University of Cyprus
Department of Economics

**Working Paper 13-2019**

# *Youth Unemployment and U.S. Job Search Assistance Policy during the Great Recession*

**Marios Michaelides, Peter Mueser and Jeffrey Smith**

Department of Economics, University of Cyprus, P.O. Box 20537, 1678 Nicosia, Cyprus
Tel.: +357-22893700, Fax: +357-22895028, Web site: http://www.ucy.ac.cy/econ/en

# Youth Unemployment and U.S. Job Search Assistance Policy during the Great Recession†

Marios Michaelides
University of Cyprus
mariosm@ucy.ac.cy

Peter Mueser
University of Missouri
mueserp@missouri.edu

Jeffrey Smith
University of Wisconsin
econjeff@ssc.wisc.edu

November 2019

ABSTRACT

We present experimental evidence on the effects of four U.S. job search assistance programs for unemployed youth during the Great Recession. Results show that all four programs reduced Unemployment Insurance (UI) duration and the benefit amounts collected by youth participants, with savings exceeding program costs. The three programs that included monitoring activities and services referrals but did not mandate services participation had little or no effects on employment and earnings. This suggests that the primary effect of these programs was to cause the early UI exits of unemployed youth with no loss of earnings. The program that combined monitoring with mandatory job counseling increased employment rates and earnings, suggesting that job counseling can help unemployed youth to improve their job search efficacy. We conclude that, during recessions, job search assistance programs should focus primarily on providing job counseling and provide less emphasis on monitoring activities for unemployed youth.

JEL Classifications: J6, H4.

Keywords: Youth, Great Recession, job counseling, active labor market policies, unemployment, Unemployment Insurance, program evaluation.

† Analyses reported here use data collected by IMPAQ International, LLC (IMPAQ) as part of studies funded by the U.S. Department of Labor, Employment and Training Administration (DOL/ETA). The authors are grateful to the European Research Council (ERC) for financial support. The views expressed in this paper are those of the authors and should not be attributed to DOL/ETA, IMPAQ, or ERC.

## Introduction

During the Great Recession, the U.S. economy experienced the worst downturn since the Great Depression, with the national unemployment rate peaking at over 10 percent and record numbers of jobseekers applying for Unemployment Insurance (UI) benefits and government-funded employment and training programs. The labor market experience of youth workers (under 25 years old) was dramatically affected by the recession, with the youth unemployment rate peaking at over 20 percent in 2010, roughly double the national rate. In response to the recession, U.S. policymakers approved substantial funds for job training and job search assistance programs to help unemployed workers improve the effectiveness of their job search and reduce the amount of time they collected UI. However, there is no evidence on whether these programs were effective in assisting unemployed youth to improve their labor market outcomes.

This paper examines the efficacy of U.S. job search assistance policy for unemployed youth during the Great Recession. We consider four programs – two operating in Florida, one in Idaho, and one in Nevada – which, collectively represent nearly the entire range of job search assistance interventions operating during the recession. These programs were not explicitly designed to address the particular needs of the unemployed youth but rather were focused on serving all unemployed workers collecting UI benefits. In fact, the large majority of UI recipients during the recession were adults – nationally, only about 15 percent of unemployed youth collected UI benefits compared with about 45 percent of unemployed adults. Youth were less likely to collect UI for several reasons, but one of the most important is that they were less likely to meet prior employment or earnings eligibility requirements. Hence, the programs considered here served a subset of youth workers, those facing unemployment after a period of stable work.

The four programs in this study incorporated approaches used in the vast majority of federally-

funded job search assistance programs operating in the U.S. during the recession. The Florida WPRS (Worker Profiling and Reemployment Services) program referred UI recipients to public employment offices to learn about and receive referrals to job search services. The Florida Reemployment and Eligibility Assessment (REA) program conducted in-person eligibility reviews to confirm that UI recipients were actively searching for employment, disqualifying no-shows and those deemed noncompliant with UI work search requirements, but did not refer participants to services. Like Florida's REA, the Idaho REA program focused on eligibility reviews but obtained most information from participant online responses, following up with in-person interviews or employer verification with a subset of participants. The Nevada REA program conducted in-person eligibility reviews and provided mandatory job counseling after the reviews was completed.

We consider whether these programs facilitated the job search efforts of unemployed youth, and particularly if the programs helped them to obtain employment, improve their earnings, and reduce the amount of time spent collecting UI benefits. All four programs used random assignment to determine whether UI recipients would be subject to program requirements (program group) or excluded from the program (control group), and thus we can estimate program effects by comparing the labor market outcomes between the program and the control groups. For our analyses, we use state UI administrative data on all youth unemployed workers under the age of 25 who started collecting UI from July to December 2009 and were subject to random assignment for participation in the programs. These data provide information on individual characteristics, such as sex, age, and education, and outcomes after program entry, including UI duration, benefits collected, employment, and earnings.

Using available data, we estimate program effects on UI duration and benefit amounts collected to assess if the programs reduced the amount of time youth participants spent collecting

UI and if the realized UI savings covered program operating costs. Analyses of program effects on employment rates and earnings during a four-quarter follow-up period are used to assess if participants found jobs and experienced higher earnings as a result of program participation. We also estimate program effects on the conditional likelihood of exiting UI at each week after program entry to examine the timing of program effects on UI exits. Namely, we attempt to identify whether the observed program effects occurred because program requirements pushed youth participants to exit UI prior to receiving any services (what we term *voluntary withdrawal effects*) or because participants exited UI after receiving services, indicating that services may have helped them to find employment (what we term *services effects*). We also observe whether an individual was disqualified, providing a proxy for what we term *monitoring effects*. Notwithstanding concerns about comparability of findings across programs operating in different contexts, comparisons of program effects allow us to make policy recommendations about which approaches are likely to produce the best results.

The remainder of this paper is organized as follows. Section 2 discusses youth unemployment and U.S. reemployment policy during the Great Recession, and existing studies of the effects of U.S. programs for unemployed youth. Section 3 describes our four programs and discusses how they are expected to affect outcomes. Section 4 discusses our data and provides baseline statistics on program participants. Section 5 presents analyses of the effects of the four programs and Section 6 summarizes the findings and their policy implications.

## 2. Background

### *2.1 Youth Unemployment and the Great Recession*

Youth workers typically have much higher unemployment rates than adult workers both in the U.S. and other developed countries (Scarpetta, Sonnet, and Manfredi, 2010; Bell and Blanchflower, 2011; Organisation for Economic Co-operation and Development, 2016). There are many potential contributing factors. Youth workers have more limited labor market experience, less information about available jobs, and fewer job search skills. As a result, they tend to obtain jobs that are incompatible with their abilities and preferences, and experience high job turnover and frequent unemployment spells (Marchand, 1999; Martin, 2009; Bell and Blanchflower, 2011). Restricted employment options, combined with limited financial responsibilities, may also discourage youth workers from engaging in robust job search efforts; instead, they may rely on parental financial support and possibly return to school (Card and Lemieux, 2000; Robson, 2010; Bell and Blanchflower, 2011; Clark, 2011).

Furthermore, the effects of economic crises are greater and are sustained for long periods after the crises end for youth workers than for the general population (Blanchflower and Freeman, 2000; Verick, 2009; Scarpetta, Sonnet, and Manfredi, 2010; Choudry, Marelli, and Signorelli, 2012). Youth workers have on average lower levels of firm-specific human capital than adult workers, which makes them more susceptible to labor market shocks (Martin, 2009; Verick, 2009; 2011). When employers make layoff decisions, they often choose to let young, inexperienced workers go because they embody less extensive employer investments, or simply because separation costs are higher for adult workers with longer job tenure (Lazear, 1990; Nickell, 1997; Bertola, Blau, and Kahn, 2002; Pages and Montenegro, 2007; Bell and Blanchflower, 2011).

Youth unemployment is an important policy concern because it may cause adverse long-term

effects on the labor market experiences of youth, "scarring" their future employment prospects and earnings (Arulampalam, 2001; Gregg, 2001; Burgess, Propper, and Shearer, 2003; Gregg and Tominey, 2005; Mroz and Savage, 2006; Kahn, 2010). Youth unemployment may also cause non-monetary welfare losses, with evidence suggesting that unemployment episodes at a younger age may damage the self-esteem of workers, negatively affect their life beliefs, and lead to antisocial behavior and engagement in criminal activities (Korpi, 1997; Goldsmith, Veum, and Darity, 1997; Narayan and Smyth, 2004; Giuliano and Spilimbergo, 2009).

Empirical evidence confirms that youth workers in the U.S. were disproportionately affected by the Great Recession, when the national unemployment rate reached a 25-year high, affecting workers in a wide range of sectors. The Great Recession also saw a substantial increase in the demand for public workforce system services, with record numbers of workers applying for UI benefits and for state employment and training services (Wandner and Eberts, 2014). According to U.S. Department of Labor (DOL) program performance reports, in 2009, an average of 9.2 million workers in the U.S. collected UI benefits each month.[1] In the entire 2009, more than 23 million unemployed registered in state Employment Service (ES) systems and more than 8 million adults and youths registered in Workforce Investment Act (WIA) training.[2] In the same year, average UI duration (19.6 weeks) and benefit exhaustion rates (57 percent) reached all-time highs.[3]

Figure 1 compares the unemployment experience of youth workers (under 25 years old) with prime-age (25-44 years old) and older (45+ years old) workers.[4] The top left panel shows that

[1] Source: U.S. Department of Labor (https://oui.doleta.gov/unemploy/docs/persons.xls).
[2] Source: U.S. Department of Labor: ES participants (https://www.doleta.gov/performance/results/wagner-peyser_act.cfm); WIA participants (https://www.doleta.gov/performance/results/WIASRD_state_data_archive.cfm).
[3] Source: Authors' tabulations of the Current Population Survey (accessed at: https://cps.ipums.org/cps/).
[4] Age ranges identify age at last birthday – age under 25 years identifies individuals who are at least 16 years of age and less than 25; age 25-44 identifies individuals who are at least 25 years of age and less than 45; and age 45+ identifies individuals who are at least 45 years of age.

youth unemployment rates were much higher than the rates of other age groups prior to the recession and exhibited the largest increases during the recession. From peak to trough, the unemployment rate for youth increased by about 6 percentage points compared with a 4 percentage-point increase for prime-age and older workers. Youth workers also experienced a larger downward shift in labor force participation (top right panel) and proportion of employment that is full-time (middle left panel). The middle right panel indicates that youth unemployment duration increased, displaying a very similar proportional increase with that for other age groups. The bottom panel shows that the proportion of unemployed youths receiving UI benefits was much below that for older age groups, although it increased substantially during the recession.

### *2.2 U.S. Reemployment Policy during the Great Recession*

In response to the Great Recession, the U.S. Congress made substantial investments to enhance the capacity of the public workforce system to serve adult and youth jobseekers. The American Recovery and Reinvestment Act of 2009 (ARRA) allocated $400 million to state workforce agencies for 2009 and 2010 – in addition to the $724 million annual funding under continuing Wagner-Peyser legislation – to support provision of job search services.[5] Several provisions of the ARRA were focused on youth programs, including the expansion of tax credits to hire disadvantaged youths, and the earmarking of funds to support WIA youth training and employment activities, including summer youth programs (Trutko and Barnow, 2013). The ARRA also included provisions related to the UI program, including extensions of benefit duration for up to 99 weeks through activation of the Emergency Unemployment Compensation (EUC) program[6]

[5] Source: US Department of Labor Detailed Budget Documentation, FY 2009 (https://www.dol.gov/dol/budget/index-2009.htm) and FY 2010 (https://www.dol.gov/dol/budget/index-2010.htm).

