26 or higher	n.a.	n.a.	n.a.	9.6	10.5	8.3
Fringe benefits and union representation						
Available fringe benefits:						
Health insurance or membership in an HMO or PPO	69.3	69.4	69.2	66.6	70.3	61.2*
Paid vacation	62.9	59.2	68.4*	65.9	68.0	62.9
Retirement, pension benefits, 401(k) or 403(b)	62.2	62.4	62.0	63.5	65.9	59.9*
Represented by a union	16.3	18.2	13.5*	14.8	17.5	10.9*

	Pre-claim job			Main job at time of survey		
	Total	UI-only recipients	EUC08/EB recipients	Total	UI-only recipients	EUC08/EB recipients
Industry and occupation						
Industry			†			†
Natural resources and mining	2.2	3.1	0.9*	2.7	3.8	1.1*
Construction	14.5	16.8	11.0*	11.9	14.1	8.7*
Manufacturing	20.7	22.1	18.7	16.4	18.4	13.4*
Trade, transportation, and utilities	15.0	14.1	16.3	15.8	14.9	17.2
Information	3.0	2.7	3.4	2.5	2.7	2.1
Financial activities	8.5	6.2	11.9*	6.6	6.1	7.3
Professional services and management	7.9	6.9	9.4	7.0	6.7	7.4
Business support services	7.6	5.2	11.3*	7.2	5.6	9.6*
Education and health services	10.8	12.1	8.8	15.9	15.0	17.1
Leisure and hospitality	6.2	7.3	4.5	6.3	6.1	6.7
Other services	1.9	1.6	2.2	3.4	2.1	5.3*
Public administration	1.7	1.9	1.4	4.3	4.4	4.1
Change in industry category	n.a.	n.a.	n.a.	58.4	51.8	68.0*
Occupation			†			†
Management, business, and finance	11.6	8.9	15.5*	12.2	10.4	14.7*
Computer, engineering, and science	5.3	5.4	5.2	5.0	5.3	4.6
Community and social services	6.4	7.4	4.9	7.2	6.9	7.7
Health care practitioners and technical	1.3	1.7	0.8	1.7	1.1	2.6
Service	9.3	10.1	8.2	16.2	15.5	17.2
Sales	8.3	7.3	9.6	7.4	5.9	9.7*
Office and administrative support	16.7	12.2	23.2*	13.1	11.9	14.9
Farming, fishing, and forestry	NA	NA	NA	NA	NA	NA
Construction and extraction	10.7	12.1	8.5	9.3	11.0	6.8*
Installation, maintenance, and repair	4.5	4.9	4.0	5.8	7.5	3.4*
Production	15.4	17.7	12.1*	11.6	12.7	10.1
Transportation and material moving	9.5	11.2	7.0*	9.9	11.4	7.6*
Military	NA	NA	NA	NA	NA	NA
Change in occupation category	n.a.	n.a.	n.a.	54.2	50.9	59.0*
Unweighted sample size	**1,261**	**743**	**518**	**1,261**	**743**	**518**

Source: Merged survey respondent data file

Note: The table is based only on information about respondents who held a job at the time of the interview. Individuals with more than one current job were asked about the one they considered their "main source of income and benefits." Values of weekly earnings and hours were assigned to categories displayed in the table after rounding to the nearest integer. Weekly earnings measures exclude respondents who reported earnings of more than $5,000 and have been converted into 2014 dollars. Information about industry and occupation was filled in from the administrative data, if possible, for respondents who did not provide this

information or whose responses could not be categorized. The measures indicating change in industry or occupation categories refer to differences between the pre- and post-claim jobs according to the industry/occupation groupings listed in the table. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

[a]To protect respondent confidentiality, entries have been suppressed for farming, fishing, and forestry occupations and for military occupations because one or more of the percentages reported for these occupations would have been based on a cell count of fewer than three individuals. As a result, the remaining percentages for the occupation distribution in each column sum to a total that is less than 100. The measure of change in occupation category includes movement in or out of the individual categories for which the percentage entries have been suppressed.

HMO = health maintenance organization, n.a. = not applicable, NA = not available, PPO = preferred provider organization

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.20. Change in household income from the year before the claim to 2013 (percentages unless stated otherwise)

	In the calendar year before the initial UI claim			In 2013		
	Total	UI-only recipients	EUC08/EB recipients	Total	UI-only recipients	EUC08/EB recipients
Total household income			†			†
$10,000 or less	10.5	8.6	12.7*	13.3	10.3	17.0*
$10,001 to $20,000	12.8	13.0	12.6	13.2	12.0	14.6
$20,001 to $30,000	15.8	16.0	15.6	15.2	13.7	17.0
$30,001 to $50,000	22.8	23.2	22.4	20.7	20.8	20.6
$50,001 to $75,000	16.6	18.1	14.7*	17.0	19.3	14.4*
$75,001 to $100,000	10.4	11.0	9.7	10.1	12.0	7.8*
$100,001 or more	11.2	10.3	12.3	10.4	11.9	8.7*
Average (dollars)	51,543	51,782	51,257	48,324	53,690	41,897*
Change in household income from year before the claim to 2013						†
Decrease: 75% or more	n.a.	n.a.	n.a.	4.9	3.0	7.3*
Decrease: 50% to 74%	n.a.	n.a.	n.a.	8.4	5.1	12.5*
Decrease: 25% to 49%	n.a.	n.a.	n.a.	15.2	13.9	16.8
Decrease: 0% to 24%	n.a.	n.a.	n.a.	27.9	28.3	27.5
Increase: 1% to 24%	n.a.	n.a.	n.a.	17.6	21.8	12.4*
Increase: 25% to 49%	n.a.	n.a.	n.a.	10.6	11.1	9.9
Increase: 50% to 74%	n.a.	n.a.	n.a.	5.3	6.0	4.5
Increase: 75% to 99%	n.a.	n.a.	n.a.	3.4	3.9	2.8
Increase: 100% or more	n.a.	n.a.	n.a.	6.6	6.8	6.2
Average (percentage)	n.a.	n.a.	n.a.	0.1	0.2	-0.0*
Unweighted sample size	**2,036**	**1,098**	**938**	**2,055**	**1,108**	**947**

