UNEMPLOYMENT COMPENSATION DURING THE GREAT RECESSION: THEORY AND EVIDENCE

Walter Nicholson, Karen Needels, and Heinrich Hock

The extreme labor market weakness during and after the Great Recession led to the passage of extensive federal legislation related to unemployment compensation. In this paper, we summarize that legislation and some of the research related to it. Although our particular focus is on the very long potential durations of benefits (up to 99 weeks) initially implemented in 2008–2009, we also look at a variety of other initiatives. Most of the research we review comes from the United States. But we also provide a brief look at the vast European literature that addresses many of the same policy issues.

Keywords: unemployment compensation, unemployment insurance, Great Recession, federal policy

JEL Codes: J64, J65, J68

I. INTRODUCTION

The U.S. system of unemployment compensation (UC)\(^1\) underwent many important changes during the Great Recession. Most were intended to reduce the economic burden created by the long durations of unemployment being experienced by unemployed workers and to speed these workers’ return to work. Perhaps the most significant innovation was the lengthy extension of the duration over which individuals could collect benefits — in some cases providing up to 99 weeks of benefits in total. This extension is the primary focus of our examination, but we also look at the many other changes in UC policy made in response to the recession. Our review of these policy initiatives

\(^1\) Throughout our discussion we use UC to refer to the overall system of unemployment compensation, reserving the term “unemployment insurance” to refer specifically to the federal-state programs that provide entry into the system and, generally, the first 26 weeks of benefits.

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examines how they might have affected unemployed workers, the overall fiscal status of state trust funds for benefits, and the wider macroeconomy.

The paper is divided into eight main sections. Section II sets the stage for our discussion by describing the basic labor market environment during the Great Recession and detailing the wide variety of UC-related policies implemented. Section III reviews the theoretical literature on UC. This review shows how researchers have conceptualized the notion of an “optimal” system of UC and summarizes how researchers have described the ways in which UC might be optimally adjusted during recessions. Sections IV and V examine empirical research on the UC program, emphasizing recent attempts to assess the impact of the policy changes on UC durations, the behavior of workers and firms (Section IV), and the entire economy (Section V). Financing issues are addressed in Section VI, with primary attention given to recent problems being experienced by states’ unemployment insurance (UI) trust funds and how those problems may be related both to the state of the labor market and to federal policy initiatives. Section VII looks at interactions between UC and other labor market programs. Finally, Section VIII offers a few conclusions about overall UC experiences during the Great Recession.

II. THE 2007–2009 RECESSION AND POLICY RESPONSES

Perhaps the most significant feature of what is called the “Great Recession,” which officially lasted from December 2007 to June 2009, was the poor performance of the labor market. For example, the unemployment rate reached 10.0 percent in October 2009, the highest rate since 1983. At 18 months, this recession was the longest-lasting since the Great Depression. However, a potentially even more important feature from a policy perspective is the anemic (often called “jobless”) recovery long after the recession’s official end. Notably, the unemployment rate has continued to remain high: during the first two years after the recession’s end, the unemployment rate never dipped below 8.9 percent, and it remained at or above 7.4 percent as of July 2013, more than four years after the official end of the recession. In addition, a high proportion of unemployed workers have experienced very long unemployment spells. The average (mean) duration of unemployment in 2011 and 2012 was greater than 39 weeks, more than double the 18-week average durations that prevailed in 2007 and 2008. As of September 2013, the number of long-term unemployed (those jobless for 27 weeks or more) also remained high, at about 4 million, representing about 38 percent of the unemployed. Such poor labor market performance has led to major concerns among both policymakers and the public at large about the detrimental effects of both the unemployment rate and the proportion of unemployed workers who have been unemployed for such a long period of time. These concerns led to a wide variety of UC policy initiatives.

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A. Overview of the Unemployment Compensation System

Founded in the 1930s as a federal-state partnership, the UC program has three interrelated goals: (1) to help alleviate the detrimental financial effects of unemployment on workers who have lost jobs through no fault of their own, (2) to support the job search efforts of unemployed workers, and (3) to provide a countercyclical influence to the economic downturn. Historically, during healthy economic times, the “regular UI” program has offered eligible claimants up to 26 weeks of benefits, although workers with a lower level of recent prior earnings may be eligible for fewer weeks. Weekly benefit amounts (WBAs) typically are about 40 to 50 percent of a worker’s previous weekly earnings, subject to minimum and maximum amounts. Offering a maximum potential duration of benefits is intended to strike a balance between providing temporary income support to unemployed workers and mitigating the potential for inducing benefit recipients to delay their return to work.

However, because the risk of long-term unemployment increases during economic downturns, two types of UC benefits programs in addition to regular UI are typically available during these periods: Extended Benefits (EB) and emergency benefits. Each program provides additional weeks of benefits — typically with the same WBA as through regular UI — to unemployed workers who have exhausted their entitlements to regular UI benefits. Providing additional weeks of benefits during economic downturns is conceptually consistent with the view of UC benefits as insurance because the greater risk of long-term unemployment during a downturn is cushioned by the additional financial support provided by the benefits (Nicholson and Needels, 2006).

The EB program is a permanent feature of UC laws, although the details of the program have varied substantially over the decades since it was established in 1970. However, for several decades prior to the Great Recession, EB benefits were (at least conceptually) made available to unemployed workers who (1) exhausted their entitlements to regular UI benefits, and (2) were in a state that had an unemployment rate both above a certain threshold and at least a certain amount higher than the state’s recent historical levels. That is, without the need for new legislation, a state could automatically “trigger on” or “trigger off” the EB program based on its unemployment rate. One measure of the unemployment rate used to determine whether a state would trigger on or off EB is the insured unemployment rate (IUR), which is based on data collected weekly by the UC system (Nicholson and Needels, 2004). However, for EB triggering purposes, states also have had the option of using the total unemployment rate (TUR). Based on data developed by the Bureau of Labor Statistics, the TUR is a broader measure of unemployment because it includes all workers who do not have a job and are actively seeking work, regardless of whether they are collecting UI benefits. The EB program currently can provide either 13 or 20 weeks of benefits, depending on the specific unemployment rates within a state. Historically, states and the federal government have shared the costs of EB benefits equally.

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4 Each state operates a regular UI program within certain broad parameters established by the federal government. Given this flexibility, some states offer fewer weeks of benefits to workers with lower prior earnings.
The importance of the EB program in practical terms has declined significantly in recent decades. Although it was heavily used when the labor market was weak in the 1970s, it was used considerably less during the 1980s and almost not at all during the economic downturns in the early 1990s and early 2000s. In essence, the EB program was dormant for about two decades prior to the start of the Great Recession, potentially because of a secular decline in the IUR and a desire by some states to avoid having to pay for half of the costs of the program (Nicholson and Needels, 2011).

In each recession in the past 50 years, additional programs have been enacted through Congressional legislation on an emergency basis. In contrast to the EB program, these emergency benefits programs are enacted for specific periods of time, have defined expiration dates, and are fully financed by the federal government. The details of each program have been quite complex; generally, though, some benefits are made available to UC-eligible unemployed workers in every state, regardless of the state’s unemployment rate. Unemployed workers in states that have higher unemployment rates are typically eligible for more weeks of benefits through the emergency program than are similar unemployed workers in states with lower unemployment rates.