[6] EUC is a federally-funded program enabling states to provide UI recipients who exhaust regular UI benefits (up to 26 weeks) with up to an additional 14-53 weeks of benefits, depending on the level of unemployment in the state.

and full federal financing of Extended Benefits (EB).[7]

Policymakers also supported the expansion of the two main job search assistance programs that had been operating prior to the recession – the Worker Profiling and Reemployment Services (WPRS) program and the Reemployment and Eligibility Assessment (REA) program. WPRS is a federal program created in 1993 that requires states to provide job search services to UI recipients who were most likely to exhaust UI benefits. The expectation was that early exposure to services would help those with employability issues to find jobs quickly and expedite their UI exit (Dickinson *et al.*, 1999; Berger *et al.*, 2000). In 2008, before the added funding took effect, the 50 state WPRS programs referred about 1.3 million UI recipients to services. Due to the added funding and higher demand for benefits during the recession, the number of WPRS referrals increased to about 2 million annually in 2009 and 2010.[8]

REA was created by DOL in 2005 to encourage state workforce agencies to conduct reviews to assess whether UI recipients were actively searching for a job while collecting benefits (Benus *et al.*, 2008; Poe-Yamagata et al., 2012). Under this program, UI recipients were required to undergo an in-person eligibility review at a public employment office. Those deemed ineligible during the review because they were not conducting an active job search, as required by state UI laws, were disqualified from collecting benefits. Prior to the recession, REA programs operated in nine states; as a response to the recession, DOL allocated $76 million to support the implementation of REA in 33 states and to encourage states to offer job search services to those

[7] EB is a permanently authorized program, normally financed jointly by states and the federal government, which enables states to provide recipients who exhaust regular UI and EUC benefits with up to an additional 20 weeks of benefits.

[8] The added funding also led to an increase in the number of UI recipients receiving actual services. In 2008, of the 1.3 million WPRS participants, 382,888 participated in job-search workshops and 141,806 received job counseling. By comparison, of the 2 million WPRS participants in 2010, 665,020 participated in workshops and 340,281 received counseling. Source: U.S. Department of Labor (http://workforcesecurity.doleta.gov/unemploy/profile.asp).

who passed the review.

### *2.3 Evidence Base*

There is a wide variety of programs in the U.S. designed to help youth obtain labor market success, but there are few rigorous evaluations, and the findings of such studies have been disappointing. The best-known job training program for youth is Job Corps, a one-year residential program established in the 1960s. Random assignment evaluations have shown that the program was effective in improving employment and earnings, although gains tend to fade over the long run, and the benefits did not appear to cover the costs for most participant groups (Schochet, Burghardt and McConnell, 2008; Flores et al., 2012; Zhang et al., 2012).

One of the most widely cited studies of a job training program in the U.S. is the random assignment evaluation of the Job Training Partnership Act (JTPA) in the late 1980s. Although the program was found to provide at least modest benefits to adults, results were not positive for youths aged 16-21 at the time of intake and showed negative effects for male youths who had been arrested (Orr *et al.*, 1996). On a slightly more positive note, in a nonexperimental study of the Workforce Investment Act (WIA) Adult program, the successor to JTPA, Heinrich *et al.* (2008) found that youth participants (under age 25) experienced positive impacts on earnings over the five years following program participation, results similar to those of all adults.

There are no job-search assistance programs in the U.S. that are focused on unemployed youth. Existing programs are designed for the general UI population (which is dominated by adult workers) and feature interventions that are much less intensive than those featured in youth training programs studied to date. As is the case with adults, evaluating the efficacy of job search assistance programs for youths is difficult because such programs involve relatively light interventions and

even effects that would easily justify program costs may be difficult to detect. Hence, credible estimates of effects of such programs generally require experimental designs and substantial sample sizes. We are not aware of studies that examine the effects on youths of U.S. job search assistance programs. However, in analyses of the full adult population, existing research indicates that such programs are often effective.

Meyer (1995) reviewed experimental studies of five job-search assistance programs operating through the 1980s. He found that the five programs reduced the UI spells of participants, although effects on employment were ambiguous. Studies of more recent programs operating in the 1990s confirmed that job search assistance may reduce the amount of time participants spend collecting UI (Decker et al., 2000; Klepinger, Johnson, and Jutta, 2002; Black *et al.*, 2003), with effects largely driven by participant exit from UI to avoid program requirements. On the other hand, recent work showed that programs requiring participants to engage in job counseling may both reduce benefit receipt and improve employment outcomes (Michaelides and Mueser, 2018; 2019, forthcoming). Manoli, Michaelides, and Ankur (2018) show that the effects of job counseling on employment and earnings for the general UI population may be sustained for long periods after program participation and may even lead to improved outcomes for participants' households.

Several studies provide experimental evidence on the effects of job search assistance programs for unemployed youth in Europe. Programs that imposed intensive monitoring requirements on unemployed youth – in an effort to push them to increase the intensity of their job search – had no effects on unemployment duration and employment in Denmark (Maibom, Rosholm, and Dvarer, 2014), Hungary (Micklewright and Nagy, 2010), and Sweden (Engström, Hesselius, and Homelund, 2012). Results seem to be more promising for schemes that involved job counseling. Programs that combined monitoring activities and direct job counseling in Sweden (Hägglund,

2014) and Denmark (Graversen and van Ours, 2008) had positive effects on job finding rates and exits from unemployment. Programs that involved job counseling and limited monitoring activities yielded no effects on employment rates in Sweden (Bennmarker, Gronqvust, and Ockert, 2013) and reductions in unemployment in France (Crépon *et al.*, 2013).

These results provide benchmark evidence about the effects of job search assistance for unemployed youth but cannot be used to infer the efficacy of U.S. programs operating during the recession. In addition to differences in labor market contexts between the U.S. and Europe, the European programs were operating during periods of relatively low unemployment. Perhaps more importantly, the European programs had more intensive requirements, mandating regular weekly or monthly meetings with job counselors throughout the unemployment spell, raising the possibility that positive effects are partly due to intensive monitoring. U.S. programs typically involved a single meeting at the onset of the UI claim with no subsequent requirements.

Overall, there is a conspicuous gap in the literature regarding the effects of U.S. job search assistance programs for unemployed youth. Existing studies focus on the general UI population and provide no evidence on how these programs affect youth, particularly during recessions when the need for job search assistance may be higher. The objective of this study is to fill this gap by considering the effects of four programs that are representative of the types of the job search assistance interventions emphasized in the U.S. during the Great Recession.

## 3. Program Descriptions

During the Great Recession, all 50 states were operating the WPRS program, with 33 states also operating the REA program. This study presents evidence on the effects for youth UI recipients of the WPRS program in Florida, and the REA programs in Florida, Idaho, and Nevada,

evaluated near the depth of the Great Recession. These programs were selected for two reasons. First, they used random assignment to select which UI recipients would be required to participate (program group) and which would be exempted from program requirements (control group). The programs' experimental design allows us to estimate the effects of each program by comparing the post-random assignment outcomes between the program and the control group. Second, as explained below, these programs represent the dominant approaches used by state workforce agencies during the recession, and thus our findings have external validity.

### *3.1 Florida*

Florida operated both the WPRS and REA programs during the recession as follows. Each week, the state UI agency identified which new UI recipients – including adult and youth – were eligible for participation in the two programs; those on temporary layoff, active in training programs, and attached to union hiring halls were excluded. Lists of program-eligible UI recipients were sent to regional workforce offices, which used the lists to randomly allocate individuals to the WPRS program, the REA program, or the control group based on availability of program slots in the region.[9] UI recipients assigned to WPRS received a notification letter in week 2 of their UI spell (i.e., when they collected their second UI weekly payment) informing them that they were required to attend an orientation meeting at a public employment office to receive information about job-search services. Those assigned to REA received a similar letter in week 2, referring them to a public employment office to undergo the eligibility review.

WPRS participants who failed to attend the meeting were given multiple opportunities to

[9] In 2009, 18 of the 24 regional workforce offices in Florida implemented both WPRS and REA, covering 85 percent of the UI recipients in the state. The proportion of program-eligible UI recipients assigned to each program varied each week based on each office's available resources. The remaining six regional offices were operating WPRS but not REA.

reschedule, and there were no repercussions for those who ultimately failed to attend. In contrast, REA participants who did not attend or reschedule the meeting within three weeks of the initial date were disqualified from collecting UI, although those who participated in job search or training services, as shown in the employment service data system, were excused. The REA program also disqualified participants who were deemed noncompliant with UI work search requirements during the eligibility review.[10] After those meetings, WPRS and REA participants were not required to attend additional meetings or receive any services. Those assigned to the control received no letter and had no obligations under either program but were subject to the usual UI work search requirements.

### *3.2 Idaho*

Idaho maintained both WPRS and REA programs during the recession, but WPRS was very small, serving only about 2 percent of services-eligible UI recipients. The remaining services-eligible recipients were randomly assigned to the REA program or the control group. Those assigned to the REA program were sent a notification letter in week 1 of their UI spell (when they collected their first UI payment) asking them to complete an online review on the IdahoWorks website by week 4, providing information on their work search activities and employer contacts. In week 5, participants who were still collecting UI but either had not completed the online review or were deemed ineligible based on their responses were disqualified from collecting UI. As in the case of Florida REA, those enrolled in job search services or training were excused.

The Idaho UI agency then selected about 5 percent of those who completed the online review

[10] State UI laws required UI recipients to be available for work, be actively searching for a job, and not reject suitable employment. UI recipients were also responsible for keeping track of their employer contacts, in case the UI agency wanted to verify that they were actively searching for a job.

for telephone verification of their employer contacts and about 20 percent for an in-person review. The remaining 75 percent had no further contact with the program. Those selected for the in-person review were contacted by phone in week 5 to set up an appointment; the in-person reviews were typically scheduled in weeks 6-7. Those who did not show up for the in-person review and those who were deemed ineligible during the review were disqualified. Those who passed the review were not required to receive any services and were explicitly informed that they did not have any further requirements under the REA program.

### *3.3 Nevada*

Nevada operated both REA and WPRS during the recession. The REA program operated in the workforce regions covering the Las Vegas and Reno metropolitan areas, which included most UI recipients in the state,[11] and WPRS operated in the rest of the state. The Nevada REA program operated as follows. Each week, the Nevada UI agency randomly assigned program-eligible UI recipients to the REA program or to the control group. The program group received a notification letter in week 1 of their UI spell asking them to attend a meeting at a public employment office in weeks 2-4 of the UI spell. During that meeting, participants underwent the eligibility review to confirm that they were searching for a job and were otherwise satisfying UI requirements. Those deemed noncompliant and those who did not show up for the review (and failed to reschedule the appointment) were disqualified from collecting additional UI payments.

Those who passed the review were offered job counseling services during the same meeting. Depending on individual needs, the program provided participants with an individual skills assessment to help them identify the types of jobs they should be pursuing, resume development

[11] Tabulations of the 2009 American Community Survey show that these regions covered 87 percent of unemployed workers in the state during the study period.

assistance, registration in the state's labor exchange system, and direct referrals to job openings. Following the meeting, REA participants had no further program obligations. Those assigned to the control did not receive any notification and had no obligations under REA but were subject to the usual requirements that they had to be actively searching for a job, be available for work, and not reject suitable employment.

*3.4 Mechanisms Underlying Program Effects*

These programs represent a wide range of job search assistance interventions that were in place during the Great Recession throughout the United States. Florida WPRS closely parallels the structure of state WPRS programs, which provided information and referrals to job search services but did not typically mandate participation in services. Florida REA is similar to the majority of the 33 state REA programs that operated during the recession, which focused exclusively on eligibility reviews and did not mandate participation in job search services. The use of online tools for the eligibility reviews distinguishes Idaho REA from REA programs operating in other states, including Florida, which relied exclusively on in-person reviews. To our knowledge, Idaho REA is the only job search assistance program in the U.S. or Europe which relied primarily on online tools and in which most participants were not required to have face-to-face interactions with program staff. Nevada REA is unique because it was the only state program during the recession that followed DOL's directives to both conduct in-person eligibility reviews and require those who passed the review to receive job counseling.