Source: Merged survey respondent data file

Note: Values of each measure were assigned to the categories displayed in the table after rounding to the nearest integer. Household income from the calendar year before the claim and from 2013 are both expressed in 2014 dollars; these values repeat the information presented in Table D.8 for reference. Income change measures exclude information from individuals reporting zero income in either year or a change of more than 1000 percent between years. Summary statistics for each measure in the table are based on individuals who provided valid responses to the underlying survey question(s) and exclude those with missing or out-of-range values. The unweighted sample size indicates the number of individuals with valid information for at least one of the measures listed in the table. Estimates have been adjusted for survey nonresponse.

n.a. = not applicable.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.21. Summary statistics for regression analyses using the survey sample

Variable	Mean	Standard deviation
Outcome measures		
Total weeks of UC benefits collected	35.5	32.2
Number of quarters employed during three post-claim years	7.266	4.322
Number quarters until first employment within three post-claim years	2.302	2.397
Employed during third post-claim year	0.739	0.440
Total earnings in third post-claim year	21,870	26,822
Participated in labor force during week before survey	0.821	0.383
Held a job at time of survey	0.596	0.491
Weekly earnings from main job at time of survey (including zeros for non-employed)[a]	491	606
Utilities disconnected since the initial UI claim date	0.141	0.348
Missed a rent or mortgage payment since the initial UI claim date	0.319	0.466
Was evicted or had house foreclosed since the initial UI claim date	0.072	0.259
Proportional change in household income from pre-claim year to 2013[b]	0.095	0.830
Receiving SSDI payments or SSI payments for a disability[c]	0.090	0.286
Receiving food stamp or SNAP benefits[c]	0.141	0.348
Measures of benefit availability and generosity		
Consecutive weeks	75.7	22.6
Gap weeks	7.4	13.7
Post-gap weeks	12.5	15.6
Weekly benefit amount[d]	313	123
Demographic characteristics		
Female	0.435	0.496
Race/ethnicity		
Hispanic, Latino, or Spanish origin	0.161	0.368
Non-Hispanic black or African American	0.156	0.363
Non-Hispanic white (ref. category)	0.633	0.482
Other	0.050	0.218
Age[e]	41.2	12.5
Highest level of school or degree		
Less than high school or GED	0.117	0.321
High school/GED (ref. category)	0.321	0.467
Some college but no degree	0.226	0.418
Associate's degree	0.117	0.322
Bachelor's or more advanced degree	0.202	0.402
Other	0.017	0.130
Marital status		
Married or living with a partner	0.532	0.499
Female and married or living with a partner	0.201	0.401
Dependents		
Has children under the age of 18	0.427	0.495
Female and has children under the age of 18	0.190	0.393
Pre-claim job characteristics		
Base period wages[d]	34,624	32,275
Worked 35 or more hours per week	0.874	0.332
Job tenure (months)	67.3	85.6
Health insurance or membership in an HMO or PPO was available through employer	0.683	0.466
Had layoffs on a regular basis	0.132	0.338

Variable	Mean	Standard deviation
Represented by a union	0.166	0.372
Displaced worker	0.617	0.486
Expected to be recalled at time of job separation	0.274	0.446
Industry		
Natural resources and mining	0.022	0.147
Construction	0.161	0.368
Manufacturing (ref. category)	0.207	0.406
Trade, transportation, and utilities	0.145	0.352
Information	0.024	0.152
Financial activities	0.069	0.253
Professional services and management	0.076	0.264
Business support services	0.084	0.277
Education and health services	0.097	0.295
Leisure and hospitality	0.070	0.255
Other services	0.024	0.152
Public administration	0.023	0.150
Occupation		
Management, business and finance	0.111	0.314
Computer, engineering, and science	0.048	0.215
Community and social services	0.062	0.241
Health care practitioners and technical	0.013	0.111
Service	0.100	0.300
Sales	0.085	0.279
Office and administrative support	0.146	0.353
Farming, fishing, and forestry	0.008	0.087
Construction and extraction	0.119	0.324
Installation, maintenance and repair	0.049	0.217
Production (ref. category)	0.150	0.357
Transportation and material moving	0.106	0.308
Military	0.005	0.067
Other pre-claim characteristics		
Received Social Security Retirement or Railroad Retirement payments	0.041	0.199
Received payments from 401(k), 403(b), or IRA account	0.051	0.220
Received SSDI or SSI payments for a disability	0.025	0.157
Received food stamps or SNAP benefits	0.086	0.280
Average state unemployment rate during the four weeks before the initial UI claim date	7.513	2.247
Characteristics of UI claim		
Included benefits from UCX or UCFE program	0.013	0.111
Timing of initial UI claim date within a quarter		
Initial UI claim date was in first month of quarter	0.354	0.478
Initial UI claim date was in second month of quarter	0.329	0.470
Initial UI claim date was in third month of quarter (ref. category)	0.317	0.465
Unweighted sample size	1,835	

Source: Merged survey respondent data file

Note: Means and standard deviations are calculated for the subsample of recipients with no missing data for any of the explanatory variables listed in the table (i.e., variables other than those listed among the outcome measures). Estimates have been adjusted for survey nonresponse.

SSDI = Social Security Disability Insurance, SSI = Supplemental Security Income, SNAP = Supplemental Nutrition Assistance Program, GED = General Educational Development certificate, HMO = Health Maintenance Organization, PPO = Preferred Provider Organization, IRA = Individual Retirement Account.