B. UC Program Responses to the Great Recession and Weak Labor Market

Federal legislative changes to the UC system in response to the Great Recession were widespread. Between June 2008 and January 2013, 12 pieces of federal legislation contained provisions to strengthen the UC program’s ability to provide temporary financial support to unemployed workers. All legislation included provisions related to emergency unemployment benefits, but some were much more comprehensive in their reforms to the UC system (Whittaker and Isaacs, 2013). Four of the most sweeping enactments were (1) the Emergency Unemployment Compensation Act of 2008 (EUC08); (2) the American Recovery and Reinvestment Act (ARRA); (3) the Worker, Homeowner, and Business Assistance Act of 2009; and (4) the Middle Class Tax Relief and Job Creation Act of 2012. Some details of these acts are summarized in Table 1. In this section, we discuss some, but by no means all, of the most prominent UC-related components of this series of legislation.5

1. The Emergency Unemployment Compensation Program

The June 2008 enactment of the EUC08 program initially provided up to 13 weeks of federally financed benefits to UI claimants who had collected all of (“exhausted”) their regular UI entitlements after passage of the legislation as well as some who had

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5 For example, the Middle Class Tax Relief and Job Creation Act of 2012 also had provisions pertaining to self-employment, demonstration projects to expedite reemployment, and new requirements for work search (“Middle Class Tax Relief and Job Creation Act of 2012 P.L. 112-96, enacted February 22, 2012.” U.S. Department of Labor, Employment and Training Administration, http://www.ows.doleta.gov/unemploy/jobcreact.asp).
Table 1
Major Components of Recent Federal UC-Related Legislation

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Date Signed</th>
<th>Major Components</th>
</tr>
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<tbody>
<tr>
<td>The Emergency Unemployment Compensation Act of 2008</td>
<td>June 30, 2008</td>
<td>Established the EUC08 (emergency benefits) program. Provided 13 weeks of federally financed benefits to eligible unemployed workers in all states.</td>
</tr>
<tr>
<td>The American Recovery and Reinvestment Act</td>
<td>February 17, 2009</td>
<td>Continued the EUC08 program, which had been expanded in November 2008, to provide 20 weeks of tier 1 benefits to all states and 13 additional weeks of tier 2 benefits in states where the TUR was at least 6% or the IUR was at least 4%. Offered 100% federal financing of EB benefits. Established the Federal Additional Compensation program. Exempted the first $2,400 of UC from federal income taxes. Offered financial incentives to states to encourage adoption of permanent changes to increase access to and benefit generosity in the regular UI programs.</td>
</tr>
<tr>
<td>The Worker, Homeowner, and Business Assistance Act of 2009</td>
<td>November 6, 2009</td>
<td>Expanded EUC08 to provide up to 53 weeks of benefits: 20 weeks to all states (tier 1), 14 weeks to all states (tier 2), 13 weeks in states with TURs at least 6% or IURs of at least 4% (tier 3), and 6 weeks in states with TURs at least 8.5% or IURs of at least 6% (tier 4).</td>
</tr>
<tr>
<td>The Middle Class Tax Relief and Job Creation Act of 2012</td>
<td>February 22, 2012</td>
<td>Continued but scaled down the EUC08 program over time, reducing it to a maximum of 47 weeks across all four tiers. Required recipients of tier 1 and tier 2 benefits to participate in certain reemployment service and benefit eligibility activities.</td>
</tr>
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</table>

Notes: The table provides an overview of some of the major components of recent federal UC-related legislation. It is not intended to be comprehensive in either the list of legislation or the components of the legislation included in the table.
Source: Whittaker and Isaacs (2012)
exhausted their entitlements shortly before the legislation was passed. The program grew significantly through additional legislation; most importantly, ARRA passed in February 2009, and in November 2009 the Worker, Homeowner, and Business Assistance Act expanded EUC08 to contain four tiers of benefits representing increasingly longer potential durations during which UC recipients could claim benefits. As of November 2009, the maximum number of weeks of EUC08 benefits available to a claimant was 53. An unemployed worker’s total entitlement to benefits through the regular UI, EB, and EUC08 programs depended both on the economic conditions within a state and his or her exhaustion of entitlements to earlier tiers of benefits. In the most generous situation, a worker could collect up to 99 weeks of benefits through the three UC programs (using 26, 53, and 20 weeks of regular UI, EUC08, and EB benefits, respectively). Claimants who were not eligible for 26 weeks of regular UI benefits had their weeks of eligibility for each tier of EUC08 benefits reduced proportionately.

The termination date for the EUC08 program was extended frequently between 2008 and 2013 because of the weak labor market. On several occasions, gaps in coverage that arose after the EUC08 program expired were averted through retroactive implementation of a program extension. In January 2013, the EUC08 program was extended to January 1, 2014.6 Unless additional legislation extends the program, individuals who have not collected their full EUC08 entitlements by this date will lose their entitlement to benefits they have not yet received.

From June 2008 through July 2013, more than $222 billion in benefits was paid through this program to long-term unemployed workers, with more than $70 billion during 2010 alone.7 These benefits were paid on claims arising from more than 23 million entries into the EUC08 program (technically, these were the first payments made for tier 1 benefits). Although Table 2 provides a few summary measures of the EUC08 program and some of the other UC-related programs and initiatives, final statistics on expenditures and claims for the EUC08 program will not be available until after the program expires.

2. The EB Program

In addition to expanding the EUC08 program, the ARRA also changed the permanent EB program to make it more appealing to states (Nicholson and Needels, 2011). ARRA allowed the federal government to pay for all EB benefits’ costs rather than only half. In addition, ARRA permitted states to adopt the TUR trigger to determine eligibility for EB even if a state wanted to use this trigger only during the period of 100 percent federal financing. As a result of these changes, benefits paid under the EB program

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### Table 2

**Key Statistics Related to the UC Program and Recent Federal Legislation**

<table>
<thead>
<tr>
<th>Pattern, Program, or Policy</th>
<th>Key Statistics</th>
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<tbody>
<tr>
<td>Regular UI program</td>
<td>Payments were about $32 billion in 2007, rose to about $79 billion in 2009, and declined to about $43 billion in 2012.</td>
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<tr>
<td>EUC08 program</td>
<td>From June 2008 through July 2013, more than $222 billion in benefits were paid, with more than $70 billion in payments during 2010 alone. The benefits were paid based on more than 23 million entries to the EUC08 program (technically, first payments made for tier 1 benefits).</td>
</tr>
<tr>
<td>EB program</td>
<td>Between July 2008 and July 2013, nearly $30 billion in benefits were paid on weekly claims associated with more than 6 million first payments. Forty-two of the 53 UI jurisdictions had triggered onto EB for at least a portion of time.</td>
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<tr>
<td>FAC</td>
<td>About $19 billion was paid.</td>
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<tr>
<td>ARRA modernization incentives</td>
<td>About $4.4 billion of the available $7.0 billion in incentive funds was paid by the federal government to states; 36 of the 53 UI jurisdictions received all of their available modernization incentive funds, and another 5 received one third of their potential funds.</td>
</tr>
<tr>
<td>Patterns in state borrowing due to trust fund shortfalls</td>
<td>Since 2008, 36 of the 53 UI jurisdictions have borrowed from the federal government; 30 states with outstanding federal loans as of April 12, 2012, owed more than $41 billion.</td>
</tr>
</tbody>
</table>

**Notes:** The table provides an overview of some of the key statistics about recent federal UC-related legislation. In some cases, final statistics are not yet available.