These programs targeted the general UI population – which is dominated by adult workers – and thus were not explicitly designed to address the needs of unemployed youth. Nonetheless, the services provided may have been of particular value to youths. Compared with adult workers,

youth workers have limited experience in the job search process and often lack information about specific job requirements and how they fit with their own skills and preferences (Marchand, 1999; Martin, 2009; Bell and Blanchflower, 2011). Youth workers also lack prior work experience compared with adults, so they are at a relative disadvantage, particularly when employers prefer to hire workers with vocation- or industry-specific experience (Caroleo and Pastore, 2007; Kahn, 2010; Bell and Blanchflower, 2011). As a result, youth workers need more time to find stable employment, they experience high job turnover and frequent spells of unemployment, and have higher NEET (neither in education nor in employment or training) rates than adult workers (Quintini and Martin, 2006; Bell and Blanchflower, 2011; Carcillo, Fernández, Königs, and Mineaan, 2015). Given that youth unemployment is more sensitive to the business cycle than is adult unemployment **(**Scarpetta, Sonnet, and Mandfredi, 2010; Verick, 2011; Choudry, Marreli, and Signorelli, 2012), the role of such mechanisms may be more important during recessions. We would also expect youth workers to be more susceptible to "discouraged worker effects" during a recession; limited job options and lack of job search experience may push them to abandon their job search altogether.

In general, we can identify three mechanisms through which the four programs considered here may have affected the job search behavior and outcomes of youth participants. First, the programs may have caused participants to exit UI voluntarily prior to receiving any services. These *voluntary withdrawal effects* may occur because program requirements pushed out youth participants who were job-ready and wanted to avoid the anticipated costs of program participation. Voluntary withdrawal may also occur because program requirements discourage youth participants who do not have any job options, causing them to completely withdraw from the job search process. We believe that voluntary withdrawal effects are plausible for all four programs. Second, programs

may have produced *monitoring effects*, caused by disqualifications of participants who did not complete program requirements. In the context of the four programs considered here, monitoring effects are plausible for the three REA programs but not for Florida WPRS, which did not include an eligibility review and did not disqualify no-shows.

Third, the programs may have caused *services effects*, occurring because the programs pushed participants to receive services that improved the quality of their job search. The Nevada REA program might be expected to display the greatest services effects because it mandated direct exposure of youth participants to services. Services effects are plausible for all four programs, even for the programs that did not mandate services participation, because they may have motivated participants to receive services on their own or intensify their job search. However, there is also a risk that program requirements and provision of services may have "rushed" youth participants back to work, yielding low-quality job matches in the short-run and employment instability in the long-run. Our analyses below attempt to both estimate the overall effects of the four programs on youth participants' labor market outcomes and to assess – to the extent feasible – the underlying mechanisms that may have caused the observed effects.

## 4. Data

Prior to the Great Recession, unemployment rates in Florida, Idaho, and Nevada were similar to national rates but, during the recession, the three states experienced sharper increases in total and youth unemployment rates (Appendix Figure A). Youth unemployment rates peaked at about 24 percent in both Florida and Nevada during the recession compared with 20.4 percent nationally. The youth unemployment rate in Idaho was slightly lower than the national rate, except in 2011. Unemployment rates started to decline steadily in 2011 and, although recovery was relatively slow,

youth unemployment rates returned to their pre-recession levels near the national rate by 2015.

Our sample includes all youth unemployed workers (under 25 years old at the time of UI application) who started collecting UI benefits from July through December 2009 in Florida, Idaho, and Nevada and were eligible for random assignment for participation in the job search assistance programs.[12] Depending on their employment histories, Florida, Idaho, and Nevada UI recipients were eligible to collect 9-26 weeks, 10-26 weeks, and 12-26 weeks of regular UI benefits on their UI claims, respectively. Since state unemployment rates exceeded the thresholds for activating the EUC and EB programs, recipients in all three states who exhausted regular UI benefits could also apply for up to an additional 53 weeks of EUC and for up to an additional 20 weeks of EB.

Analyses of program effects rely on UI state administrative claims data and wage records. UI claims data report individual characteristics, including program assignment, gender, race (for Florida and Idaho), ethnicity, education, and occupation. The data also report benefit entitlements under the UI claim and the number of weeks and benefit amounts actually collected under regular UI and EUC programs. Unfortunately, it was not feasible to obtain information on benefits collected under EB, so our analyses only consider receipt of regular UI and EUC benefits. Using these data, we construct several measures of UI receipt, including the number of UI weeks collected (regular UI and EUC), benefit amounts collected (regular UI and EUC), whether individuals exhausted regular UI, and whether individuals collected EUC benefits.

[12] Of the 18 Florida workforce regions that implemented both WPRS and REA, seven regions assigned all eligible youth UI recipients to either WPRS or REA (i.e., none to the control group) and one region assigned fewer than 3 percent of eligible youths to either WPRS or REA. Our analyses rely on the remaining 10 regions, which assigned 16-47 percent of eligible youths to WPRS, 17-56 percent to REA, and 15-51 percent to the control group. These 10 regions covered about 60 percent of youth unemployed workers in the state during the study period. The Nevada analyses are based on the workforce regions covering the Las Vegas and Reno metropolitan areas, where REA operated; these areas covered 89 percent of unemployed youths in the state. Idaho REA was implemented statewide so our sample covers all REA-eligible youth UI recipients in the state.

UI wage records report quarterly earnings that UI youth recipients earned from employers in the state in the eight quarters prior to and in the four quarters following the start of the UI claim associated with program assignment. These data are used to measure quarterly employment and earnings prior to and following entry into the UI program.

Table 1 presents statistics on the characteristics of youth UI recipients in the samples. There were 6,524 youth recipients who were eligible for WPRS and REA in the Florida sample – about 32 percent were assigned to WPRS, 40 percent to REA, and 28 percent to the control group. In Idaho, 1,956 eligible youth were subject to random assignment, of which 79 percent were assigned to the program. About 16 percent of the 2,767 eligible youth UI recipients in the Nevada were assigned to the REA program.

In Florida, about 55 percent of youth UI recipients were white, 22 percent were black, and 10 percent were Hispanic, reflecting the diverse workforce in the state. In Idaho, about 80 percent were white, with blacks making up less than 1 percent; nearly 16 percent were Hispanic. Race was not reported in the Nevada data, but about a quarter of youth UI recipients were Hispanic. The proportion of the population with some college education was higher in Idaho than in the other states—36 percent versus 25 percent in Nevada and 16 percent in Florida. The occupational distribution reflects the prevalence of the entertainment industry in Nevada, with relatively higher proportions of youth previously employed in white collar, low skill jobs. As might be expected, Idaho had the largest proportion of youth in blue collar, low skill jobs.

During the 2009 study period, only about 15 percent of unemployed youth workers applied for UI benefits, well below the rate for older workers (Figure 1). This is due to a number of factors, including that many unemployed youth: (1) were not qualified for UI benefits because they had no prior work experience; (2) were not employed in UI-covered jobs or did not earn sufficient

earnings to qualify for benefits; or (3) did not apply for benefits after they lost their jobs even though they qualified for benefits. Our study samples include only youth unemployed workers who applied and were deemed qualified for UI benefits, and thus they are unlikely to be representative of the entire youth unemployed population.[13]

Table 2 presents individual earnings in the eight quarters prior to UI entry and UI benefit entitlements. Note that Nevada youth UI recipients were eligible to collect a total of 81.1 weeks of benefits with a $18,817 cumulative entitlement, compared with 70.8 weeks and a $14,541 cumulative entitlement in Florida, and 71.0 weeks and $14,579 cumulative entitlement in Idaho.

To establish that random assignment yielded balanced program-control samples, we estimate the likelihood of program assignment based on individual characteristics, prior earnings, and UI entitlements. The results (see Appendix Table B) show that, of 70 coefficients, five were significant at the 95 percent or higher confidence level. Three of the significant coefficients pertain to the Idaho, so insofar as there is the possibility of violations in the random assignment procedure, it would be focused on that state. Otherwise, these results imply that program and control groups were similar in observed factors, indicating that any differences in observed characteristics would have a small bearing on program-control differences in subsequent outcomes. Nonetheless, our analyses of program effects control for differences in these factors.

Employment service data report when required meetings were scheduled, whether participants met requirements, and the number of participants disqualified for failure to show up or who failed the eligibility review. Table 3 presents the meeting schedule for each program, including the proportions of youth participants who completed the meetings and who were disqualified. In

[13] Appendix Table A summarizes the characteristics of experienced unemployed youth in 2009. Comparisons with the characteristics of UI recipients in our samples (Table 1) show that women and white unemployed youth were under-represented in the UI population. In contrast, youth unemployed with a high school diploma and those previously employed in white collar, high skill and blue collar, high skill occupations were over-represented in the UI population.

Florida, WPRS and REA meetings were mostly scheduled in weeks 4-6 of the UI claim, while Nevada REA meetings were mostly scheduled in weeks 2-6. Nearly two thirds of Florida WPRS participants attended the orientation. Completion rates were higher in Florida REA and Nevada REA, with nearly nine in every ten participants attending required meetings. In Idaho, only one in five participants were scheduled for an in-person interview. Almost all of these interviews were scheduled for week 6 or 7. The bottom panel of the table shows that between 0.7 and 1.2 percent of REA youth participants across states were disqualified because they did not show up for the eligibility review. In addition, 0.4 to 0.5 percent were disqualified because they were deemed noncompliant with UI work search requirements.[14]

Table 4 compares the job counseling services received by youth UI recipients in the Nevada REA group and the control group. Unfortunately, it was not possible to obtain similar information for the Florida or Idaho programs. About 61 percent of program cases received at least one job counseling service offered during the meeting, compared with only 8 percent of control cases. Program cases had much higher take-up rates than control cases for each type of counseling service; importantly, about 17 percent of treatment cases received a direct job referral, compared with only about 3 percent of control cases. Treatment cases were also appreciably more likely to attend group orientation meetings to learn about job search services and employment workshops to obtain basic job skills training. These figures show that Nevada REA was effective in inducing youth UI recipients to participate in job search services.

[14] Note that the number of completions plus the number of disqualifications do not add up to the total participant population in the Florida and Nevada REA programs; completions were not available for Idaho REA. The reason is that treatment cases who did not complete REA requirements in Florida, Idaho, and Nevada but received job-search and/or training services on their own initiative were exempt from REA requirements and thus were not disqualified.

## 5. Program Effects

### *5.1 Effects on UI Receipt and Employment Outcomes*

Our analyses estimate the effects of each program on the UI receipt and employment outcomes of youth participants. Using UI claims data, we measure the number of regular UI, EUC, and total (regular UI plus EUC) weeks collected, and the total amount of regular UI, EUC, and total benefits collected on the claim.[15] We also measure whether individuals exhausted regular UI benefits and whether they collected EUC benefits after exhausting regular UI.

UI wage records are used to measure employment outcomes on a quarterly basis for each of the four quarters after program entry: *employed in quarter t* – indicates whether the individual had earnings within the state in the quarter; *earnings in quarter t* – provides the dollar value earned in the quarter. Appendix Table C presents descriptive statistics of outcomes for youth control cases, which capture outcomes in the absence of program requirements.

To estimate each program's effects on UI receipt and employment outcomes, we use regression models of the following form:

$$[1] \qquad Y_i = a + b \cdot T_i + X_i \cdot c + u_i$$

The dependent variable ($Y_i$) is the outcome for individual *i.* The treatment indicator ($T_i$) equals 1 if the individual was in the program group and 0 in the control group. The vector of control variables ($X_i$) includes individual characteristics at program entry (as listed in Table 1), prior earnings, indicators for weeks of regular UI eligibility, weekly benefit entitlement, indicators for week of UI entry, workforce region, and, for the Florida programs, interactions between week of UI entry and workforce region. Estimated parameters include a constant term ($a$) and a vector of

[15] As noted, we do not have information on EB weeks and amounts collected, and thus we do not observe the full UI spell for individuals who exhausted both regular UI and EUC benefits.

coefficients for control variables ($c$); $u_i$ is a zero-mean disturbance term. Since program assignment was random each week (or, for Florida, within workforce region in a given week), parameter $b$ estimates the program's average treatment effect.

Table 5 presents estimated program effects on UI receipt. Point estimates indicate that all programs reduced UI spells and benefit amounts collected, with effects varying across programs. Nevada REA reduced UI duration by 3.81 weeks and benefit amounts collected by $554 – these represent 12 and 7 percent reductions relative to control group means, respectively. Florida REA yielded higher reductions in benefit duration and amounts collected than Florida WPRS, but the effects of both programs were lower than the effects of Nevada REA. In percentage terms, the Idaho REA effects were lower than the Florida REA effects and similar to those of Florida WPRS. The Nevada REA program also yielded higher reductions in regular UI exhaustion and take-up of EUC benefits than any of the other programs. For all four programs, estimated UI savings exceeded estimated program costs (shown at the bottom of the table). Nevada and Idaho yielded net savings (UI benefit savings minus cost) of $353 and $363 per participant, respectively, which exceeded the net savings of Florida REA ($302) and Florida WPRS ($134 to $147).