[a]The weekly earnings measure excludes those reporting more than $5,000.

[b]Calculated as the difference between household income in 2013 and household income in the year prior to the claim date, divided by the household income in the year prior to the initial UI claim date. Excludes individuals reporting zero income in either year or a change of more than 1000 percent between years.

[c]Measures of SSDI payments, SSI payments for a disability, and food-stamp/SNAP benefit receipt are household-level measures. Each is coded to equal one if any member of the recipient's household collected support from the given source.

[d]The natural log of this measure is used as an explanatory variable.

[e]The regression also includes a control for the square of this measure (not reported).

Table D.22. Association between potential durations and outcomes measured in administrative records (fixed effects included)

	Total weeks of UC benefits collected	Number of post-claim quarters employed[a]	Number of post-claim quarters until first employment[a]	Employed during third post-claim year	Total earnings in third post-claim year
Potential duration measures					
Consecutive weeks	0.454*	-0.006	0.008	-0.001	-244*
	(0.076)	(0.012)	(0.008)	(0.001)	(80)
Gap weeks	-0.071	0.019	-0.005	0.001	52
	(0.085)	(0.012)	(0.007)	(0.001)	(66)
Post-gap weeks	0.465*	-0.012	0.015	-0.001	-233*
	(0.111)	(0.017)	(0.010)	(0.002)	(103)
Additional regression information					
Unweighted sample size	1,835	1,835	1,606	1,835	1,835
R-squared	0.21	0.19	0.12	0.13	0.26
Standard error	29.231	3.996	2.317	0.421	23,599
Mean of dependent variable	35.929	7.383	2.316	0.754	22,802

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE benefits, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

[a]Quarterly employment measures were calculated over the three years following the initial UI claim quarter. The number of post-claim quarters until first employment was defined only among those who were employed at some point during the three-year period.

*Significantly different from zero at the .05 level, two-tailed test

Table D.23. Association between potential durations and labor market outcomes at time of survey (fixed effects included)

	Participated in labor force during week before survey	Held a job at time of survey	Weekly earnings from main job at time of survey[a]
Potential duration measures			
Consecutive weeks	0.000	0.000	-7.54*
	(0.001)	(0.001)	(1.65)
Gap weeks	0.001	-0.002	-2.47
	(0.001)	(0.002)	(1.83)
Post-gap weeks	0.001	0.000	-7.56*
	(0.002)	(0.002)	(2.25)
Additional regression information			
Unweighted sample size	1,832	1,835	1,799
R-squared	0.23	0.18	0.35
Standard error	0.345	0.454	500.03
Mean of dependent variable	0.811	0.597	488.62

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

[a]The weekly earnings measure includes zeros for those not employed at the time of the interview. Individuals reporting more than $5,000 omitted from this analysis.

*Significantly different from zero at the .05 level, two-tailed test

Table D.24. Association between potential durations and outcomes measured in administrative records (fixed effects included), by displaced worker status

	Total weeks of UC benefits collected	Number of post-claim quarters employed[a]	Number of post-claim quarters until first employment[a]	Employed during third post-claim year	Total earnings in third post-claim year
Potential duration measures: displaced workers					
Consecutive weeks	0.538*	-0.016	0.013	-0.001	-262*
	(0.086)	(0.014)	(0.008)	(0.001)	(88)
Gap weeks	0.013	0.006	0.003	0.000	-7
	(0.099)	(0.017)	(0.008)	(0.002)	(92)
Post-gap weeks	0.469*	-0.019	0.011	-0.003	-247*
	(0.122)	(0.019)	(0.011)	(0.002)	(116)
Potential duration measures: other UC recipients					
Consecutive weeks	0.373*	0.003	0.002	0.000	-231*
	(0.086)	(0.014)	(0.010)	(0.002)	(86)
Gap weeks	-0.146	0.031*	-0.013	0.002	114
	(0.103)	(0.013)	(0.008)	(0.002)	(63)
Post-gap weeks	0.484*	-0.006	0.022	0.000	-219
	(0.134)	(0.020)	(0.012)	(0.002)	(112)
Additional regression information					
Unweighted sample size	1,835	1,835	1,606	1,835	1,835
R-squared	0.22	0.19	0.12	0.13	0.26
Standard error	29.220	3.996	2.315	0.421	23,607
Mean of dependent variable	35.929	7.383	2.316	0.754	22,802

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. The estimates reported in the table are based on an interaction between the potential duration measures (consecutive, supplementary, and gap weeks) and an indicator for whether or not the UC recipient was a displaced worker. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

[a]Quarterly employment measures were calculated over the three years following the initial UI claim quarter. The number of post-claim quarters until first employment was defined only among those who were employed at some point during the three-year period.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.25. Association between potential durations and labor market outcomes at time of survey (fixed effects included), by displaced worker status

	Participated in labor force during week before survey	Held a job at time of survey	Weekly earnings from main job at time of survey[a]
Potential duration measures: displaced workers			
Consecutive weeks	-0.001	-0.002	-8.75*
	(0.001)	(0.002)	(1.93)
Gap weeks	0.000	-0.005*	-5.10*
	(0.001)	(0.002)	(2.09)
Post-gap weeks	0.001	0.000	-7.90*
	(0.002)	(0.002)	(2.59)
Potential duration measures: other UC recipients			
Consecutive weeks	0.001	0.001	-6.49*
	(0.001)	(0.002)	(1.72)
Gap weeks	0.001	0.001	0.19
	(0.002)	(0.002)	(1.93)
Post-gap weeks	0.002	0.000	-7.36*
	(0.002)	(0.002)	(2.43)
Additional regression information			
Unweighted sample size	1,832	1,835	1,799
R-squared	0.23	0.19	0.35
Standard error	0.345	0.454	499.66
Mean of dependent variable	0.811	0.597	488.62