**Sources:**
- Information about the ARRA modernization incentives is from Barnow et al. (2012). Information about state borrowing and UI trust fund shortfalls is available from Vroman (2012).
expands significantly beginning in the second quarter of 2009. Between July 2008 and July 2013, nearly $30 billion was paid through the EB program (on weekly claims associated with more than 6 million first payments). During this period, 42 of the 53 UI jurisdictions (the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands) triggered on to EB for at least a portion of time; however, almost all of these states triggered off of EB by mid-2012.9

3. Additional Provisions to Boost the Generosity of, or Expand Access to, the UC Program

ARRA also contained other provisions relating to the UC system. Generally, these provisions were intended to boost the program’s generosity to recipients or to expand the types of unemployed workers eligible for benefits. One was a temporary increase of $25 per week (called Federal Additional Compensation, or FAC) for all UC recipients; the FAC was in effect from February 2009 through December 2010. FAC benefits paid totaled almost $20 billion.10 Another provision, which was effective for calendar year 2009 only, exempted the first $2,400 in UC benefits from federal income taxation.

ARRA also included a set of financial incentives, collectively called the “modernization provisions,” to encourage states to adopt provisions that would permanently expand access to or increase the generosity of their regular UI programs. The federal government offered each state a portion of $7.0 billion, in proportion to its share of UC-taxable wages nationally. States could collect one third of their allocated share of incentive funds for adopting (or already having in place) an alternate base period (ABP). (A base period is the four-quarter period prior to a UI claimant’s application for benefits upon which his or her prior eligibility for benefits is based; using an ABP could expand eligibility and increase benefit generosity for some types of workers.) States could collect the full amount of their allocated share of the incentive funds if along with an ABP they adopted two of four other provisions that expanded access to benefits for certain types of unemployed workers or increased the amount of benefits paid to UI recipients with dependents. Thirty-six of the 53 jurisdictions received all of their available modernization incentive funds, and five other states received one third of their potential funds (Barnow et al., 2012). The total federal payout was about $4.4 billion of the $7.0 billion in incentives (about 63 percent).

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4. **EUC08 Reemployment Services and Reemployment and Eligibility Assessment Activities**

The Middle Class Tax Relief and Job Creation Act of 2012 required that states provide reemployment services and reemployment and eligibility assessments (RES/REAs) to EUC08 recipients who receive either tier 1 or tier 2 benefits. Unless a recipient receives an exemption, he or she must participate to maintain eligibility for EUC08 benefits. There are four mandatory components of the services: (1) the provision of labor market and career information, (2) an assessment of the EUC08 recipient’s skills, (3) an orientation to services available at American Job Centers (formerly One Stop Career Centers), and (4) a review of the recipient’s eligibility for EUC08 benefits based on his or her work search activities. Although states may provide the first three of these mandated services remotely, such as through the Internet or by telephone, the eligibility review generally must occur in person.

III. **THEORETICAL BACKGROUND**

Researchers have developed a wide variety of theoretical models to provide a conceptual framework for the UC program. In this section we examine these models — especially those with the most direct relevance to assessing recent policy initiatives.

Most theoretical models of UC begin by viewing the program’s key goal as providing insurance against the risk of wage losses arising from involuntary unemployment. An advantage of this theoretical approach is that it permits researchers to draw on recent developments in the theory of insurance and related issues, such as the study of moral hazard or of optimal incentive contracts. From this perspective, UC is considered superior to other ways of insuring against wage loss from unemployment, such as precautionary savings or income-conditioned transfer programs, because it compensates explicitly for job loss. In the absence of adverse incentive effects, and with actuarially fair insurance premiums, full wage replacement insurance would be optimal.\(^{11}\) As with any insurance contract, however, the possibility of moral hazard complicates matters. For example, if receipt of UC benefits provides an incentive for workers to remain unemployed longer, full insurance is no longer optimal. Instead, there is a trade-off between the risk-reduction benefits of insurance and the welfare costs of added unemployment. Such welfare costs can be mitigated if the added search time is used to find better job matches.

A. **Modeling the Trade-off**

As the first author to model this trade-off explicitly, Baily (1978) used simulations to suggest that the optimal wage replacement ratio is about 0.65 unless the elasticity

\(^{11}\) Although UC benefits typically are paid for by firms through UI taxes or general revenue, virtually all of the theoretical literature treats the taxes as being paid by workers — an approach consistent with the widely held view that workers bear the final incidence of the tax. Section VI contains a more extensive discussion of UC financing.
of a recipient’s job search effort with respect to that ratio is quite high. Baily’s formula for optimal replacement was extensively reanalyzed by Chetty (2006), who provided a more comprehensive study of the interactions among several key parameters (risk aversion, consumption smoothing effects of UI benefits, and the elasticity of unemployment duration with respect to the UI benefit). Specifically, under certain assumptions he showed that the optimal UC benefit \( (b^*) \) is defined implicitly by

\[
\frac{\Delta c}{c} (b^*) = \frac{\varepsilon_{D,b}}{\gamma},
\]

where \( \Delta c \) is the decline in consumption (a function of \( b^* \)), \( \varepsilon_{D,b} \) is the elasticity of unemployment duration with respect to \( b \), and \( \gamma \) is the worker’s coefficient of relative risk aversion. As an example, if \( \varepsilon_{D,b} = 0.5 \) and \( \gamma = 2 \), the optimal decline in consumption is 25 percent — that is, the wage replacement rate should be 75 percent, assuming there are no other sources of consumption support for the unemployed worker.

The more recent literature on optimal UC has generalized the early models of UC as insurance by including (1) more thorough specifications of the incentive effects of UC and of whether UC-induced effects are inherently inefficient once a more comprehensive specification of the job search process is taken into account, (2) an explicit consideration of heterogeneity in employers rather than the single-agent models that yielded simpler results, (3) a focus on the duration of UC benefits (as opposed to WBAs) as a policy parameter, and (4) consideration of how UC benefit generosity should vary over the business cycle. Because the third and fourth of these have the greatest relevance to recent UC policy initiatives, we provide only a brief overview of the first two types of generalizations.

**B. Additional Incentive Effects**

Some researchers generalize the possible incentive effects of UC benefits on the job search process, including to the intensity of search effort (Hopenhayn and Nicolini, 1997) or refusal of suitable employment (Hansen and Imrohoroglu, 1992). This literature concludes that more generous UC benefits may indeed reduce search effort and describes how optimal benefit schedules (such as those under which the benefit declines over time) may mitigate such effects. Additional generalizations speculate that the availability of UC benefits affects workers’ performance on their pre-unemployment jobs, perhaps making workers more willing to shirk (Wang and Williamson, 1996; Coles and Masters, 2006) or to quit voluntarily.\(^{12}\) Other research looks at how calculations of optimal UI replacement rates are affected by taking into account human capital accumulation. For example, Brown and Kaufold (1988) find that UI benefits can increase incentives for workers to make investments in risky human capital.

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\(^{12}\) Historically, most U.S. workers who voluntarily quit a job without good cause have been ineligible for UC benefits, at least for a defined period of time (Nicholson, 1997). Administrative regulations for assessing whether separations are voluntary can be quite complex.
The relationship between optimal UC and private savings has also been the subject of considerable research. Feldstein (2005), in his influential presidential address to the American Economic Association, stresses that theoretical calculations of optimal UI replacement rates can be misleading if they do not consider how the availability of UI benefits affects decisions to save. Wang and Williamson (2002) show this to be the case by calculating rather complex optimal benefits schedules in which disincentives to save can be mitigated. Card, Chetty, and Weber (2007) and Chetty (2008) provide insight into the savings question by focusing on capital market imperfections. If households are liquidity constrained (that is, they cannot borrow to support consumption), the receipt of UC benefits may mitigate the pressure to accept a suboptimal job quickly in order to maintain consumption. Such a conclusion returns to a point made in the earliest empirical literature on UC (for example, Ehrenberg and Oaxaca, 1976) that the “disincentive” effects of UI benefits may not be complete welfare losses if the longer duration of unemployment permits the worker to make a better job match. Chetty’s (2008) empirical estimates suggest that such motivation may explain a significant portion of the welfare costs of more generous UI benefits.