Results also show that the four programs reduced the probability of exhausting regular UI benefits and the likelihood of collecting EUC benefits UI. Three of the four programs, except Idaho REA, also reduced the likelihood of exhausting EUC benefits. Estimated effects for the three programs on regular UI exhaustion and receipt of EUC are similar with the effects on EUC exhaustion, indicating that the programs did not have any additional effects on UI exits at the later stages of participants' claims, particularly in the period when EUC and EB became available. Since we do not observe payments made under EB, then it is likely that our results underestimate the effects on actual duration and total benefit amounts collected for the three programs that reduced

EUC exhaustion. Under certain assumptions, we can show that the maximum possible bias for the three programs can be substantial.[16]

Table 6 presents program effects on quarterly employment outcomes. The Florida WPRS and REA programs had similar positive effects on employment and earnings, although most lacked statistical significance. The Idaho REA program had small positive or negative effects on employment and negative effects on earnings; all estimates lacked statistical significance. In contrast, the Nevada program had large positive and statistically significant effects on both outcomes. Nevada REA increased employment rates by 20 percent in the first quarter after entry, an effect that remained substantively high in subsequent quarters. Earnings effects in Nevada were in the $400-500 range in each of quarters 2-4. Overall, the Nevada REA program increased participant earnings by an average $1,553 over the entire four-quarter follow-up period, a 22 percent improvement relative to the control group.

### *5.2 Effects on Conditional UI Exit Probabilities*

As discussed earlier, program effects were likely due to three mechanisms – voluntary withdrawal, monitoring, and services effects. Our data provide no information that can be used to directly measure the effects of voluntary withdrawal or services; they do, however, provide information on how many participants each week were disqualified following the eligibility review, which serves as a proxy for monitoring effects. To identify the importance of voluntary

[16] Assuming that program and control individuals who exhausted EUC had the same expected EB duration, then each program's effect on EB would be caused by a reduction in EUC exhaustion. Using information on the weeks of EB eligibility each individual would have had if they had exhausted EUC, we calculate the maximum bias for total weeks (and benefits) collected by multiplying the effect on EUC exhaustion times EB eligibility weeks (and amount). These calculations show that the maximum possible bias would be -0.44 weeks (-0.028 times 15.68 weeks) and $86 benefit amount (-0.028 times $3,084 benefit amount) in Florida PREP, -0.38 weeks (-0.024 times 15.68 weeks) and $74 benefit amount (-0.024 times $3,084 benefit amount) in Florida REA , and -1.87 weeks (-0.112 times 16.71 weeks) and $435 benefit amount (-0.112 times $3,025 benefit amount) in Nevada REA

withdrawal and services effects for each program, we estimate treatment-control differences in the probability of exiting UI in a given week, conditional on not exiting in a prior week. We use a linear probability model with the following structure:

$$H_{ti} = a + b_t \cdot T_i + X_i \cdot c_t + v_{ti} \qquad [2]$$

The independent variable ($H_{ti}$) is the UI exit probability for individual *i* at week *t*, contingent on not exiting prior to week *t*, often referred to as a discrete time hazard. Control variables $X_i$ are the same as those used in model 1. The model is estimated for each week using all individuals who were still collecting UI in that week. This model allows the program effect on the conditional UI exit probability ($b_t$) to vary over time, which is consistent with the expectation that the timing of effects may differ over time based on program design. The model also allows the effects of characteristics on UI exit to vary over time, mitigating concerns about dynamic selection based on observed heterogeneity. Although this approach accounts for selection on observed variables, if those who exit UI early differ based on unobserved factors from those who stay on UI for longer periods and those unobserved factors are correlated with UI duration, then estimates in later weeks may be biased (Black *et al.,* 2003). However, prior work that uses similar estimation strategies has shown that dynamic selection bias based on unobserved characteristics is very small and has a minimal influence on the estimated effects of job search assistance programs (Michaelides and Mueser, 2018; 2019, *forthcoming*).

Results are summarized in Figure 2. The plot for each program presents the estimated program effect with the 95 percent confidence interval; statistically significant estimates at the 10 percent level or lower are noted. The Florida, Idaho and Nevada REA plots also include the proportion of program cases that were disqualified during the review, our proxy for monitoring effects.

Florida WPRS had positive effects from week 3 through 7, but only the effect in week 7 (1.1

percentage points) is statistically significant. The week 7 effect reflects participant exits immediately after the meetings were scheduled. Since the program had no monitoring effects, the week 7 effect most likely reflects voluntary exits of participants rather than effects of any services received. In subsequent weeks, effects are as likely to be negative as positive; in substantive terms, effects were generally small both in weeks 1-8 (when voluntary withdrawal effects likely dominated) and after week 8 (when services effects would be expected to prevail).[17]

Florida REA had a significant positive effect in week 4, after participants received notification and prior to undergoing the eligibility review, suggesting that some participants exited UI to avoid the review. Positive effects in weeks 5-7 (solid line) lacked statistical significance and appear to largely reflect disqualifications of no-shows and ineligibles (dashed line). Estimates are generally small in week 9 or later, except for statistically significant effects in weeks 16 (1.2 percentage point) and 25 (1.5 percentage point). These results suggest the existence of services effects, because the program motivated participants either to obtain services that aided their job search or to exert a more intensive job search effort.[18]

The Idaho program had a positive and significant effect in week 5 (1.9 percentage points), immediately following the week 4 deadline for completing the online review. The dashed line indicates that half of this effect (0.9 percentage points) was due to disqualifications; the remaining effect is likely due to voluntary withdrawal. In weeks 6 through 8, program participants continued to leave at higher rates than the control, although effects are smaller and not statistically significant. Disqualifications play a smaller role over this period. After week 8, seven of the 17 estimates are positive, but only the 2.0 percentage-point effect in week 11 is statistically different from zero.

[17] Using the estimated effects on the conditional UI exit probability, we find that the program effect on the cumulative probability of exiting UI was 1.3 percentage points in weeks 1-8 and 4.1 percentages point in weeks 1-25.

[18] Using the estimated effects on the conditional UI exit probability, we find that the program effect on the cumulative probability of exiting UI was 1.6 percentage points in weeks 1-8 and 6.5 percentage points in weeks 1-25.

The remaining estimates are not statistically significant. Overall, effects after week 8 – when services effects would be expected to occur – are at least as likely to be negative as to be positive, indicating that services were less important than voluntary withdrawal and monitoring in explaining program effects.[19]

Nevada REA results show large positive effects on UI exit in weeks 2-5, which is after participants received the notification letter (week 1) and when most program meetings were scheduled. Estimated effects during this period (0.9 to 4.2 percentage points) much exceeded the disqualification rates (0.1 to 0.5 percentage points), suggesting that program effects were predominantly attributable to voluntary withdrawal. In weeks 11-16, at least a month after most reviews were completed and services were provided, we estimate positive effects on UI exit, including large significant effects in week 12 (1.8 percentage points), week 13 (2.9 percentage points), and week 16 (3.1 percentage points). There are also large effects in weeks 22 and 23, although only the latter is statistically significant. These results show that Nevada REA increased the rate at which program participants exited UI relative to the control group starting at least five weeks after most participants had received services, indicating that services effects were important. In fact, it appears that services played an important role in explaining program results and were at least as important as voluntary withdrawal and monitoring.[20]

### *5.3 Discussion*

Our results show that the job search assistance programs that were in place during the recession reduced the UI spells of youth participants and yielded UI savings that exceeded program costs.

[19] The estimated program effect on the cumulative probability of exiting UI was 4.8 percentage points in weeks 1-8 and 6.3 percentage points in weeks 1-25.
[20] The program effect on the cumulative probability of exiting UI was 12.3 percentage points in weeks 1-8 and 22.4 percentage points in weeks 1-25.

However, the magnitude of the effects and the potential underlying mechanisms differed across programs. The Florida WPRS had smaller effects on UI duration and benefit amounts than did the Florida REA and Idaho REA programs. In all three programs, reductions in UI receipt were not accompanied by positive effects on employment and earnings. Hazard analyses show that the programs primarily caused the early exit of youth participants from the UI program around the period when the eligibility reviews (in both programs) and follow-up activities (in Idaho) were scheduled. These early UI exits were partly because of disqualifications based on the eligibility review and partly because of voluntary participant exits. There were some positive effects on UI exits after program requirements had been met, but those effects were relatively small and did not translate into any employment effects.

Our findings suggest that the three programs in Florida and Idaho had minimal services effects and did not help youth participants to improve the quality of their job search. It appears that the primary effect of these programs was to cause the early exit of some youths from the UI program around the period when program requirements were scheduled. These findings are consistent with those of earlier studies of U.S. programs that included services referrals (Black et al., 2003; Decker et al., 2002) or monitoring activities (Klepinger et al., 2003; Michaelides and Mueser, forthcoming) but no strong services components.

In programs studied by earlier work, which primarily concerned adult populations, early effects on UI exit were accompanied by positive short-term effects on employment and earnings, suggesting that the programs effectively reduced moral hazard by pushing out of UI participants who were not conducting an active job search but had readily available job options. We find limited evidence that the Florida and Idaho programs considered here improved the employment outcomes for youth participants, so it is doubtful that early UI exits not accounted for by monitoring effects

are due to youth leaving UI for attractive jobs. In fact, we cannot discount the possibility that the added scrutiny imposed by the programs – particularly the eligibility review – may have discouraged some youth participants, pushing them to exit UI although they did not have any real job options. This explanation is in line with European studies (Micklewright and Nagy, 2010; Engström et al., 2012; Maibom et al., 2014) that suggest that monitoring requirements do not improve the job search efforts of unemployed youth and may push some to prematurely end their job search altogether.[21]

The Nevada REA program was the only program that helped youth participants to exit UI quickly, find jobs, and improve their earnings. Analyses of UI exits show that program effects were in part attributed to early participant exits, either voluntarily or because they failed to attend or pass the eligibility review. But a large portion of program effects are attributed to higher UI exit in the period after program requirements had been met. These results suggest that, while the program may have induced some participants with limited job options to leave UI prematurely, it provided those who continued to collect UI with services that helped them conduct a more effective job search. It is also possible that the job counseling offered by the program simply motivated youth participants to remain actively engaged in the job search process or increase the intensity of their search. This conclusion is enhanced by the fact that the other three programs – which did not include mandatory job counseling – had very small effects on UI exits after program requirements had been met and had minimal effects on employment and earnings. While we cannot dismiss the possibility that differences in program efficacy may be due to contextual factors, it is likely that the job counseling offered by Nevada REA is responsible for the higher effects in Nevada.

[21] In their review of the European literature on programs targeting unemployed youth, Caliendo and Schmidl (2016) note: "A potential downside of [monitoring schemes] is that they may result in a direct withdrawal from the labor market when monitoring and sanctions are imposed too fiercely."

The conclusion that job counseling can be effective for unemployed youth is supported by earlier work concerning European programs. Programs that required unemployed youth to engage in job counseling – stand-alone or in combination with monitoring activities – were found effective in reducing unemployment duration and increasing employment rates (Graversen and van Ours, 2008; Crépon et al., 2013; Hägglund, 2014). The programs considered in those studies, however, featured more intensive schemes than the Nevada program, requiring participants to participate in weekly or monthly meetings with job counselors throughout their unemployment spell and, in some cases, engage in training activities. Because of continuous participation in monitoring and counseling activities, those studies could not distinguish between the effects of services and voluntary withdrawal to avoid program requirements.

## 6. Conclusions

Youth workers have much higher unemployment rates than adult workers, particularly during recessions, partly because they have low human capital and lack job search experience and skills. This study considers the effects of four U.S. job search assistance programs in helping unemployed youth to improve their labor market prospects. We find that, regardless of their specific requirements, the programs were effective in reducing UI duration, yielding UI savings that generally exceeded the average costs of program operations.