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. The estimates reported in the table are based on an interaction between the potential duration measures (consecutive, supplementary, and gap weeks) and an indicator for whether or not the UC recipient was a displaced worker. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

[a]The weekly earnings measure includes zeros for those not employed at the time of the interview. Individuals reporting more than $5,000 were omitted from this analysis.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.26. Association between potential durations and post-claim financial well-being (fixed effects included)

	Utilities disconnected[a]	Missed a rent or mortgage payment[a]	Was evicted or had house foreclosed[a]	Proportional change in household income from pre-claim year to 2013[b]
Potential duration measures				
Consecutive weeks	0.001	0.001	0.000	0.004
	(0.001)	(0.001)	(0.001)	(0.002)
Gap weeks	0.000	0.001	0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.002)
Post-gap weeks	0.001	-0.003	-0.002	0.007*
	(0.002)	(0.002)	(0.001)	(0.003)
Additional regression information				
Unweighted sample size	1,829	1,835	1,835	1,672
R-squared	0.13	0.13	0.07	0.09
Standard error	0.333	0.445	0.255	0.811
Mean of dependent variable	0.137	0.311	0.065	0.080

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

[a]Indicates whether recipient experienced the given financial difficulty between the initial UI claim date and the time of the survey.

[b]Calculated as the difference between household income in 2013 and household income in the year prior to the claim date, divided by the household income in the year prior to the initial UI claim date. Excludes individuals reporting zero income in either year or a change of more than 1000 percent between years.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.27. Association between potential durations and participation in income support programs at time of survey (fixed effects included)

	Receiving SSDI payments or SSI payments for a disability	Receiving food stamp or SNAP benefits
Potential duration measures		
Consecutive weeks	0.000	-0.002
	(0.001)	(0.001)
Gap weeks	0.000	0.000
	(0.001)	(0.001)
Post-gap weeks	0.000	-0.002
	(0.001)	(0.001)
Additional regression information		
Unweighted sample size	1,833	1,834
R-squared	0.19	0.27
Standard error	0.264	0.304
Mean of dependent variable	0.093	0.133

Source: Merged survey respondent data file

Note: Each column presents results from a separate linear regression with a different dependent variable. The two dependent variables included in this table are household-level indicators; each is coded to equal one if any member of the recipient's household collected support from the given source. All regressions use nonresponse weights and control for the weekly benefit amount, whether the individual received UCX and/or UCFE, and the demographic and pre-claim characteristics listed in Appendix Table D.21. All regressions also include fixed effects for the liable claim state and the month of the initial UI claim. Robust standard errors are in parentheses.

SSDI = Social Security Disability Insurance, SSI = Supplemental Security Income, SNAP = Supplemental Nutrition Assistance Program.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.28. Final status of cases released for UI recipient survey (percentages)

	Percentage
Responded	38.3
Refused to participate	9.4
No contact with potential respondent	22.9
Invalid contact information (unlocatable)	28.1
Determined ineligible to participate	1.3
Sample size	**5,615**

Source: Paradata for survey-eligible UC recipients

Note: The percentages exclude survey-ineligible recipients who, at the time of the survey, were determined to be deceased, incarcerated, or suffering from a physical or cognitive impairment that prevented their participation in the survey.

Table D.29. Regression analysis of factors related to the likelihood of responding to the UI recipient survey

Variable	Differential in the likelihood of response
Pre-claim characteristics	
Female	0.040*
	(0.014)
Race/ethnicity (ref: Non-Hispanic White)	
Hispanic, Latino, or Spanish origin	-0.073*
	(0.019)
Non-Hispanic black or African American	0.041*
	(0.021)
Other	-0.049
	(0.027)
Missing	0.000
	(0.028)
Age (ref: 31 to 49 years old)	
30 years old or younger	-0.026
	(0.016)
50 years old or older	0.080*
	(0.016)
Quintile of base period wages (ref: less than 20th percentile)	
At least 20th percentile and less than 40th percentile	0.025
	(0.021)
At least 40th percentile and less than 60th percentile	0.026
	(0.021)
At least 60th percentile and less than 80th percentile	0.038
	(0.022)
At least 80th percentile	0.085*
	(0.022)
Missing	0.105
	(0.104)
Industry (ref: professional services)	
Manufacturing	-0.090*
	(0.022)
Natural resources and construction	-0.067*
	(0.022)
Trade and transportation	-0.019
	(0.022)
Education, health, and public administration	-0.003
	(0.027)
Other services	-0.042
	(0.027)
Missing	-0.007
	(0.026)
Post-claim outcomes	
Weeks collected (ref: Less than 26 weeks)	
26 weeks to less than 60 weeks	-0.005
	(0.017)
60 weeks or more	0.033
	(0.019)

Variable	Differential in the likelihood of response
Recipient address not in liable claim state	-0.012 (0.027)
Employed during the first year after the initial UI claim quarter	0.025 (0.018)
Employed during the second year after the initial UI claim quarter	-0.004 (0.020)
Employed during the third year after the initial UI claim quarter	0.066* (0.018)
State and time period	
Liable claim state (ref: California)	
Arkansas	0.019 (0.030)
Colorado	0.008 (0.029)
Florida	-0.032 (0.028)
Georgia	-0.061 (0.033)
Illinois	0.035 (0.026)
New Jersey	0.028 (0.028)
Ohio	0.009 (0.029)
South Dakota	0.113* (0.036)
Virginia	0.033 (0.030)
Washington	0.058 (0.030)
Wisconsin	0.106* (0.032)
Time period covering the initial UI claim date (ref: January 2008 through September 2008)	
October 2008 through March 2009	0.015 (0.016)
April 2009 through September 2009	-0.001 (0.016)
Additional regression information	
Unweighted sample size	5,541
R-squared	0.035
Standard error	0.480
Response rate (mean of dependent variable)	0.388