C. Effects of Employer Heterogeneity

The theoretical literature on heterogeneity in responses to UC is focused mainly on the employer. Early papers by Feldstein (1978) and Topel (1984) suggest that the failure to adopt complete experience rating, in which employers are subsequently charged dollar-for-dollar for the UI benefits received by former employees, may result in the subsidization of firms and industries with above-average layoff experiences. Blanchard and Tirole (2008) make the case that full experience rating is required if firms are to internalize the costs of their layoff decisions and therefore make efficient choices about changes in labor input during a decline in demand. Furthermore, Acemoglu and Shimer (1999) illustrate how the availability of UC benefits might alter the distribution of jobs by making high-risk jobs more attractive to risk-averse workers.

D. Potential Duration as a Policy Variable

Davidson and Woodbury (1997) provide one of the first attempts to consider formally the question of the optimal duration of UC benefits. They reach the surprising conclusion that the potential duration of benefits should be infinite under an optimal program. The authors point out that an actuarially fair increase in benefit duration will always be welfare enhancing if there are no work disincentive effects because an increase provides added income in the post-UC period when income is lowest. With an infinite duration, the authors conclude, a wage replacement ratio of approximately 0.50 is efficient. However, if potential durations were limited (say, to 26 weeks), optimal replacement ratios could easily exceed 1.0.

Supporting the findings of Davidson and Woodbury (1997), Wang and Williamson (2002) present simulations suggesting that there are welfare gains from increasing the
potential durations of benefits. However, these gains are small in percentage terms. These authors also compute smaller optimal wage replacement rates than do Davidson and Woodbury. For example, with infinite durations, Wang and Williamson compute an optimal replacement rate of 0.24, which is about half the size estimated by Davidson and Woodbury. An interesting sidelight to the authors’ simulations is that their base case yields an “optimal” unemployment rate of about 7.4 percent with a potential duration of 52 weeks and an optimal replacement ratio of 0.35. These figures are close to UC experiences in the United States during several recessions since World War II.

The relationship between duration policy and other related policies, such as the experience rating of firms in determining their UI taxes and the monitoring of UI recipients’ work search effort, has been the subject of several recent theoretical papers. For example, Hopenhayn and Nicolini (1997) show how a wage tax on reemployment earnings that increases with the length of the unemployment spell can be efficiently used to offset the negative effects of longer durations. Boone et al. (2007) show that monitoring recipients’ job search efforts can provide welfare improvements both in time-limited and unlimited regimes of UC collection. Fredriksson and Holmlund (2006) provide an extensive survey of the theoretical literature that incorporates the incentive effects of job search assistance and monitoring on the structure of optimal UC programs. They conclude that there is a strong theoretical case of including some sort of sanctions for inactive search.

E. UC Policy over the Business Cycle

Although most theoretical work on the UC system assumes a constant risk of unemployment, several recent research papers have explicitly modeled how optimal UC policy parameters should be adjusted for unemployment risk that varies over the business cycle. Most conclude that UC benefits should be more generous during downturns.13 For example, Kiley (2003) and Sanchez (2008) argue that UI benefits have smaller effects on work incentives during downturns because of the lower probability of finding a job. Hence, higher wage replacement rates are welfare enhancing. (In Section IV, we examine whether the empirical evidence is consistent with this hypothesis.)

Researchers who take a general equilibrium approach to their modeling have reached similar conclusions, although the logic used can be quite different. For example, Andersen and Svarer (2010) show that the ability of governments to balance their UC budgets over the business cycle allows greater generosity during periods of weak labor demand when work disincentive effects are presumed to be smaller. Although such countercyclical financing creates overall welfare benefits through consumption smoothing, it also tends to exaggerate employment fluctuations. Landais, Michaillat, and Saez (2010)

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13 Although literature about this issue has implicitly focused on the WBA as the key measure of generosity, many of its conclusions seem equally relevant to a notion of generosity that includes both WBAs and potential duration of benefits. For example, the total dollar value of a UC recipient’s entitlement might be viewed as the parameter that is made more generous during recessions.
examine how the formula for optimal UC derived by Chetty (2006) might be adjusted to take into account varying labor market conditions. In one version of their model, they assume that labor markets during recessions are characterized by job rationing. In this case, individual job search effort creates an externality by reducing the likelihood that other job seekers can find a job. Increases in the generosity of UI benefits can partly offset this externality. However, an alternative version of their model reaches different conclusions by stressing the relationship between wage bargaining and job vacancies. In this case, more generous UC benefits can increase wage rates (because of the greater opportunity costs of working) and reduce job vacancies. Hence, less generous benefits during recessions might be warranted.

F. Conclusions from the Theoretical Literature

Overall, much of the theoretical literature on UC does not align perfectly with the countercyclical policy issues arising over the past several years. But that literature does offer some insights that should be considered when assessing those policies:

- All models suggest that the choice of optimal UC parameters involves a trade-off between consumption support and the moral hazard that UC benefits entail.
- The optimal wage replacement rate might not be constant over the unemployment spell or across different economic conditions. Several researchers favor decreasing benefit schedules. Others find that optimal wage replacement is higher during downturns in labor demand.
- The literature offers little explicit guidance about how, if at all, UC durations — one aspect of benefit generosity — should be adjusted during cyclical downturns.
- Experience rating of firms may play an important role in getting employers to internalize the social costs of their layoff decisions.

IV. MICROECONOMIC EFFECTS OF UNEMPLOYMENT COMPENSATION

A vast empirical literature seeks to measure the effects of UC collection on lengths of unemployment spells and other outcomes. We first discuss the portion of this literature that tries to estimate the effects of the potential duration of UC benefits on the lengths of unemployment spells; this possible effect of recent benefit extensions has generated considerable policy interest. Later in the section, we briefly summarize some papers that assess the impact of UC on other outcomes.

14 There is also a large literature, summarized in Decker (1997) and Tatsiramos and van Ours (2012), on the effects of UC benefit amounts (or wage replacement rates) on the duration of unemployment. Although we do not discuss these estimates here, the FAC, the reduced taxation of UC benefits, and the adoption of dependent allowances in some states might have affected unemployment durations by raising net UC wage-replacement rates.
Before beginning our survey, we point out two distinctions sometimes overlooked in reviews of the empirical literature. First, from a societal point of view, the key empirical question is how greater UC availability affects the lengths of all unemployment spells, not just spells compensated by benefits. Second, because of the types of data sets typically used for analysis, effects of UC benefits can occur during three distinct time intervals: (1) during collection of regular UI benefits, (2) during collection of extended and/or emergency benefits, and (3) after exhaustion of all benefit eligibility. Any comparisons of the results of various studies must take such distinctions into account.