While we would expect that these effects would be accompanied by positive effects on employment, evidence indicates that only Nevada REA– the only program that included mandatory participation in job counseling – helped youth participants to improve their job search outcomes. The three programs that did not mandate participation in job counseling services – Florida WPRS, which provided services referrals but did not mandate participation, and the REA

programs in Florida and Idaho, which conducted eligibility reviews but had no services component – primarily caused the early exit of youth participants around the time when program requirements were scheduled. These exits were partly attributed to disqualifications based on an eligibility review (in the REA programs) but were otherwise due to voluntary participant exits. The absence of any effects on employment outcomes and the small effects on UI exits after program requirements had been met suggests that these programs may have induced youth participants to leave UI prematurely.

The Nevada REA program, which mandated participation in both an in-person eligibility review and job counseling, had substantive effects on employment and earnings for at least four quarters after program participation. Similar to the other programs, the Nevada program caused some youth participants to exit UI early in their spell either voluntarily or because of disqualifications during the review. But the program also had substantive effects on UI exits after most youth participants had met service requirements. This finding, combined with the substantial positive effects on employment and earnings, suggest that the mandatory job counseling provided by the Nevada program may have helped youth participants to conduct more effective job search. Of course, it is possible that job counseling did not directly aid the job search efforts of participants but rather motivated participants to conduct a more intensive job search or not to abandon their job search when their initial efforts were unsuccessful.

These findings have important policy implications. First, job search assistance programs that focus on job referrals or monitoring activities but do not include a strong job counseling component are likely to be ineffective in helping unemployed youth to improve their job search outcomes during recessions. It seems unlikely that these programs would induce youth participants to receive any services on their own or motivate them to exert a more rigorous job search effort. In fact, the

only effect of such programs may be to discourage some unemployed youth from continuing to collect UI even when they have no available job options. Second, programs that provide unemployed youth with job counseling services early in their UI spells can help them develop more effective job search strategies and achieve better outcomes. These findings suggest that, during recessions, job search assistance programs should focus on provision of job counseling services to unemployed youth and provide less emphasis on job search monitoring activities.

**References**

Arulampalam, W. (2001). Is Unemployment Really Scarring? Effects of Unemployment Experiences on Wages. The Economic Journal, 111(475), 585–606.

Bell, D.N.F., and Blanchflower. D.G. (2011). Young People and the Great Recession. Oxford Review of Economic Policy, 27(2), 241–267.

Bell, D.N.F., and Blanchflower, D.G. (2010). Youth Unemployment: Déjà Vu? IZA Discussion Paper No. 4705.

Bennmarker, H., Gronqvist, E., and Ockert, B. (2013). Effects of Outsourcing Employment Services: Evidence from a Randomized Experiment. Journal of Public Economics, 98:68-84.

Benus, J., Poe-Yamagata, E., Wang, Y., and Blass, E. (2008). Reemployment and Eligibility Assessment Study, ETA Occasional Paper 2008-02, U.S. Department of Labor, Washington, DC.

Bertola, G., Blau, F.D., and Kahn, L. M. (2002). Labor Market Institutions and Demographic Employment Patterns. NBER Working Paper Series 9043.

Black, D.A., Smith, J.A., Berger, M.C., and Noel, B.J. (2003). Is The Threat Of Reemployment Services More Effective Than the Services Themselves? Evidence from Random Assignment in the UI System. American Economic Review, 93(4), 1313-1327.

Blanchflower, D.G., and Freeman, R.B. (2000). Youth Employment and Joblessness in Advanced Countries, eds, University of Chicago Press and NBER, Chicago, IL.

Burgess, S., Propper, R., and Shearer, A. (2003). The Class of 1981: The Effects of Early Career Unemployment on Subsequent Unemployment Experiences. Labour Economics, 10(3), 291-309.

Caliendo, M., and Schmidl, Ricarda (2016). Youth Unemployment and Active Labor Policies in

Europe. IZA Journal of Labor Policy, 5(1), 1-30.

Carcillo, S., Fernández, R., Königs, S., and Minea, A. (2015). NEET Youth in the Aftermath of the Crisis: Challenges and Policies. OECD Social, Employment and Migration Working Papers, No. 164. OECD Publishing, Paris.

Card, D., and Lemieux, T. (2000). Adapting to Circumstance: The Evolution of Work, School and Living Arrangements among North American Youth. In: Blanchflower D. and Freeman E. (eds.), Youth Employment and Joblessness in Advanced Countries, University of Chicago Press and NBER, Chicago, IL.

Caroleo, F.E., and Pastore, F. (2007). The Youth Experience Gap: Explaining Differences across EU Countries. No. 41, Quaderni del Dipartimento di Economia, Finanza e Statistica, Universita di Perugia, Perugia.

Choudhry, M.T., Marelli, E., and Signorelli, M. (2012). Youth Unemploymen Rate and Impact of Financial Crises. International Journal of Manpower, 33(1), 76-95.

Clark, D. (2011). Do Recessions Keep Students in School? The Impact of Youth Unemployment on Enrolment in Post-compulsory Education in England. Economica, 78(311), 523-545.

Crépon, B., Duflo, E., Gurgand, M., Rathelot, R., and Zamora, P. (2013). Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Experiment. Quarterly Journal of Economics, 128(2), 531-580.

Decker, P.T., Olsen, R.B., Freeman, L., and Klepinger, D.H. (2000). Assisting Unemployment Insurance Claimants: The Long-Term Impacts of the Job Search Assistance Demonstration. No. 8170-800. Princeton, NJ: Mathematica Policy Research.

Engström, P., Hesselius, P., and Homelund, B. (2012). Vacancy Referrals, Job Search, and the Duration of Unemployment: A Randomized Experiment. Labour, 26(4), 419-435.

Flores, C., Flores-Lagunes, A., Gonzalez, A., and Neumann, T. C. (2012). Estimating the Effects of Length of Exposure to Instruction in a Training Program: The Case of Job Corps. The Review of Economics and Statistics, 94(1), 153-171.

Giuliano, P., and Spilimbergo, A. (2009). Growing Up in a Recession: Beliefs and the Macroeconomy. NBER Working Paper No. 15321.

Goldsmith, A.J., Veum, J.R., and Darity, W. Jr. (1997). Unemployment, Joblessness, Psychological Well-being and Self-esteem: Theory and Evidence. The Journal of Socio-Economics, 26, 133–158.

Graversen, B.K., and van Ours, J.C. (2008). How to Help Unemployed Find Jobs Quickly: Experimental Evidence from a Mandatory Activation Program. Journal of Public Economics, 29(10-11), 2020-2035.

Gregg, P. (2001). The Impact of Youth Unemployment on Adult Unemployment in the NCDS. The Economic Journal, 11(475), 626-653.

Gregg, P., and Tominey, P. (2005). The Wage Scar from Male Youth Unemployment. Labour Economics, 12(4), 487-509.

Hägglund, P. (2014). Experimental Evidence from Active Placement Efforts among Unemployed in Sweden. Evaluation Review, 38(3), 191-216.

Heckman, J.J., LaLonde, R., and Smith, J.A. (1999). The Economics and Econometrics of Active Labor Market Programs. In Ashenfelter O., and Card, D., Handbook of Labor Economics. New York: Elsevier.

Heinrich, C.J., Mueser, P.R., and Troske, K.R. (2008). Workforce Investment Act Non-Experimental Net Impact Evaluation: Final Report. IMPAQ International, December 2008.

Kahn, L.B. (2010). The Long-Term Labor Market Consequences of Graduating from College in a

Bad Economy. Labour Economics, 17(2), 303-316.

Klepinger, D.H., Johnson, T.R., and Joesch, J.M. (2002). Effects of Unemployment Insurance Work-Search Requirements: The Maryland Experiment. Industrial Relations and Labor Review 56(1), 3-22.

Korpi, T. (1997). Is Utility Related to Employment Status? Employment, Unemployment, Labor Market Policies and Subjective Well-Being among Swedish Youth. Labour Economics, 4(2), 125-147.

Lazear, E. P. (1990). Job Security Provisions and Employment. Quarterly Journal of Economics, 58(4), 757-82.

Maibom, J., Rosholm, M., and Svarer, M. (2014). Can Active Labour Market Policies Combat Youth Unemployment? IZA Discussion Paper No. 7912.

Manoli, D.S., Michaelides, M., and Patel, A. (2018). Long-Term Effects of Job-Search Assistance: Experimental Evidence Using Administrative Tax Data. NBER Working Paper No. 24422.

Marchand, O. (1999). Youth Unemployment in OECD Countries: How Can the Disparities Be Explained? In: Organisation for Economic Co-operation and Development (ed.): WPRSaring Youth for the 21st Century: The Transition from Education to the Labour Market. Paris: OECD.

Martin, Gary (2009). A Portrait of the Youth Labor Market in 13 Countries, 1980–2007. Monthly Labor Review, July 2009, 3–21.

Meyer, B. (1995). Lessons from the U.S. Unemployment Insurance Experiments. Journal of Economic Literature, 33(1), 91-131.

Michaelides, M., and Mueser, P. (2018). Are Reemployment Services Effective? Experimental Evidence from the Great Recession. The Journal of Policy Analysis and Management, 37(3):

546-570.

Michaelides, M., and Mueser, P. (forthcoming). The Labor Market Effects of U.S. Reemployment Policy: Lessons from an Analysis of Four Programs during the Great Recession. The Journal of Labor Economics.

Micklewright, J., and Nagy, G. (2010). The Effect of Monitoring Unemployment Insurance Recipients on Unemployment Duration: Evidence from a Field Experiment. Labour Economics 17(1), 180-187.

Mroz, T.A., and Savage, T.H. (2006). The Long-Term Effects of Youth Unemployment. The Journal of Human Resources, 45(2), 772-808.

Narayan, P.K., and Smyth, R. (2004). Crime Rates, Male Youth Unemployment and Real Income in Australia: Evidence from Granger Causality Tests. Applied Economics, 36, 2079-2095.

Nickell, S. (1997). Unemployment and Labor Market Rigidities: Europe versus North America. Journal of Economic Perspectives, 11(3), 55-74

Organisation for Economic Co-operation and Development. (2016). Society at a Glance 2016: OECD Social Indicators. OECD Publishing, Paris.

Orr, L., Bloom, Howard, S., Bell, S.H., Doolittle, F., Lin, W., and Cave, G. (1996). Does Training for the Disadvantaged Work? Evidence from the National JTPA Study. Washington, D.C.: Urban Institute Press.

Pagés, C., and Montenegro C. E. (2007). Job Security and the Age-Composition of Employment: Evidence from Chile. Estudios de Economia, 34(2), 109-139.

Poe-Yamagata, E., Benus, J., Bill, N., Michaelides, M., and Shen, T. (2012). Impact of the Reemployment and Eligibility Assessment (REA) initiative. ETA Occasional Paper 2012-08. Washington, DC: U.S. Department of Labor.

Quintini, G., and Martin, S. (2006). Starting Well or Losing their Way? The Position of Youth in the Labour Market in OECD Countries. OECD Social, Employment and Migration Working Papers, No. 39. OECD Publishing, Paris.

Robson, K. (2010). The Afterlife of NEETs. In: Attewell, P., and Katherine, N.S. (eds.): Growing Gaps: Educational Inequality Around the World. Oxford University Press, Oxford, UK.

Scarpetta, S., Sonnet, A., and Manfredi, T. (2010). Rising Youth Unemployment During the Crisis: How to Prevent Negative Long-term Consequences on a Generation? OECD Social, Employment and Migration Working Papers, No. 106.

Schochet, P.Z., Burghardt, J., and McConnell, S. (2008). Does Job Corps Work? Impacts Findings from the National Job Corps Study. American Economic Review, 95(5),1864-1886.

Trutko, J., and Barnow, B. (2013) Challenges and Accomplishments: States' Views. In The American Recovery and Reinvestment Act: The Role of Workforce Programs. Kalamazoo, MI: Upjohn Institute.

U.S. Department of Labor (2005), OPA News Release, No. 05-0343-NAT, March 2005.

Verick, S. (2009). Who is Hit Hardest During a Financial Crisis? The Vulnerability of Young Men and Women to Unemployment in an Economic Downturn. IZA Discussion Paper No. 4359.