Source: Paradata and administrative data for survey-eligible recipients

Note: The dependent variable is a binary indicator for whether a UI recipient responded to the survey. The nonresponse analysis sample excludes survey-ineligible individuals who were determined to be deceased, incarcerated, or suffering from a physical or cognitive impairment that prevented their participation in the survey. Explanatory variables were derived from the UC claims and UI wage records of potential respondents. Age and gender were missing for 0.1 percent of cases. In each case, individuals with missing values were assigned to the reference category for the purposes of this analysis. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.30. Remaining differences in pre-claim characteristics after nonresponse adjustment (percentages unless stated otherwise)

	Survey-eligible cases (unweighted)	Survey respondents (weighted)
Gender		†
Female	40.0	41.9*
Male	59.9	58.0
Missing	0.1	0.0*
Race/ethnicity		
Hispanic, Latino, or Spanish origin	15.3	14.7*
Non-Hispanic black or African American	13.6	14.3
Non-Hispanic white	56.9	57.2
Other	6.6	5.9
Missing	7.7	8.0
Age at the initial UI claim date		
Younger than 25	10.4	9.1*
25 to 34	24.4	24.8
35 to 44	24.4	23.2
45 to 54	25.2	26.1
55 to 64	12.9	13.4
65 or older	2.7	3.5*
Missing	0.1	0.0*
Job Separation reason		
Layoff	74.4	74.9
Fired	14.6	13.8
Quit or retired	2.7	2.4
Other reason	3.3	3.9
Missing	5.0	5.0
Base period wages		
$10,000 or less	13.5	13.1
$10,001 to $20,000	22.8	22.2
$20,001 to $30,000	20.7	19.7
$30,001 to $50,000	25.5	26.3
$50,001 to $75,000	11.0	11.4
$75,001 to $100,000	3.9	4.3
$100,001 or more	2.1	2.4
Missing	0.5	0.5
Average for nonmissing values (dollars)	32,447	33,784*
Industry		
Natural resources and mining	2.6	2.4
Construction	14.4	13.7
Manufacturing	17.8	17.1
Trade, transportation, and utilities	14.5	15.3
Information	2.2	2.3
Financial activities	4.4	4.7
Professional services and management	5.0	5.5
Business support services	10.0	10.1
Education and health services	7.4	7.9
Leisure and hospitality	6.0	5.4
Other services	2.0	2.2
Public administration	1.6	1.5
Missing	12.3	12.0

	Survey-eligible cases (unweighted)	Survey respondents (weighted)
Liable state for UI claim		
Arkansas	6.6	6.6
California	23.4	23.3
Colorado	6.5	6.4
Florida	9.8	9.8
Georgia	5.3	5.2
Illinois	9.3	9.3
New Jersey	7.7	7.7
Ohio	7.9	7.9
South Dakota	4.9	4.9
Virginia	6.6	6.5
Washington	6.6	6.6
Wisconsin	5.7	5.7
Time period covering the initial UI claim date		
January 2008 through September 2008	33.4	33.4
October 2008 through March 2009	33.2	33.2
April 2009 through September 2009	33.4	33.4
Unweighted sample size	**5,540**	**2,122**

Source: Administrative data for survey-eligible recipients; merged survey respondent data file

Note: Both columns present summary statistics on characteristics recorded in the administrative data. The first column displays unweighted estimates based on all UC recipients from whom responses were sought, including both respondents and nonrespondents, but excluding cases ruled as ineligible for the survey. The second column presents estimates for individuals who responded to the survey that have been weighted to adjust for survey nonresponse using a subset of the variables examined in Appendix Table D.32. Values of base period wages were assigned to the categories displayed in the table after rounding to the nearest dollar.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.31. Remaining differences in benefit collection patterns after nonresponse adjustment (percentages unless stated otherwise)

	Survey-eligible cases (Unweighted)	Survey respondents (Weighted)
Total weeks of UC benefits collected		
One week or less	4.7	4.6
2 to 12 weeks	27.6	27.0
13 to 25 weeks	21.0	22.0
26 to 38 weeks	9.8	9.7
39 to 51 weeks	8.2	7.7
52 to 64 weeks	5.6	5.4
65 to 77 weeks	6.3	6.0
78 to 90 weeks	6.8	7.5
91 to 99 weeks	9.9	10.1
Average (weeks)	35.4	35.7
Receipt of EUC08/EB benefits		
Collected EUC08 Tier 1	44.8	45.2
Average weeks of EUC08 Tier 1 collected	16.7	16.6
Collected EUC08 Tier 2	34.6	34.4
Average weeks of EUC08 Tier 2 collected	11.7	11.8
Collected EUC08 Tier 3	27.8	28.1
Average weeks of EUC08 Tier 3 collected	11.4	11.5
Collected EUC08 Tier 4	20.3	20.5
Average weeks of EUC08 Tier 4 collected	5.5	5.5
Collected EB	17.4	17.5
Average weeks of EB collected	16.0	15.9
Exhaustion rate	13.6	13.6
Unweighted sample size	**5,540**	**2,122**

Source: Administrative data for survey-eligible recipients; merged survey respondent data file

Note: Both columns present summary statistics on benefit collection measures derived from administrative claims data. Average weeks collected for EUC08 tiers and EB were calculated among individuals who collected at least one dollar of benefits from the given program/tier. The first column displays unweighted estimates based on all UC recipients from whom responses were sought, including both respondents and nonrespondents but excluding cases ruled as ineligible for the survey. The second column presents estimates for individuals who responded to the survey that have been weighted to adjust for survey nonresponse using a subset of the variables examined in Appendix Table D.32. Values of the total weeks of UC benefits collected were assigned to the categories displayed in the table after rounding to the nearest week.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.32. Remaining differences in post-claim employment and earnings after nonresponse adjustment (percentages unless stated otherwise)