A. Early Econometric Estimates

One of the first papers to examine the effects of potential UC duration changes on lengths of jobless spells is Moffitt and Nicholson (1982), which estimates the effects of the Congressionally legislated emergency benefits program of the mid-1970s. Their data set allowed them to follow UC recipients for up to three years following job separations. By focusing on changes in individuals’ budget constraints that occur at the point of benefit exhaustion, they estimate that each added week of benefits added about one tenth of a week to the length of unemployment spells. Hence, the 26 weeks of added benefits provided by this program are estimated to have increased unemployment durations by about 2.6 weeks, although the estimate is very sensitive to structural assumptions in the authors’ model.

Katz and Meyer (1990) use a more general approach and administrative data from recessions of the early 1980s collected under the Continuous Wage and Benefit History project; they estimate that each week of added UC benefits increased jobless spells by between 0.16 and 0.20 weeks. This estimate is based on an analysis of regular and extended spells of UC collection, but it requires assumptions about the rate of exit from unemployment after benefits were exhausted. The researchers hypothesize that their estimates might have been biased modestly upward by their inability to control completely for changing labor market conditions during the time covered by their data.

Perhaps the most frequently cited estimate of the effect of extended benefits on the lengths of unemployment spells is that of Card and Levine (2000). They examine the impact in New Jersey of an unexpected addition of 13 weeks of state extended benefits provided for political reasons rather than based on an unemployment rate trigger. The

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15 UC benefits are to be paid only to people who are actively seeking work. Increases in unemployment spells caused by these benefits are a social cost because of the foregone production through employment. However, if some UC recipients are actually out of the labor force, the social costs would be less and the benefits would be pure (though perhaps unintended) transfers. It is also possible that longer unemployment spells may be productive if the extra search time leads to better job matches, although the empirical evidence supporting this conclusion is limited.

16 We use the term “jobless spells” to denote findings based on periods between jobs regardless of whether the individual is searching for work or not. The term “unemployment spells” is used only when the data set allows the researcher to differentiate between jobless periods searching for work and jobless periods out of the labor force.
authors find that had the availability of benefits run long enough to affect recipients from the start of their unemployment spells, the exhaustion rate for regular UI benefits would have increased by seven percentage points and recipients would have collected about one more week of regular UI benefits. No attempt was made to estimate the effects of the extensions on the lengths of unemployment spells beyond the regular UI entitlement period, however.

Hence, much of the early literature is consistent with the notion that an added week of UC leads to about 0.1 to 0.2 extra weeks of unemployment. But that literature is subject to a number of methodological shortcomings and may not accurately predict how labor markets respond to more recent UC initiatives.

B. Recent Empirical Studies

Attempts to measure the impact of recent UC extensions directly using individual-level data can be difficult because many of the most important available data sets do not have direct measures of benefit collection. For example, research using the Current Population Survey (a widely available and frequently used data source) typically treats unemployed individuals who have lost their prior jobs as “UC eligible” whereas people unemployed for other reasons (quits, new entrants, and re-entrants) are treated as “ineligible” (Valletta and Kuang, 2010; Rothstein, 2011; Farber and Valletta, 2013). This research finds that added UC availability has modest positive effects on the lengths of unemployment spells of UI-eligible individuals; the quantitative effects cluster in the range of 0.02–0.05 extra weeks of unemployment for each extra week of potential UC duration. These papers also suggest that the majority of the increase in unemployment duration arose from lower exit rates from the labor force, with a smaller share of the effect stemming from reduced job finding. The extent to which misclassification of UC eligibility might bias such estimates downward is not known, however.

Recent international literature has been based on more easily available administrative data on individual-level benefit collection. Some international studies have used natural experiments in which the causal influence of UC benefits can be more accurately assessed. For example, Schmieder, von Wachter, and Bender (2012) use a regression discontinuity design to study the effect of an extra four to six months of UC benefits provided to German workers in some age categories. They find that jobless spells increased by about 0.2 weeks for each added week of UC benefits. The authors also show that their estimates are not very sensitive to the level of labor market strength. A similar estimated effect is obtained by van Ours and Vodopivec (2006) from their examination of a major cutback in UC durations for certain categories of Slovenian workers. For the median affected worker, they find a reduction in duration of joblessness of about 1.2 months in response to a cutback of six months in UC eligibility. Lalive, van Ours, and Zweimüller (2006) look at another natural experiment — an expansion of durations for older, more experienced workers in Austria. They find somewhat smaller responses than the other European studies: 0.05–0.10 weeks of additional joblessness per week of additional UC availability among workers eligible for 9 or 22 more weeks of benefits.
Overall, this range of recent estimates is reasonably close to those obtained from the earlier econometric work, despite the major differences in methods and data sources used.

C. Effects of UC on Other Outcomes

UC can be expected to have additional effects on the economic circumstances of recipients. Two such additional outcomes have been extensively studied: (1) how UC receipt affects economic adjustments that households make to job loss, and (2) the relationship between UC and participation in other income transfer programs. We briefly review some of this literature.

A widely cited work on the relationship between UC receipt and household spending is Gruber’s (1997) examination of the impact of receiving UC benefits on household food consumption. He finds that in the absence of UC, food consumption by households of newly laid-off workers falls by about 22 percent — approximately three times the average decline when benefits are available. Although finding similar consumption smoothing effects of UC benefits using Canadian data, Browning and Crossley (2001) report that most of the effect arose from the decisions of households with few financial assets. In addition, Gruber (2001) finds that higher benefit levels were associated with smaller declines in financial assets following a layoff. Most of these effects would be expected to be larger during the Great Recession because unemployment spells were so much longer, but there is yet no direct evidence on these issues.

Cullen and Gruber (2000) examine another type of household interaction — whether receipt of UC benefits affected the labor supply of other household members. They find that more generous UC benefit receipt by husbands was accompanied by fewer hours worked by wives. The effect was largest in those households with young children.

Because unemployed workers can seek to obtain income support from other government programs aside from the UC system, recent research has assessed the extent to which benefits extensions affect participation in the Supplemental Nutrition Assistance Program (SNAP) and the Social Security Disability Insurance (SSDI) program. The relationship between the UI program and SNAP is potentially substantial. For example, the Government Accountability Office (GAO, 2012) finds that in 2009 about 15 percent of UC exhaustees participated in the SNAP program, and a recent paper combining data from the UC and SNAP systems shows that the overlap between the programs has increased during the recent recession (Anderson, Kirlin, and Wiseman, 2012). Unfortunately, the data used in this study ended in early 2010, but the authors conclude that it is likely that enrollment in SNAP would increase more rapidly after large numbers of UC recipients begin to exhaust their full entitlements.

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17 We do not discuss potential interactions with the Temporary Assistance for Needy Families (TANF) program because the TANF program is relatively small and because the overlap between the UI program and TANF is also small (GAO, 2012).
A more complex relationship is the one between UI collection and participation in the SSDI program. The secular growth in SSDI applications, especially during economic downturns, has been studied for many years (Autor and Duggan, 2003). Focusing on the Great Recession, Rutledge (2012) finds that roughly five percent of UC exhaustees apply for SSDI benefits around their UC exhaustion dates, but this percentage is approximately halved by benefit extensions. He concludes that decreased SSDI and related Medicare costs might have offset up to half of the cost of the EUC08 program. By delaying applications to the SSDI program, the benefit extensions could also have increased the rate of acceptance into the program because healthier recipients continued to receive EUC08 benefits. Therefore, SSDI applications might be expected to increase significantly after UC recipients exhaust all available benefits or the EUC08 program ends.