Verick, S. (2011). Who is Hit Hardest during a Financial Crisis? The Vulnerability of Young Men and Women to Unemployment in an Economic Downturn. In: From the Great Recession to Labour Market Recovery: Issues, Evidence and Policy Options, ed. by Islam I., and Verick. S., ILO/Palgrave Macmillan.

Wandner, S.A. (2010). Solving the Reemployment Puzzle: From Research to Policy. W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan.

Wander, S.A., and Eberts, R.W. (2014). Public Workforce Programs during the Great Recession.

Monthly Labor Review, 137, 1-18.

Zhang, J., Rubin, D., and Mealli, F. (2012). Likelihood-Based Analysis of Causal Effects of Job Training Programs Using Principal Stratification. Journal of the American Statistical Association, 104(485),166-176.

Table 1: Characteristics of Youth UI Recipients
Eligible for Job Search Assistance Programs

| | Florida | Idaho | Nevada |
|---|---|---|---|
| Sample Size | 6,524 | 1,956 | 2,767 |
| PREP | 0.322 | -- | -- |
| REA | 0.398 | 0.785 | 0.162 |
| Control | 0.281 | 0.215 | 0.838 |
| Female | 0.447 | 0.344 | 0.436 |
| White | 0.553 | 0.797 | -- |
| Black | 0.215 | 0.006 | -- |
| Other race | 0.232 | 0.198 | -- |
| Hispanic | 0.099 | 0.156 | 0.261 |
| Disabled | 0.013 | 0.032 | 0.063 |
| No high school diploma | 0.124 | 0.146 | 0.216 |
| High school diploma | 0.713 | 0.496 | 0.535 |
| Some college/college degree | 0.162 | 0.358 | 0.249 |
| White collar, high skill† | 0.200 | 0.096 | 0.090 |
| White collar, low skill | 0.386 | 0.235 | 0.428 |
| Blue collar, high skill | 0.260 | 0.300 | 0.258 |
| Blue collar, low skill | 0.154 | 0.369 | 0.224 |

*Note:* Reported are sample proportions.
† Occupation of prior employment: *White collar, high skill* includes management, healthcare practitioner, business and financial, computer and mathematical, architecture and engineering, and life, physical and social science, and legal occupations; *white collar, low skill* includes office and administrative support, sales, education, training, and library, healthcare support, arts and entertainment, and community and social services occupations; *blue collar, high skill* includes production, transportation, installation, maintenance, and repair, protective services, and military occupations; and *blue collar low skill* includes construction and extraction, food preparation and serving, building cleaning and maintenance, personal care and services, and agricultural occupations.
*Source*: State UI claims data.

Table 2: Prior Earnings and UI Eligibility of Youth UI Recipients
Eligible for Job-Search Assistance Programs

| | Florida | Idaho | Nevada |
|---|---|---|---|
| Prior earnings | | | |
| Quarter 1 prior to entry | 3,945 (2,754) | 4,183 (3,242) | 4,247 (3,404) |
| Quarter 2 prior to entry | 3,994 (2,635) | 3,568 (2,698) | 4,133 (3,229) |
| Quarter 3 prior to entry | 3,973 (2,686) | 3,063 (2,849) | 3,954 (3,230) |
| Quarter 4 prior to entry | 3,723 (2,821) | 3,597 (2,832) | 3,861 (3,356) |
| Quarter 5 prior to entry | 3,361 (2,760) | 4,086 (3,392) | 3,765 (3,400) |
| Quarter 6 prior to entry | 3,033 (2,821) | 2,754 (2,722) | 3,037 (3,133) |
| Quarter 7 prior to entry | 2,765 (2,732) | 2,316 (2,525) | 2,789 (3,233) |
| Quarter 8 prior to entry | 2,615 (2,708) | 2,527 (2,631) | 2,579 (3,010) |
| Regular UI weeks eligibility | 19.7 (4.8) | 18.6 (5.5) | 21.3 (4.8) |
| Regular UI cumulative entitlement ($) | 3,889 (1,954) | 3,817 (2,154) | 4,952 (2,718) |
| EUC weeks eligibility | 40.2 (9.8) | 37.9 (11.2) | 43.3 (9.9) |
| EUC cumulative entitlement ($) | 7,932 (3,994) | 7,785 (4,389) | 10,048 (5,472) |
| EB weeks eligibility | 13.9 (4.5) | 14.5 (4.3) | 16.5 (3.8) |
| EB cumulative entitlement ($) | 2,720 (1,486) | 2,978 (1,678) | 3,818 (2,071) |
| Total weeks eligibility | 73.8 (17.5) | 71.0 (20.9) | 81.1 (18.5) |
| Total cumulative entitlement ($) | 14,541 (7,246) | 14,579 (8,219) | 18,817 (10,259) |

*Note:* Reported are sample means with standard deviations in parentheses.
*Source*: State UI claims data (UI eligibility measures); State UI wage records (prior earnings).

Table 3: Meeting Schedule, Completions, and Disqualifications for Program Cases

| | Florida PREP | Florida REA | Idaho REA | Nevada REA |
|---|---|---|---|---|
| Total | 2,099 | 2,595 | 1,535 | 447 |
| UI week 1 | -- | -- | -- | -- |
| 2 | 13 (1%) | 35 (1%) | -- | 98 (22%) |
| 3 | 39 (2%) | 66 (2%) | -- | 142 (32%) |
| 4 | 797 (38%) | 990 (38%) | -- | 99 (22%) |
| 5 | 848 (40%) | 978 (38%) | -- | 67 (15%) |
| 6 | 402 (19%) | 526 (20%) | 184 (12%) | 27 (6%) |
| 7 | -- | -- | 92 (6%) | 9 (2%) |
| 8 | -- | -- | 21 (1%) | 5 (1%) |
| 9 | -- | -- | 7 (<1%) | -- |
| 10 | -- | -- | 4 (<1%) | -- |
| Completions | 1,370 (65%) | 2,309 (89%) | N/A | 389 (87%) |
| Disqualifications | | | | |
| No-shows | -- | 19 (0.7%) | 18 (1.2%) | 5 (1.1%) |
| Ineligibles | -- | 11 (0.4%) | 8 (0.5%) | 2 (0.4%) |
| Total | -- | 30 (1.1%) | 26 (1.7%) | 7 (1.5%) |

*Note:* Reported is the number of program cases with sample proportion in parentheses. For Florida and Idaho, the dates specify the original scheduled meetings, so for meetings that were postponed, we do not have dates when the meeting actually occurred. For Nevada, the dates include postponements, so the date indicates when the meeting occurred, or the final "missed" date.
*Source*: Employment service data.

Table 4: Service Take-Up Rates, Program vs. Control Group, Nevada REA

| | Program | Control | *Difference* |
|---|---|---|---|
| Any job-counseling service | 0.613 | 0.081 | *0.532 [0.019]*** |
| Work search plan | 0.515 | 0.050 | *0.465 [0.016]*** |
| Resume assistance | 0.248 | 0.021 | *0.228 [0.011]*** |
| Individual needs assessment | 0.293 | 0.032 | *0.262 [0.013]*** |
| Job referral | 0.169 | 0.033 | *0.136 [0.013]*** |
| Group orientation | 0.237 | 0.031 | *0.206 [0.013]*** |
| Job-search workshops | 0.098 | 0.009 | *0.089 [0.008]*** |

*Note:* Job-counseling services include: work search plan, resume assistance, individual needs assessment, and job referrals. They do not include group orientations, job-search workshops, and the eligibility review.
*** = treatment-control difference is statistically significant (p<.01).

*Source*: Nevada employment service data.

Table 5: Effects on Unemployment Insurance Receipt

| | Florida PREP | Florida REA | Idaho REA | Nevada REA |
|---|---|---|---|---|
| Weeks on UI | | | | |
| Regular | -0.07 (0.22)<br>[-1%] | -0.20 (0.23)<br>[-2%] | -0.90 (0.26)***<br>[-4%] | -2.06 (0.37)***<br>[-12%] |
| EUC | -1.05 (0.57)*<br>[-5%] | -1.68 (0.57)***<br>[-10%] | -0.76 (0.79)<br>[-4%] | -1.76 (0.94)*<br>[-13%] |
| Total† | -1.12 (0.73)<br>[-3%] | -1.88 (0.74)**<br>[-6%] | -1.67 (0.94)<br>[-4%] | -3.81 (1.16)***<br>[-12%] |
| Benefits Collected | | | | |
| Regular UI | -10 (55)<br>[-1%] | -31 (55)<br>[-2%] | -225 (66)***<br>[-4%] | -363 (105)***<br>[-8%] |
| EUC | -179 (123)<br>[-5%] | -325 (124)***<br>[-10%] | -150 (186)<br>[-4%] | -192 (238)<br>[-5%] |
| Total† | -168 (165)<br>[-3%] | -356 (166)**<br>[-6%] | -375 (225)*<br>[-4%] | -554 (304)*<br>[-7%] |
| Exhausted Regular UI | -0.028 (0.016)*<br>[-4%] | -0.026 (0.016)*<br>[-5%] | -0.055 (0.027)**<br>[-5%] | -0.136 (0.026)***<br>[-22%] |
| Collected EUC | -0.025 (0.016)<br>[-4%] | -0.035 (0.016)**<br>[-6%] | -0.048 (0.027)*<br>[-7%] | -0.104 (0.026)***<br>[-20%] |
| Exhausted EUC | -0.028 (0.013)**<br>[-14%] | -0.024 (0.013)*<br>[-12%] | 0.006 (0.017)<br>[+6%] | -0.112 (0.025)***<br>[-74%] |
| Cost per Participant | $21-34 | $54 | $12 | $201 |

*Note:* Average treatment effect with standard error in parentheses. Brackets identify the average treatment effect as a percentage of the control group mean. * p<0.1; ** p<0.05; *** p<0.01.

† Calculated as follows:

Florida PREP – lower bound: Wagner-Peyser grant amount in 2009 divided by the number of Wagner-Peyser participants in 2009; upper bound: Wagner-Peyser grant amount in 2009 divided by number of PREP participants.

Florida REA – REA grant amount in 2009 divided by the number of REA referrals in 2009.

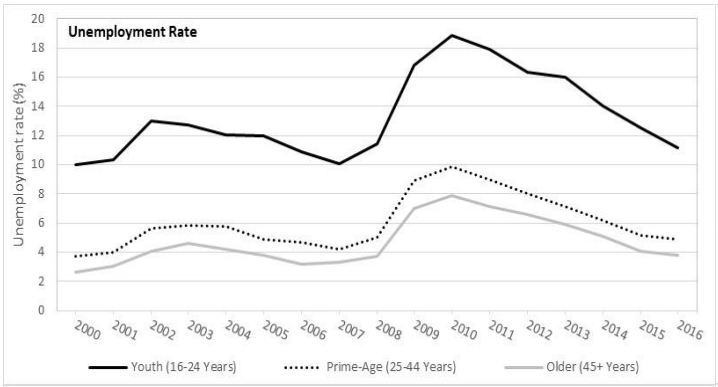
Nevada REA – REA grant amount plus Wagner-Peyser grant amount used to support the program in 2009 divided by the number of REA referrals in 2009.