	Survey-eligible cases (unweighted)	Survey respondents (weighted)
Quarters employed during the three years after the initial UI claim quarter		
0	13.3	13.7
1 to 2	9.0	7.9*
3 to 4	8.9	8.8
5 to 6	10.3	10.1
7 to 8	10.5	10.5
9 to 10	14.2	15.4
11 to 12	33.8	33.6
Average (number of quarters)	7.1	7.2
Employed during the first year after the initial UI claim quarter	73.1	73.2
Employed during the second year after the initial UI claim quarter	72.7	72.9
Employed during the third year after the initial UI claim quarter	72.6	73.2
Earnings during the third year after the initial UI claim quarter		
No earnings	27.4	26.8
$1 to $10,000	16.7	17.1
$10,001 to $20,000	15.1	15.1
$20,001 to $30,000	13.5	14.7
$30,001 to $40,000	10.0	9.7
$40,001 to $50,000	5.8	5.5
$50,001 or more	11.5	11.0
Average, including zero earnings (dollars)	21,285	21,118
Unweighted sample size	**5,540**	**2,122**

Source: Administrative data for survey-eligible recipients; merged survey respondent data file

Note: Both columns present summary statistics on outcome measures derived from quarterly administrative wage data. The first column displays unweighted estimates based on all UC recipients from whom responses were sought, including both respondents and nonrespondents, but excluding cases ruled as ineligible for the survey. The second column presents estimates for individuals who responded to the survey that have been weighted to adjust for survey nonresponse using a subset of the variables examined in Appendix Table D.32. Values of earnings were assigned to the categories displayed in the table after rounding to the nearest dollar.

*Means for the two groups of recipients differ significantly at the .05 level, two-tailed test.

†Distributions of the two groups across categories differ significantly at the .05 level, chi-squared test.

Table D.33. Employment measures for survey respondents based on administrative and survey data (percentages unless stated otherwise)

	Measured using administrative data	Measured using self-reported survey data
Employed during:		
Post-claim quarter 1	53.8	24.9
Post-claim quarter 2	55.2	32.9
Post-claim quarter 3	56.6	37.4
Post-claim quarter 4	55.3	44.6
Post-claim quarter 5	57.5	49.5
Post-claim quarter 6	59.8	52.8
Post-claim quarter 7	61.1	55.7
Post-claim quarter 8	61.7	57.6
Post-claim quarter 9	62.6	59.9
Post-claim quarter 10	63.4	61.4
Post-claim quarter 11	62.9	62.8
Post-claim quarter 12	62.1	63.2
Quarters employed during the three years after the initial UI claim quarter		
0	13.8	25.9
1 to 2	8.0	5.8
3 to 4	9.3	9.5
5 to 6	9.9	8.8
7 to 8	10.5	10.6
9 to 10	15.7	13.4
11 to 12	32.8	26.1
Average (number of quarters)	7.1	6.0
Among those employed over the three-year period, quarters elapsed until first employment		
1	53.8	24.9
2	9.2	8.9
3 to 4	9.2	13.9
5 to 8	9.5	17.4
9 to 12	4.5	9.0
Average (number of quarters)	2.4	3.9
Unweighted sample size	**1,938**	**1,938**

Source: Merged survey respondent data file

Note: Measures of employment in the first column are based on quarterly earnings of at least $100 according to the administrative UI wage records. Measures in the second column are based on the start and end dates that respondents reported for post-claim jobs. Employment that ended before the start of the first post-claim quarter was not counted. In addition, both columns report unweighted estimates for a common sample that excludes any respondents who (1) corrected the prefilled initial UI claim date that was used to anchor retrospective survey questions, (2) skipped over the job history section of the survey, (3) did not provide any job start dates, (4) reported a job start date that was more than a week before their initial UI claim date, or (5) did not provide a job end date for a noncurrent job for which they provided a start date.

Table D.34. Pre-claim characteristics based on administrative data only, by analysis sample (percentages unless stated otherwise)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Gender			
Female	41.9	39.0	38.9
Male	58.0	60.8	61.0
Missing	0.0	0.1	0.1
Race/ethnicity			
Hispanic, Latino, or Spanish origin	14.7	11.4	17.0
Non-Hispanic black or African American	14.3	15.3	14.7
Non-Hispanic white	57.2	62.0	57.5
Other	5.9	7.1	7.0
Missing	8.0	4.2	3.8
Age at the initial UI claim date			
Younger than 25	9.1	10.3	10.2
25 to 34	24.8	23.8	23.8
35 to 44	23.2	24.3	24.2
45 to 54	26.1	25.1	25.1
55 to 64	13.4	13.7	13.8
65 or older	3.5	2.6	2.7
Missing	0.0	0.2	0.2
Average (years)	41.4	41.1	41.2
Job separation reason			
Layoff	74.9	70.4	67.1
Fired	13.8	15.9	15.6
Quit or retired	2.4	2.8	3.2
Other reason	3.9	4.1	4.8
Missing	5.0	6.8	9.3
Base period wages			
$10,000 or less	13.1	12.4	13.2
$10,001 to $20,000	22.2	22.8	22.9
$20,001 to $30,000	19.7	22.0	21.8
$30,001 to $50,000	26.3	26.1	26.0
$50,001 to $75,000	11.4	10.3	10.0
$75,001 to $100,000	4.3	3.6	3.4
$100,001 or more	2.4	2.0	2.2
Missing	0.5	0.8	0.6
Average (dollars)	33,784	32,267	32,177
Weekly benefit amount			
$150 or less	10.2	10.1	10.7
$151 to $250	22.0	21.3	21.5
$251 to $350	28.1	32.4	29.1
$351 to $450	30.4	26.5	30.6
$451 or more	9.2	9.7	8.1
Average (dollars)	312	306	305
Industry			
Natural resources and mining	2.4	2.0	2.3
Construction	13.7	14.3	14.8
Manufacturing	17.1	18.6	18.8
Trade, transportation, and utilities	15.3	15.1	15.6
Information	2.3	1.8	1.9