V. MACROECONOMIC EFFECTS OF UNEMPLOYMENT COMPENSATION

UC traditionally has been viewed as an “automatic stabilizer” — that is, a program for which expenditures are countercyclical and therefore rise significantly during periods of economic downturn. In all recent recessions, this “natural” increase in UC benefits has been supplemented by discretionary programs that increase the duration of UC entitlements. Experiences during the Great Recession clearly exhibit this pattern. For example, total benefits paid under regular state UI programs rose from about $30 billion in 2007 to approximately $57 billion in 2010, and payments under extended and emergency benefits programs increased from approximately zero in 2007 to nearly $80 billion in 2010. As a percentage of GDP, total UC benefits expanded from about 0.2 percent in 2007 to approximately 1.0 percent in 2010. In this section, we review literature that focuses on how expansions of the total duration of benefits affect the U.S. economy. In particular, we discuss research on the effect of increased UC availability on GDP (the multiplier effect), on the unemployment rate, and on the broader economy.

A. The UC GDP-Multiplier

In the literature concerning the macroeconomic effects of UC, which is based on a standard Keynesian analysis of GDP multipliers, added UC benefits are assumed to be quickly spent on goods and services by recipients. This spending creates a multiplier effect as the providers of the goods and services spend the extra revenues received from

18 SSDI is essentially a program that allows workers early access to their Social Security retirement benefits as well as Medicare benefits after a waiting period. To be eligible for SSDI, workers must demonstrate that they have a medical or functional disability that interferes with their ability to obtain and hold gainful employment. This criterion appears to be at least partly at odds with the UC program requirements for recipients to be able and available for work.

19 The GAO (2012) report finds that 18 percent of exhaustees collected Social Security payments, though the data cannot be used to differentiate between Social Security programs. However, because only 7 percent of the GAO study sample is age 62 or older, it is possible that many of the exhaustees are in the SSDI program.

UC beneficiaries. Most literature assumes relatively high values for this multiplier — typically in the range of 1.5–2.0. For example, the Congressional Budget Office (2010) assumes in one of their simulations a GDP multiplier of 1.9 (categorized as a “high value”) to conclude that extended and emergency benefits payable in 2010 expanded GDP by more than $150 billion (relative to a situation without the UC extensions). Furthermore, this created about 1.2 million worker-years of added employment. Reaching a similar conclusion, Vroman (2010) calculates a GDP-multiplier in excess of 2.0 for regular UI, EB, and EUC08. Both approaches assume that the taxes required to finance higher UC benefits had no immediate impact on either GDP or employment because, at the federal level, they were financed by added debt or, at the state level, the required tax increases will only occur in future years as states impose higher UI tax rates on employers. (Section VI contains a more extensive discussion of UI financing issues.)

Whether large multipliers around 1.9 or 2.0 are consistent with other economic literature on the impact of fiscal policy during recessions is an open question. For example, in an extensive review of the empirical literature on the multiplier effects of government purchases, Ramey (2011) concludes that most of the published estimates fall in a range of 0.8 to 1.5. She also points out that many economists believe that the multiplier for increased transfers (such as UC) may be considerably smaller than this. Still, because most Keynesian-type models of the entire economy tend to include UC benefits in an aggregate category containing all taxes and transfers, there is little direct evidence with which to decide the issue definitively.

### B. UC and the Unemployment Rate

A question addressed in recent literature is whether the work disincentive effects of UC discussed in Section IV were large enough during the Great Recession to affect economy-wide measures such as the unemployment rate. Not surprisingly, considerable empirical work on this topic exists. However, because of the close correlation between the unemployment rate and the adoption of emergency benefits policies, significant uncertainty remains about how to derive causal estimates.

One methodological approach uses parameter estimates of the effect of potential UC duration on the duration of unemployment from earlier studies to estimate the likely effect of extended potential durations on the unemployment rate for the economy as a whole. Several studies have done so using estimates from either the Card and Levine (2000) study of UC extensions in New Jersey or the Katz and Meyer (1990) study that examines the relationship between potential durations and unemployment exit rates. (Both research studies were discussed in Section IV.) Researchers couple these parameters with the large increases in the potential duration of benefits through the EUC08 program to extrapolate possible impacts of the program on the unemployment rate. For example, Mazumder (2011) uses a variety of different parameter values to generate estimated increases of between 0.8 and 1.7 percentage points in the unemployment rate during the Great Recession. A similar estimate is provided by Aaronson, Mazumder, and Schechter (2010), who conclude that between 10 and 25 percent of the increase in
the observed duration of unemployment\textsuperscript{21} shortly after mid-2008 might be attributed to benefit extensions. Nakajima (2012) finds a similar estimate by developing a structural model that took into account the time pattern of the UC extensions.

As another approach, the authors of two of the recent CPS-based studies discussed in Section IV (Valletta and Kuang, 2010; Rothstein, 2011) used their estimated effects of the recent UC extensions to assess whether additional weeks of benefit availability affected unemployment duration, and thus, the unemployment rate. These studies found a smaller implied increase in the unemployment rate — in the range of 0.3 to 0.4 points — than studies using estimated duration effects from previous research.\textsuperscript{22}

Grubb (2011) provides a detailed critique of many attempts to estimate the effect of UC extensions on the unemployment rate using results from prior studies. He concludes that it is likely many of the estimates are biased downward because many authors do not control for the effects of increased durations in all three of the time intervals discussed in the prior section. According to his calculations, as much as one-half of the observed increase in unemployment rates during the Great Recession might be attributed to the increased duration and generosity of UC benefits. However, this controversial conclusion is heavily dependent on the precise ways in which the author extrapolates the empirical findings to time intervals not actually observed.

The precise impact of UC on unemployment rates during the Great Recession remains uncertain and controversial. Nevertheless, virtually all of the available research rejects the hypothesis that greatly extended eligibility had no effect, and the debate focuses on the magnitude of the effect. Hence, policymakers may wish to understand this debate when adopting emergency benefits policies in the future.

C. General Equilibrium Modeling

A policy as significant as that embodied in EUC08 would be expected to have potential ramifications throughout the economy that would not be completely captured in estimates based on individual worker behavior as described in the previous section. Hence, some researchers have begun to utilize general equilibrium approaches to assess these broader effects. One strand of this literature focuses on what has come to be called the “labor wedge.” Drawing on a tax analogy, this wedge represents a difference between workers’ marginal productivities and their opportunity costs of working. Consequently, the wedge arises not only because workers’ earnings are taxed but also because work-conditioned transfer payments such as UC affect opportunity costs. Programs such as EUC08 are hypothesized to increase the size of the wedge and can thus lead to both increased unemployment and reduced labor force participation. Perhaps the most promi-

\textsuperscript{21} A 10 percent increase in duration would increase the unemployment rate by 10 percent (that is from, say, 5 percent to 5.5 percent) if experienced by all job seekers. The effect would be smaller if only those receiving UC benefits experienced the increase in duration.

\textsuperscript{22} However, as discussed in Section IV, inferring disincentive effects of UC from studies using the CPS might be problematic because those data do not contain data on UC eligibility or receipt.
nent (and controversial) expression of this position is in Mulligan (2012), in which the author attributes a large portion of the continuing weakness in the U.S. labor market to increasingly generous UC benefits and other recent expansions in the social safety net. Although Ohanian (2010) does not directly model UC benefits, this paper draws similar conclusions by showing that most market distortions arising from the Great Recession occurred in U.S. labor markets; in contrast, market distortions in Europe tended to occur primarily as productivity shocks. Of course, many other authors have attributed the recent labor market weakness to a wide variety of other factors.