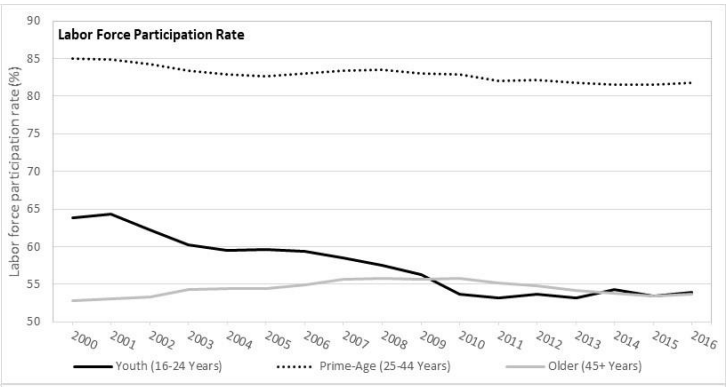
Table 6: Effects on Employment and Earnings

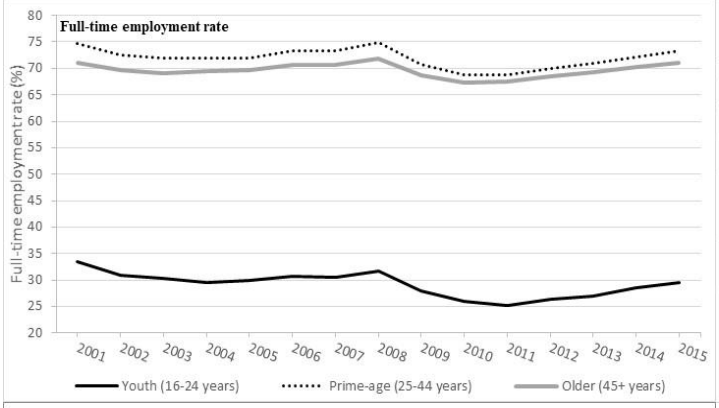
| | Florida PREP | Florida REA | Idaho REA | Nevada REA |
|---|---|---|---|---|
| Employed | | | | |
| Quarter 1 after entry | 0.006 (0.016)<br>[2%] | 0.003 (0.016)<br>[+1%] | 0.014 (0.027)<br>[+3%] | 0.106 (0.026)***<br>[+24%] |
| Quarter 2 after entry | 0.028 (0.017)*<br>[+7%] | 0.024 (0.017)<br>[+6%] | 0.035 (0.027)<br>[+6%] | 0.098 (0.026)***<br>[+20%] |
| Quarter 3 after entry | 0.026 (0.017)<br>[+6%] | 0.025 (0.017)<br>[+5%] | -0.015 (0.027)<br>[-2%] | 0.055 (0.026)**<br>[+10%] |
| Quarter 4 after entry | 0.024 (0.017)<br>[+5%] | 0.012 (0.017)<br>[+2%] | -0.019 (0.026)<br>[-3%] | 0.053 (0.025)**<br>[+9%] |
| Earnings | | | | |
| Quarter 1 after entry | -8 (60)<br>[-1%] | 7 (61)<br>[+1%] | -60 (85)<br>[-7%] | 214 (109)**<br>[+20%] |
| Quarter 2 after entry | -22 (81)<br>[-2%] | -33 (83)<br>[-2%] | 42 (119)<br>[+3%] | 414 (133)***<br>[+25%] |
| Quarter 3 after entry | 63 (81)<br>[+4%] | 54 (93)<br>[+3%] | -112 (174)<br>[-4%] | 510 (159)***<br>[+24%] |
| Quarter 4 after entry | -29 (109)<br>[-1%] | -128 (109)<br>[-6%] | -153 (154)<br>[-6%] | 416 (164)**<br>[+18%] |
| Total, quarters 1-4 | 21 (295)<br>[<1%] | -115 (299)<br>[-2%] | -283 (432)<br>[-4%] | 1,553 (460)***<br>[+22%] |

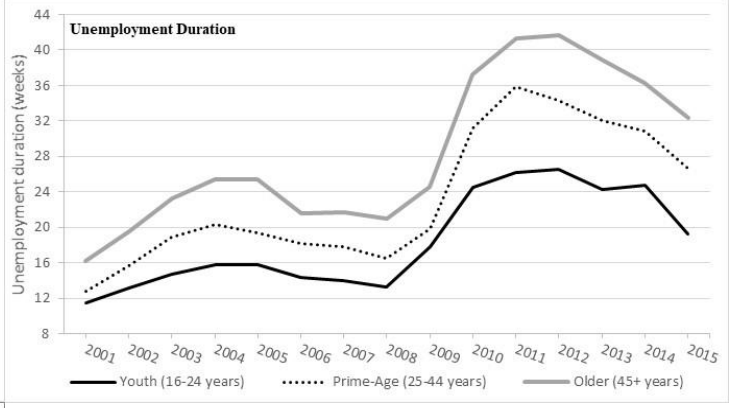
*Note:* Average treatment effect with standard error in parentheses. Brackets identify the average treatment effect as a percentage of the control group mean. * p<0.1; ** p<0.05; *** p<0.01.

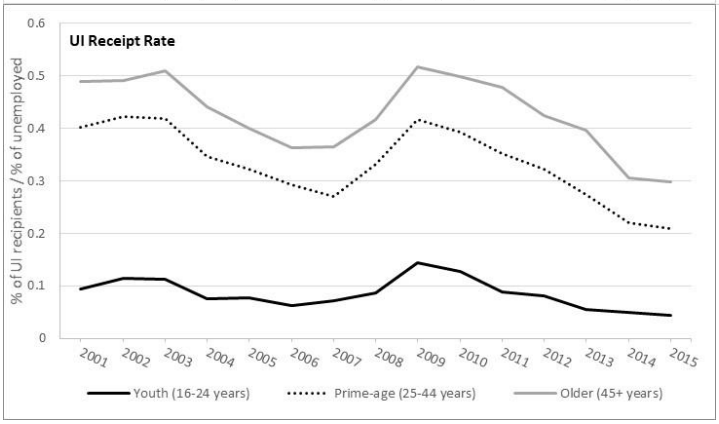
Figure 1: Youth Workers during the Great Recession



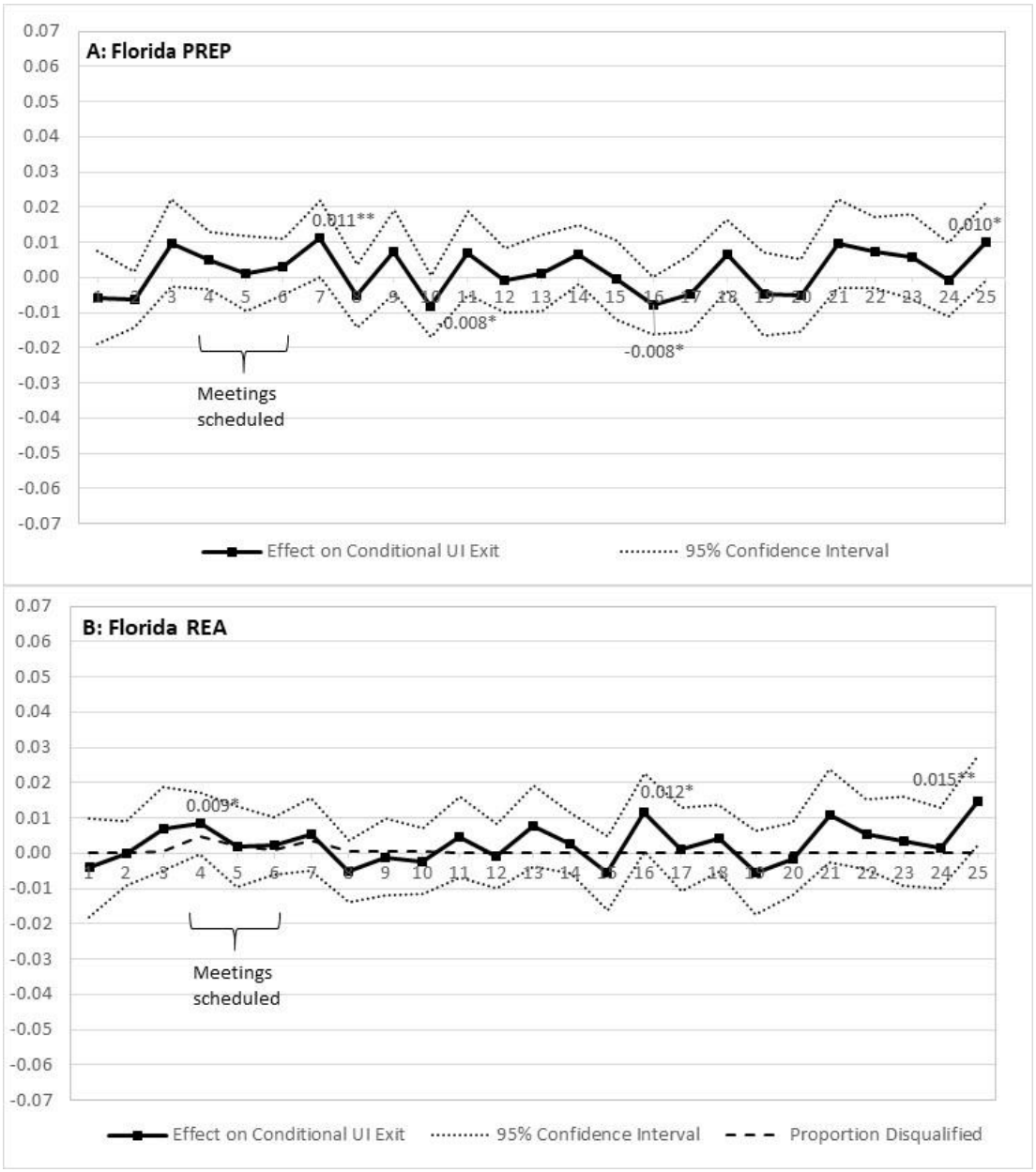



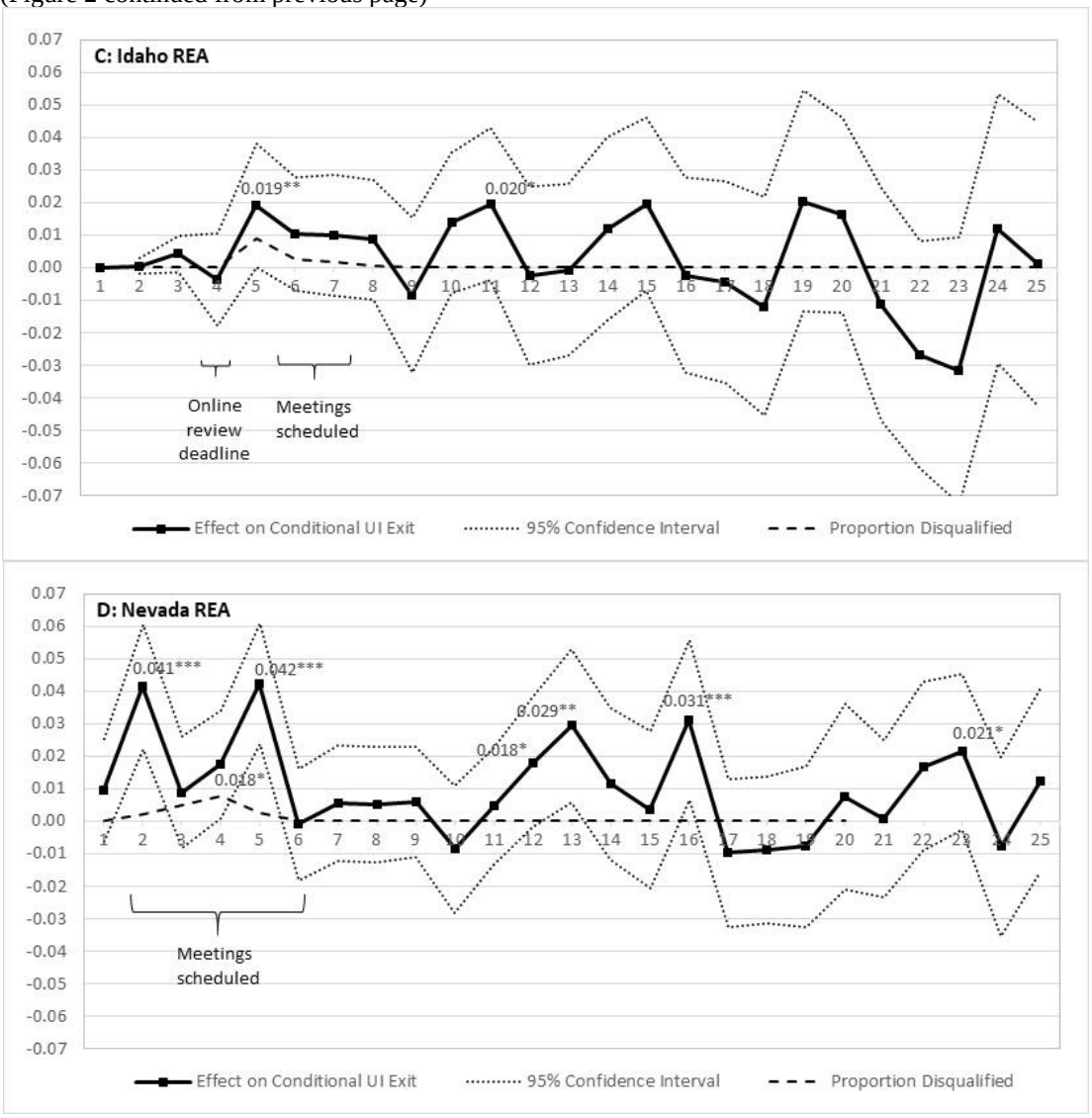

Note: Unemployment rate is the number of unemployed workers divided by the labor force. Labor force participation rate is the number of labor force participants divided by the population. Full-time employment rate is the proportion of employed workers who worked full time. Unemployment duration is the average number of weeks spent on unemployment among unemployed workers. UI receipt rate is the proportion of UI recipients divided by the proportion of unemployed workers. Sources: Authors' tabulations of the Current Population Survey (accessed at https://cps.ipums.org/cps/), except the proportion of UI recipients, which is based on U.S. Department of Labor's reports (https://oui.doleta.gov/unemploy/chariu.asp).