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Financial activities	4.7	4.1	4.3
Professional services and management	5.5	5.4	5.6
Business support services	10.1	9.3	9.3
Education and health services	7.9	7.0	7.3
Leisure and hospitality	5.4	5.6	5.7
Other services	2.2	2.0	2.1
Public administration	1.5	2.1	2.0
Missing	12.0	12.7	10.3
Liable state for UI claim			
Arkansas	6.6	8.3	5.9
California	23.3	8.3	5.9
Colorado	6.4	8.3	5.9
Florida	9.8	8.3	5.9
Georgia	5.2	8.3	5.9
Illinois	9.3	8.3	5.9
New Hampshire	n.a.	n.a.	5.9
New Jersey	7.7	8.3	5.9
New York	n.a.	n.a.	5.9
North Carolina	n.a.	n.a.	5.9
North Dakota	n.a.	n.a.	5.9
Ohio	7.9	8.3	5.9
South Dakota	4.9	8.3	5.9
Texas	n.a.	n.a.	5.9
Virginia	6.5	8.3	5.9
Washington	6.6	8.3	5.9
Wisconsin	5.7	8.3	5.9
Time period covering the initial UI claim date			
January 2008 through September 2008	33.4	41.4	41.1
October 2008 through March 2009	33.2	30.2	30.4
April 2009 through September 2009	33.4	28.4	28.5
Unweighted sample size	**2,122**	**252,000**	**357,000**

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: All columns present summary statistics on characteristics recorded in the administrative data. The first column presents nonresponse-adjusted estimates for individuals who responded to the survey. The second and third columns display unweighted estimates for the administrative-only analysis file. Values of base period wages and weekly benefits amounts were assigned to the categories displayed in the table after rounding to the nearest dollar.

n.a. = not applicable.

Table D.35. Potential durations of benefits, by analysis sample (percentages unless stated otherwise)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Regular UI potential duration			
Less than 13 weeks	2.6	3.8	4.2
13 to 18 weeks	8.8	9.7	10.2
19 to 25 weeks	17.5	20.1	19.3
26 weeks	71.1	65.7	66.4
Average (weeks)	24.0	23.6	23.6
Total potential duration			
Less than 52 weeks	4.6	6.0	8.1
52 to 77 weeks	19.4	24.6	24.6
78 to 98 weeks	19.1	23.1	23.1
99 weeks	56.9	46.4	44.3
Average (weeks)	88.0	84.9	83.5
Potential consecutive weeks			
Less than 52 weeks	19.1	23.8	26.3
52 to 77 weeks	19.7	23.9	24.1
78 to 98 weeks	39.9	34.4	34.8
99 weeks	21.3	17.9	14.9
Average (weeks)	75.5	71.5	70.0
Potential gap weeks			
0 weeks	37.4	37.7	37.0
1 to 12 weeks	44.5	39.7	34.8
13 to 25 weeks	10.1	11.6	10.8
26 to 51 weeks	5.8	7.7	8.4
52 weeks or more	2.2	3.4	9.0
Average (weeks)	7.4	9.2	14.0
Potential post-gap weeks			
0 weeks	37.7	37.9	37.2
1 to 12 weeks	21.4	19.9	20.1
13 to 25 weeks	28.4	26.5	26.5
26 to 51 weeks	6.9	8.9	9.8
52 weeks or more	5.6	6.8	6.4
Average (weeks)	12.5	13.4	13.5
Unweighted sample size	**2,122**	**252,000**	**357,000**

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: All columns present summary statistics on potential duration measures calculated using administrative claims data. The first column presents nonresponse-adjusted estimates for individuals who responded to the survey. The second and third columns display unweighted estimates for the large administrative-only samples. Values of each potential duration measure were assigned to the categories displayed in the table after rounding to the nearest week.

Table D.36. Employment and earnings based on administrative data only, by analysis sample (percentages unless stated otherwise)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Quarters employed during the three years after the initial UI claim quarter			
0	13.7	13.2	12.6
1 to 2	7.9	9.4	9.1
3 to 4	8.8	8.7	8.5
5 to 6	10.1	9.5	9.3
7 to 8	10.5	10.5	10.4
9 to 10	15.4	13.9	13.9
11 to 12	33.6	34.8	36.2
Average (number of quarters)	7.2	7.2	7.3
Employed during the first year after the initial UI claim quarter	73.2	74.3	75.3
Employed during the second year after the initial UI claim quarter	72.9	72.3	73.3
Employed during the third year after the initial UI claim quarter	73.2	72.3	73.1
Earnings during the third year after the initial UI claim quarter			
No earnings	26.8	27.7	26.9
$1 to $10,000	17.1	16.8	16.4
$10,001 to $20,000	15.1	15.2	15.0
$20,001 to $30,000	14.7	13.7	13.8
$30,001 to $40,000	9.7	10.0	10.4
$40,001 to $50,000	5.5	6.2	6.5
$50,001 or more	11.0	10.4	11.1
Average, including zero earnings (dollars)	21,118	20,809	21,616
Unweighted sample size	**2,122**	**252,000**	**357,000**

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: All columns present summary statistics on outcome measures based on administrative wage data. The first column presents nonresponse-adjusted estimates for individuals who responded to the survey. The second and third columns display unweighted estimates for the large administrative-only samples. Values of earnings were assigned to the categories displayed in the table after rounding to the nearest dollar.