More generally, literature that seeks to model UC in a general equilibrium context examines whether the micro-level incentive effects that arise from changing UC benefits are enhanced or moderated when a general equilibrium view is taken. In this regard, some research, such as Landais, Michaillat, and Saez (2010), focuses on the “externalities” that arise in the labor market because of changes in work search behavior induced by changes in UC policies. As discussed in Section III, two important and competing effects have been identified. First, by discouraging work search by some unemployed workers, more generous UC benefits might make it easier for other workers to find jobs. This implies that the general equilibrium effects of a more generous UC policy should be smaller than the micro-level estimates imply. Second, less work search effort may require employers to raise wage offers, and this would reduce their demand for workers. This implies that the general equilibrium effects of more generous UC benefits could be larger than the micro-level estimates imply.

The recent literature yields mixed results on the relative strength of these two effects. For example, most of the Keynesian-type analysis in Landais, Michaillat, and Saez (2010) suggests that the former effect is larger, so that general equilibrium effects of extra weeks of UC benefits are moderated. On the other hand, the simulations in Hagedorn et al. (2013) suggest that the wage impacts of UC generosity on labor demand can be quite substantial, thereby leading to negative macroeconomic effects and possibly explaining a significant portion of the “jobless recovery.”

This literature is in its very early stages. Important factors such as the impact of present or future UC taxes, expectations about future benefit levels, and interactions with other methods for smoothing consumption during periods of unemployment have not been explicitly modeled. Experiences with UC during the Great Recession will undoubtedly provide vast opportunities for modeling these factors in the future.

VI. IMPACT OF THE GREAT RECESSION ON STATE UI TRUST FUNDS

The very high level of both state and federal UC benefits in recent years has significant implications for the financial health of the UC system. A key policy issue is that the heavy use of the system since the Great Recession, coupled with policies that left states unprepared prior to the start of the recession, led to significant problems financing regular UI benefits for most states. Many states likely will need concerted effort and time to restore their trust fund balances to levels deemed adequate to meet potential future demands on the system. In this section, we discuss implications of the recent labor
market weakness and resulting legislation on state UI trust funds as well as potential strategies that states can use to address the financial challenges faced by the trust funds. We focus exclusively on effects on state trust funds that are used to finance payments of the regular UI program because issues for federally funded benefits are fundamentally different and typically extend significantly outside the realm of the UC system itself.23

A. Overview of UI Benefit Financing

Because the UI program is a federal-state partnership, states have flexibility within parameters specified by the federal government to determine the structure of UI benefit payments and methods for imposing UI-specific taxes on employers, who are primarily responsible for financing the program. Although the details of UI program financing are complex, a fundamental component is that states are responsible for maintaining adequate reserves in their state-specific UI trust funds to ensure that they can meet their benefit obligations.24 States determine the tax rate imposed on each employer in large part on the recent history of benefit collection by its former employees, a process called experience rating. Generally speaking, employers with a small amount of benefits charged against them are at the low end of a tax rate schedule, whereas the opposite is true for employers with a large amount of benefits charged against them. However, most states also have in place several tax rate schedules; which schedule a state uses in a given year depends on the overall health of the state’s trust fund.

B. Inflows and Outflows of State Trust Funds

State UI trust funds are an important component of the program’s economic stabilization goals. During weak labor markets, the outflow of UI benefits should exceed the inflow of UI tax receipts — to stimulate the economy — whereas the opposite is true during strong labor markets. On the outflow side of the trust fund ledger, regular UI benefit payouts increased dramatically from 2007–2009 and have declined significantly from that peak, although they remained higher than was the case before the recession began. Regular UI benefit payments were about $32 billion in 2007, rose to about $79 billion in 2009, and declined to about $43 billion in 2012.25 The high payouts arose through a combination of a dramatic increase in the number of UI recipients, the long average duration of weeks paid, and a higher average WBA paid to recipients. As discussed in Section IV, evidence suggests that at least a portion of the increase in UI benefit payments is attributable to the work disincentive effects of EUC08 benefits for much of this time period; the existence of the EUC08 program might have exacerbated the strain on state trust funds.

23 For example, the funding source for EUC08 benefits during the early period of the program was the federal unemployment account but was federal general revenues for most of the program’s period of operation.
24 Whittaker (2012) provides a more comprehensive discussion of this issue.
The recent federal legislation related to the EB program also likely had some implications on states’ trust funds, although the theoretical direction of the effects probably differs across states. As discussed in Section II, the federal government began paying 100 percent of the benefit costs of EB even though, historically, states have been responsible for 50 percent of these costs. Because of the 100 percent federal financing, states that would have triggered onto EB in the absence of the recent legislation instead received a windfall. However, a considerable number of states adopted the TUR trigger for EB, likely because of the full federal financing. For these states, the work disincentive effects of the extra weeks of potential EB benefits likely led to some additional payments of state-financed regular UI benefits that would not have occurred in the absence of full federal financing of EB.

The inflow side of the ledger for state trust funds — in terms of UI tax receipts — also changed as a result of the weak labor market. In the very short term after any labor market downturn, UI tax receipts are expected to shrink with a reduction of workers’ earnings upon which UI taxes are based. However, because of experience rating, tax rates would automatically increase, usually on an annual basis, in the absence of political intervention. In addition, depending on a state’s trust fund balance, a state might shift to a higher tax rate schedule. These two effects, coupled with an increase in workers’ earnings during an economic recovery, are expected to lead eventually to an increase in tax receipts for the UI program. For example, nationwide, the UI contributions collected in 2007 were about $32 billion; they declined to about $28 billion in 2009, and they grew to about $51 billion in 2012.26

C. State Trust Fund Adequacy and Potential Strategies to Address Insolvency

The U.S. Department of Labor suggests that a state’s trust fund reserve should be able to cover at least the highest one-year amount of benefit payments during the past 20 years (Whittaker, 2012). Vroman (2012) indicates that a high proportion of states entered the Great Recession with inadequate trust fund reserves. The analysis attributes the inadequacy of trust fund reserves in many states to the low caps they had set on the earnings that are subject to UI taxation (the “taxable wage base”).

Because UI benefits are an entitlement, states are required to pay benefits to eligible claimants even if their trust fund is insolvent. States with inadequate trust fund reserves have several options, including borrowing from the federal trust fund account, borrowing from the private financial market, and adapting their state UI laws to address the program.

Borrowing from the federal trust fund account is complex (Whittaker, 2012): (1) states are allowed under some circumstances to obtain interest-free loans for a short period of time; (2) states that do not meet the requirements to receive interest-free loans (such as states that have multiyear outstanding loan balances) are subject to both interest charges.

and, potentially, a reduction in their Federal Unemployment Tax Act (FUTA) credit; and (3) the longer states have outstanding loans, the larger the FUTA credit reduction becomes. ARRA temporarily suspended interest charges on federal loans in 2009 and 2010, a move projected to provide financial relief to states of about $1.1 billion in avoided interest payments (Barnow et al., 2012). But states still needed to pay back the principal, and interest began accruing again in 2011. Vroman (2012) finds that 36 of the 53 UI jurisdictions have borrowed from the federal government since 2008, and 30 states with outstanding federal loans, as of April 12, 2012, owed more than $41 billion.

An additional strategy available to states facing inadequate trust fund balances is to borrow from the private financial market. Barnow et al. (2012) suggest that a few states have been using this strategy, given that interest rates in the private bond market have recently been lower than federal interest rates. In addition to saving on interest payments, this strategy might be appealing to states because they could avoid the reduction in the FUTA tax credit.