Figure 2: Program Effects on the UI Exit Likelihood




(Figure 2 continues on next page)

(Figure 2 continued from previous page)




*Note:* Program effect on the conditional probability of UI exit (solid line) and the 95 percent confidence interval (dotted lines). The dashed lines (Florida REA, Idaho REA, and Nevada REA) report the proportion of no-shows and ineligibles disqualified each week. * p<0.1; ** p<0.05; *** p<0.01.

Appendix Table A: Characteristics of Experienced Unemployed Youth in 2009

| | Florida | Idaho | Nevada | National |
|---|---|---|---|---|
| Female | 0.505 | 0.509 | 0.480 | 0.492 |
| White | 0.739 | 0.911 | 0.713 | 0.759 |
| Black | 0.166 | 0.010 | 0.064 | 0.109 |
| Other race | 0.095 | 0.079 | 0.223 | 0.132 |
| Hispanic | 0.227 | 0.128 | 0.308 | 0.163 |
| No high school diploma | 0.171 | 0.245 | 0.203 | 0.195 |
| High school diploma | 0.419 | 0.420 | 0.456 | 0.400 |
| Some college/college degree | 0.410 | 0.335 | 0.342 | 0.405 |
| White collar, high skill† | 0.052 | 0.056 | 0.058 | 0.060 |
| White collar, low skill | 0.460 | 0.377 | 0.438 | 0.428 |
| Blue collar, high skill | 0.146 | 0.158 | 0.169 | 0.167 |
| Blue collar, low skill | 0.342 | 0.409 | 0.335 | 0.346 |

*Note:* Reported are sample proportions. "Experienced unemployed youth includes unemployed workers under the age of 25 with prior employment experience.
† Occupation of prior employment. See Table 1.
*Source:* American Community Survey (accessed at https://usa.ipums.org/usa/).

Appendix Table B: Regression Results, Probability of Program Assignment

| | Florida PREP | Florida REA | Idaho REA | Nevada REA |
|---|---|---|---|---|
| Female | 0.027 (0.017) | 0.033 (0.015)** | 0.011 (0.022) | -0.002 (0.015) |
| White | -- | -- | -- | -- |
| Black | -0.009 (0.020) | 0.028 (0.018) | -0.143 (0.126) | -- |
| Other race | -0.002 (0.021) | -0.010 (0.017) | 0.016 (0.033) | -- |
| Hispanic | -0.012 (0.028) | -0.005 (0.023) | -0.037 (0.038) | 0.011 (0.016) |
| No high school diploma | -- | -- | -- | -- |
| High school diploma | -0.021 (0.024) | -0.021 (0.021) | -0.016 (0.029) | -0.008 (0.018) |
| Some college/college deg. | -0.070 (0.030)** | -0.041 (0.026) | -0.019 (0.031) | 0.075 (0.021)*** |
| Disabled | -0.038 (0.070) | -0.050 (0.058) | 0.026 (0.054) | 0.022 (0.029) |
| White collar, high skill | -- | -- | -- | -- |
| White collar, low skill | -0.008 (0.022) | -0.014 (0.019) | -0.014 (0.036) | -0.015 (0.026) |
| Blue collar, high skill | -0.020 (0.024) | -0.007 (0.021) | 0.008 (0.036) | 0.041 (0.027) |
| Blue collar, low skill | 0.003 (0.028) | 0.014 (0.024) | -0.030 (0.036) | -0.011 (0.028) |
| Prior earnings (in $000s) | | | | |
| Quarter 1 prior to entry | -0.0022 (0.0048) | -0.0002 (0.0041) | 0.0162 (0.0043)*** | 0.0016 (0.0029) |
| Quarter 2 prior to entry | 0.0008 (0.0060) | -0.0033 (0.0051) | -0.0153 (0.0058)*** | -0.0017 (0.0036) |
| Quarter 3 prior to entry | -0.0008 (0.0057) | -0.0005 (0.0048) | 0.0078 (0.0059) | 0.0008 (0.0037) |
| Quarter 4 prior to entry | -0.0023 (0.0049) | -0.0010 (0.0045) | 0.0029 (0.0054) | -0.0011 (0.0031) |
| Quarter 5 prior to entry | -0.0047 (0.0054) | -0.0002 (0.0049) | -0.0095 (0.0041)** | 0.0034 (0.0037) |
| Quarter 6 prior to entry | 0.0039 (0.0052) | 0.0039 (0.0050) | -0.0011 (0.0058) | -0.0011 (0.0034) |
| Quarter 7 prior to entry | 0.0003 (0.0056) | -0.0054 (0.0050) | 0.0032 (0.0068) | 0.0022 (0.0038) |
| Quarter 8 prior to entry | -0.0024 (0.0047) | -0.0014 (0.0041) | -0.0004 (0.0056) | 0.0039 (0.0034) |
| Observations | 3,944 | 4,443 | 1,956 | 2,767 |
| R-Squared | .1413 | .2328 | .0543 | .0684 |

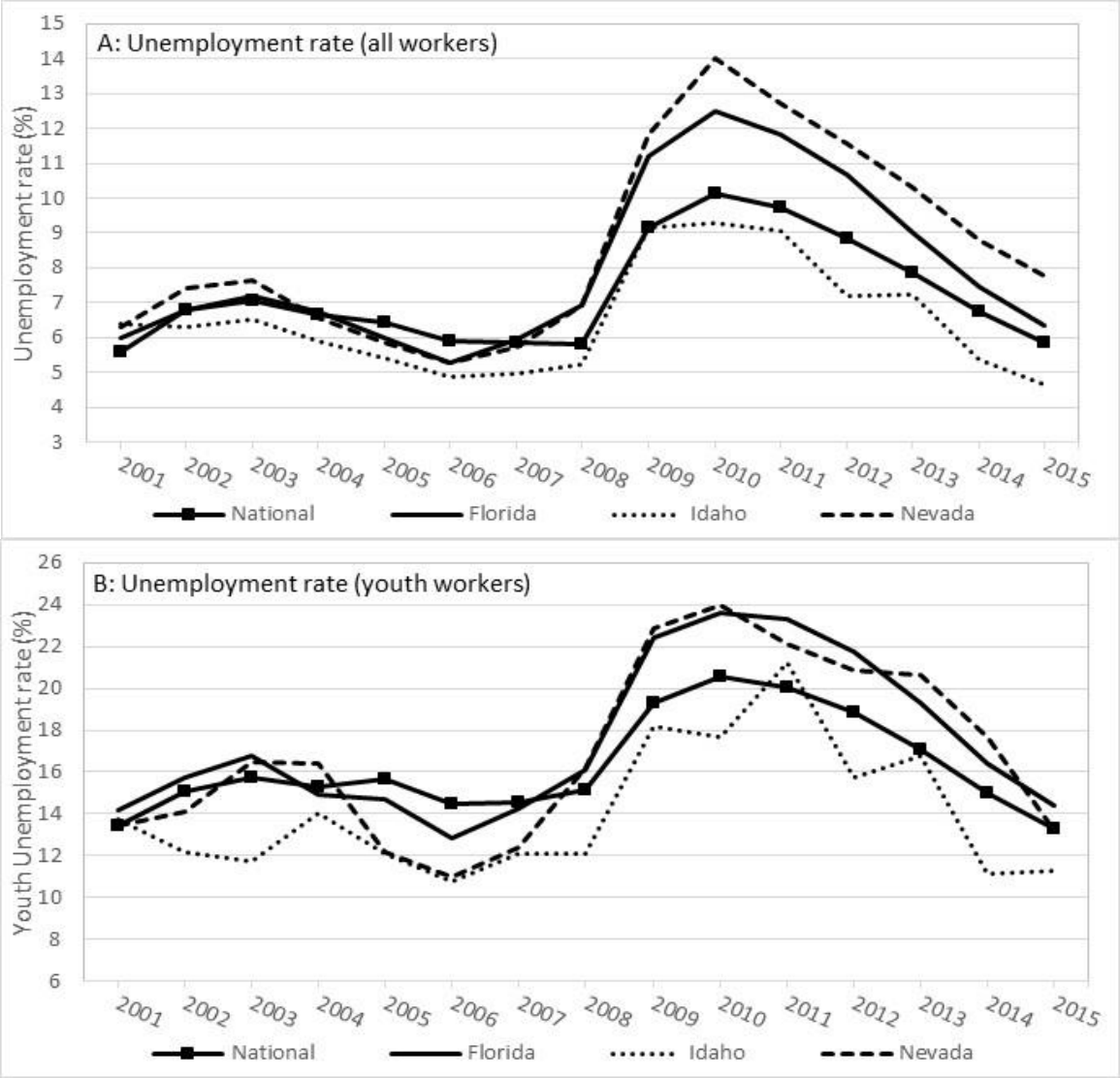
*Note:* Reported are estimated parameters with standard errors in parentheses. Also included but not reported are indicators for weeks of UI entitlement, week of UI entry, and workforce area. ** p<0.05; *** p<0.01.

Appendix Table C: UI Receipt, Employment, and Earnings of Control Cases

| | Florida | Idaho | Nevada |
|---|---|---|---|
| Weeks on UI | | | |
| Regular | 16.7 (7.3) | 16.26 (5.94) | 16.93 (7.65) |
| EUC | 18.4 (16.7) | 10.83 (14.66) | 14.01 (18.11) |
| Total† | 35.1 (21.9) | 27.10 (17.89) | 30.94 (22.19) |
| Benefits Collected | | | |
| Regular UI | 3,271 (2,091) | 3,346 (1,970) | 3,903 (2,725) |
| EUC | 3,560 (3,757) | 2,332 (3,516) | 3,186 (4,608) |
| Total† | 6,831 (5,365) | 5,678 (4,831) | 7,089 (6,421) |
| Exhausted Regular UI | 0.681 | 0.637 | 0.613 |
| Collected EUC | 0.668 | 0.470 | 0.513 |
| Exhausted EUC | 0.207 | 0.112 | 0.151 |
| Employed | | | |
| Quarter 1 after entry | 0.351 | 0.461 | 0.437 |
| Quarter 2 after entry | 0.399 | 0.570 | 0.496 |
| Quarter 3 after entry | 0.458 | 0.637 | 0.566 |
| Quarter 4 after entry | 0.503 | 0.658 | 0.588 |
| Earnings | | | |
| Quarter 1 after entry | 830 (1,739) | 909 (1,671) | 1,096 (2,066) |
| Quarter 2 after entry | 1,376 (2,502) | 1,624 (2,284) | 1,626 (2,521) |
| Quarter 3 after entry | 1,719 (2,729) | 2,546 (3,254) | 2,086 (2,969) |
| Quarter 4 after entry | 2,079 (3,527) | 2,501 (2,961) | 2,256 (3,072) |
| Total, quarters 1-4 | 6,004 (9,145) | 7,581 (8,401) | 7,064 (8,624) |

*Note:* Reported are sample proportions or sample means with standard deviations in parenthesis.
†Regular UI plus EUC; does not include EB.

Appendix Figure A: Unemployment Rates across Study States




Source: Authors' tabulations of the American Community Survey (accessed at https://usa.ipums.org/usa/)