Table D.37. Association between potential durations and the number of post-claim quarters until first employment based on administrative data only

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	0.019*	0.007*	0.006*
	(0.005)	(0.000)	(0.000)
Gap weeks	0.000	0.001*	0.003*
	(0.005)	(0.000)	(0.000)
Post-gap weeks	0.012*	0.000	-0.001*
	(0.006)	(0.000)	(0.000)
Additional regression information			
Unweighted sample size	1,530	220,732	314,314
R-squared	0.05	0.02	0.02
Standard error	2.238	2.272	2.260
Mean of dependent variable	2.198	2.138	2.133

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Quarterly employment was calculated over the three years following the quarter of the initial UI claim. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and whether the initial UI claim date was in the first, second, or third month of a calendar quarter. Regressions for survey respondents use nonresponse weights, but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.38. Association between potential durations and employment in the third post-claim year based on administrative data only

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	-0.0009	-0.0009*	-0.0004*
	(0.0010)	(0.0001)	(0.0000)
Gap weeks	0.0002	-0.0003*	0.0002*
	(0.0013)	(0.0001)	(0.0000)
Post-gap weeks	-0.0022	-0.0014*	-0.0011*
	(0.0012)	(0.0001)	(0.0001)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.07	0.04	0.04
Standard error	0.424	0.428	0.427
Mean of dependent variable	0.764	0.741	0.745

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Employment was measured during the third year after the claim quarter. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and whether the initial UI claim date was in the first, second, or third month of a calendar quarter. Regressions for survey respondents use nonresponse weights but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.39. Association between potential durations and total earnings in the third post-claim year based on administrative data only

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	-104*	-81*	-35*
	(41)	(4)	(3)
Gap weeks	0	36*	93*
	(50)	(4)	(3)
Post-gap weeks	-111*	-108*	-86*
	(54)	(5)	(4)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.22	0.18	0.16
Standard error	22,962	25,422	27,159
Mean of dependent variable	22,753	21,819	22,397

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Earnings were calculated during the third year after the claim quarter. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and whether the initial UI claim date was in the first, second, or third month of a calendar quarter. Regressions for survey respondents use nonresponse weights but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.40. Association between potential durations and number of post-claim quarters employed based on administrative data only (fixed effects included)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	0.001	0.016*	0.025*
	(0.014)	(0.001)	(0.001)
Gap weeks	0.002	0.004*	0.003*
	(0.014)	(0.001)	(0.001)
Post-gap weeks	-0.008	0.015*	0.024*
	(0.019)	(0.001)	(0.001)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.14	0.10	0.09
Standard error	4.041	4.143	4.152
Mean of dependent variable	7.617	7.490	7.546

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Quarterly employment was calculated over the three years following the quarter of the initial UI claim. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and fixed effects for the liable claim state and the month of the initial UI claim. Regressions for survey respondents use nonresponse weights but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.41. Association between potential durations and the number of post-claim quarters until first employment based on administrative data only (fixed effects included)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	0.012	0.001*	-0.004*
	(0.008)	(0.001)	(0.000)
Gap weeks	0.008	-0.002*	-0.001*
	(0.006)	(0.001)	(0.000)
Post-gap weeks	0.022*	0.001	-0.005*
	(0.010)	(0.001)	(0.001)
Additional regression information			
Unweighted sample size	1,530	220,732	314,314
R-squared	0.09	0.05	0.05
Standard error	2.204	2.245	2.235
Mean of dependent variable	2.198	2.138	2.133

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Quarterly employment was calculated over the three years following the quarter of the initial UI claim. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and fixed effects for the liable claim state and the month of the initial UI claim. Regressions for survey respondents use nonresponse weights, but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.42. Association between potential durations and employment in the third post-claim year based on administrative data only (fixed effects included)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	0.0001	0.0013*	0.0017*
	(0.0014)	(0.0001)	(0.0001)
Gap weeks	-0.0005	0.0002*	0.0002*
	(0.0016)	(0.0001)	(0.0001)
Post-gap weeks	0.0001	0.0012*	0.0014*
	(0.0021)	(0.0002)	(0.0001)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.11	0.07	0.06
Standard error	0.418	0.423	0.422
Mean of dependent variable	0.764	0.741	0.745

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Employment was measured during the third year after the claim quarter. All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and fixed effects for the liable claim state and the month of the initial UI claim. Regressions for survey respondents use nonresponse weights, but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

Table D.43. Association between potential durations and total earnings in the third post-claim year based on administrative data only (fixed effects included)

		Samples from administrative-only analysis file	
	Survey respondents	Recipients in the 12 survey states	Recipients in all 17 study states
Potential duration measures			
Consecutive weeks	-274*	-173*	-60*
	(83)	(9)	(7)
Gap weeks	-28	27*	8
	(69)	(6)	(5)
Post-gap weeks	-295*	-172*	-51*
	(103)	(10)	(9)
Additional regression information			
Unweighted sample size	1,732	249,629	354,629
R-squared	0.25	0.20	0.17
Standard error	22,670	25,172	26,941
Mean of dependent variable	22,753	21,819	22,397

Source: Administrative data elements of merged survey respondent data file; administrative-only analysis file

Note: Each column represents results from a separate linear regression estimated for a different sample of recipients. Earnings was calculated during the third year after the claim quarter All regressions control for age, gender, race/ethnicity, base-period wages, the industry of the pre-separation job, the weekly benefit amount, whether the individual received UCX and/or UCFE, and fixed effects for the liable claim state and the month of the initial UI claim. Regressions for survey respondents use nonresponse weights but otherwise include only measures available from the administrative data. Robust standard errors are in parentheses.

*Significantly different from zero at the .05 level, two-tailed test.

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