A final type of strategy states can use to address trust fund financing problems, at least in the long term, is to adapt their UI program laws to improve the trust fund balance through either increased tax receipts or reduced benefit payments. Generally speaking, however, states have recently been reluctant to change their laws to increase tax receipts, possibly because of continued weakness in the economy, the political climate in the states, or other reasons. Some states have even passed laws to override automatic adjustments that would lead to an increase in receipts. For example, a recent study of 20 states finds six states have passed laws that limit the automatic movement to a higher tax schedule or to have prevented the automatic imposition of a statutory tax designed to aid with trust fund solvency (Barnow et al., 2012). Although each state’s financial situation is unique, and states frequently change the details of their UI laws, some states have used a strategy to reduce benefit payments that is very unusual in historical context. Seven states have reduced their maximum potential weeks of benefits paid to UI recipients below 26 — a benchmark that has been used by almost all states for about 50 years. Florida and Georgia have set their maximum potential durations at 12 and 14 weeks, respectively, during healthy economic times, although the maximums increase under worse labor market conditions. This approach is consistent with the theory discussed in Section III that potential UI durations should act as insurance against the risk of longer unemployment. As an attempt to aid trust fund solvency, shortening the maximum potential duration of benefits likely has arisen because, during much of the EUC08 period, states have been restricted in their ability to reduce the average WBA paid to UI recipients.28

27 The FUTA imposes a tax rate of 6.0 percent on the first taxable earnings paid by employers to each employee (Whittaker, 2012). Employers in states that are in compliance with certain federal requirements and that do not have delinquent federal loans may receive a credit (typically of 5.4 percent) to offset this tax rate, but the credit is reduced after a certain time period based on when the loan was obtained.

28 As a result of a federal rule called the “nonreduction rule,” states that reduce their average WBA would lose eligibility for EUC08 benefits (Oates, 2010). One state did so in spring 2013.
VII. RELATIONSHIP OF UC TO ACTIVATION POLICIES

Policymakers have long recognized the importance of coupling UC benefits with programs that provide job search assistance and/or increase UC recipients’ skills to aid in the return to work. Traditionally these programs have been referred to as “active labor market policies.” However, recent literature, especially based on European research, has used the more general term “activation measures” to include both the traditional measures and an added focus on enforcement activities to ensure compliance with UC program rules. In this section, we review some of these policy initiatives, with special attention to actions taken to enhance UC effectiveness during the Great Recession.

The rationale for pairing activation policy and UC policy is straightforward. Well-designed activation policies can reduce UC durations and thereby reduce the social and governmental costs of prolonged unemployment. Promoting a quicker return to work can also avoid the deterioration of skills that often accompanies long-duration unemployment. Since the inception of the UC program, state benefit payments have been accompanied by reemployment services and ongoing eligibility requirements (often related to job search) that were intended to speed recipients’ return to work. Since the 1990s, various initiatives have tried to strengthen service delivery and enforce eligibility requirements for regular UC recipients; O’Leary (2006) provides a review of these initiatives.

The two most important initiatives are the Worker Profiling and Reemployment Services (WPRS) System (established in 1993) and the development of Re-employment Eligibility Assessments (REAs, begun in 2005). The WPRS requires states to identify individuals who have just started receiving regular UI benefits and who are predicted to be likely to exhaust their benefit entitlements. The identified UI recipients must participate in reemployment services, such as an orientation meeting to learn about reemployment service assistance that is available through American Job Centers. In an extensive evaluation of this system, Dickinson, Kreutzer, and Decker (1997) find that such profiling activities had the effect of reducing unemployment durations by about one-half week. Black et al. (2003) use somewhat different methods and focus on a single state, Kentucky. They find larger effects — approximately a two-week reduction in benefit receipt. By looking at the specific timing of this response, however, the authors draw the controversial conclusion that most of the effect arose from the “threat” of reemployment services incorporated in the profiling system (that is, workers found jobs when they were scheduled for services) rather than from the services themselves.

The U.S. Department of Labor provides funding to states to provide REAs to individuals claiming regular UC benefits. Such assessments typically include in-person eligibility reviews, labor market information, individual reemployment plans development, and referrals to reemployment services and/or training. In providing an evaluation of initial findings from this program, Poe-Yamagata et al. (2011) use a random assignment methodology to show that although program success tended to vary across the states examined, in most sites participation in the REA program tended to reduce weeks of UC benefits collected. Reductions were greatest in Nevada, which also provided significant additional services to those claimants subject to an REA.
The optimal mix of complementary activation policies might be affected by the state of the labor market for several reasons. These include the possibility that opportunity costs (also called “lock-in effects”) are lower during downturns and that the lower probability of finding a job might either increase or decrease optimal levels of job search assistance or of the enforcement of UC continuing eligibility rules. Much of the European literature on this topic, which is extensive, concludes that there is a strong case for expanding a wide variety of activation measures during recessions. (Summaries are in Kluve, 2010, and Immervoll and Scarpetta, 2012.) Country-specific studies come to a range of different conclusions about the effectiveness of such measures during recessions, however. For example, Forslund and Krueger (2010) show that the extensive active labor market policies in Sweden may have retarded that country’s recovery from the recession of the early 1990s. On the other hand, Schmitt (2011) reports that activation policies in Germany were relatively effective in constraining the rise in unemployment rates during the Great Recession. He contrasted Germany with Denmark, where such policies were relatively ineffective, and attributed the difference to the different labor market institutions in the two countries — especially the much greater use of work hour reductions in Germany.\footnote{Compared to the United States, some countries have much more widespread use of reduced work weeks and much less reliance on layoffs to accommodate reduced demand for workers. The Middle Class Tax Relief and Job Creation Act of 2012 included a provision designed to expand use of reduced work weeks through a program often called short-time compensation (STC). Previous research (Walsh et al., 1997) has found that the program has not attracted substantial interest, but employers who have used STC generally have been satisfied with the program.}

Actual use of active policies tended to decline during the Great Recession in the United States — at least on a per-unemployed-person basis — because budgets for such services were constrained. An innovative attempt to measure enforcement activities across OECD countries concluded that, contrary to the situation in many European countries, enforcement activities in the United States also tended to decline during this period (Venn, 2012). Perhaps in response to such findings, the Middle Class Tax Act of 2012 required states to provide in-person RES/REAs to all individuals who started collecting tier 1 or tier 2 EUC08 benefits on or after March 23, 2012. Although most states already had regular REA programs for a segment of their regular UI populations, the focus on EUC08 recipients entailed a much larger caseload and provided a closer examination of the job search activities of extended benefit recipients than had previously been the case.

\section*{VIII. CONCLUSION}

The severity of the Great Recession created the impetus for many changes to the UC system in the United States. Perhaps the most significant of these changes was the extension of the potential duration of benefits to unprecedented levels — reaching up to 99 weeks of benefits in the weakest labor markets. Many other changes were made to the UC system during this period as well — some of which also increased the generosity...
of benefits in other ways. Although an extensive body of previous research exists on the effects of UC, the precise relevance of this literature to the recent changes is uncertain, and empirical research on the effects of the recent changes is in its infancy. This early research shows that the recent UC extensions may indeed have had detectible effects on the U.S. labor market, but some of the studies are contradictory, and many suffer from imperfect data and other methodological problems. Undoubtedly, the true effects of the changes will become more apparent as better data become available and as researchers have the opportunity to develop their methods further. Ideally, the lessons from such research will aid in the design of emergency UC policies that will almost inevitably be needed in future recessions.

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DISCLAIMERS

Any errors are the responsibility of the authors.

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