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RETHINKING UNEMPLOYMENT INSURANCE TAXES AND BENEFITS

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ABSTRACT

This paper addresses economic issues related to the unemployment insurance (UI) system, focusing on the worker- and employer-facing aspects of UI policy—i.e., the ways that benefits are provided to workers and that employers are taxed to fund those benefits. We outline principles for optimal design, grounding these principles in the relevant research literature. These principles guide the empirical analysis of the paper, which focuses on establishing the quantitative importance of the considerations that motivate those principles. This leads to several specific areas of investigation and policy recommendations: benefit structure, rules for eligibility, experience-rated UI tax schedules, and interactions of UI with part-time work, among others.

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INTRODUCTION

Unemployment insurance (UI) serves a core purpose that is intuitive for both economists and noneconomists: it provides insurance against the risk of job loss. Because employment is the only or primary source of income for most families, job loss often delivers a financial blow that would be crippling absent any insurance.

This insurance is mandatory and publicly provided because adverse selection would undermine the private provision of a similar program. But like any insurance, UI benefits create moral hazard, distorting the labor market choices of workers, and UI financing can influence the labor demand decisions of employers. Balancing these costs with the benefits of insurance is the first task for UI policymakers.

Somewhat less intuitive are the other considerations that underlie the optimal design of UI. In addition to the question of the overall generosity of UI benefits, how should payments be structured over the course of an unemployment spell? To what extent should UI accommodate transitions to labor market statuses other than full-time traditional employment? Who should be eligible for UI? How should UI be funded, and to what extent should employers be penalized for layoffs? And how can UI best support labor market dynamism?

In this report, we do not offer precise answers to these questions. Rather, we develop a framework for their assessment that is rooted in appropriate theory and evidence. In doing so, we indicate several ways UI policy could be improved.

As a core labor market institution, UI has a range of economic effects that are in a sense incidental to its core insurance objective. Most importantly, UI provides automatic fiscal stimulus during economic downturns (Chodorow-Reich and Coglianesse 2019). We largely exclude this UI aspect from consideration in this paper. We also deemphasize the robust and ongoing research debate over the magnitude of UI employment effects, focusing on the consensus view of small but negative impacts.

Instead, we explore the implications of the research consensus—and descriptive evidence we present—for optimal UI design. We emphasize the worker- and employer-facing aspects of UI design, leaving the specifics of trust fund finance outside the scope of this report.

We begin with a summary of relevant UI policy detail. As with any discussion of UI specifics, generalizing from the patchwork of state rules and practices is difficult; nonetheless, we attempt to do so as background for discussion of principles that inform UI design. We then proceed to each principle in turn, explaining how it applies to the relevant policy choices and what evidence is most relevant for decisionmaking.

Before presenting evidence and theory that bear on UI reform questions, we discuss key aspects of current UI policy design. We do not attempt to provide a comprehensive description of UI or variation in state UI rules.¹ Rather, we highlight details of UI that are especially relevant to a reconsideration of its design.

Some key UI summary statistics (shown in table 1) are a useful starting point. In 2018, more than 140 million employees were covered by UI (i.e., they would be eligible if they were fired without cause and met other eligibility conditions). This constitutes most of the U.S. employee population (155.8 million in 2018), though the number of unemployed workers who are eligible for UI and receive benefits is a substantially smaller fraction. Although about one-quarter of unemployed people receive UI benefits, recent estimates suggest that the share of unemployed people who are eligible is about one-third and that about three-quarters of those eligible take up benefits (Auray, Fuller, and Lkhagvasuren 2019). Because most UI rules are set at the state level, the share of unemployed people who are eligible and who receive benefits varies dramatically across states. For example, Wandner (2018) shows that the reciprocity rate, or the share of the unemployed receiving benefits, varies from about 10 percent in Florida to about 65 percent in North Dakota.²

Indeed, the number of UI recipients in 2018—essentially all of whom are recipients under regular state programs—was 1.8 million, slightly more than one-quarter of the unemployed. Across these 1.8 million recipients, average weekly benefits were \$356, and the average duration of benefits was just over 15 weeks. Nearly 36 percent of recipients ended up receiving the entire span of benefits to which they were entitled (typically 26 weeks, but less in several states).

TABLE 1

The Extent and Generosity of Unemployment Insurance



Variable	
Number of employees covered by UI	141,728,000
Number unemployed	6,313,917
Number UI recipients	1,766,000
Weekly average initial UI claims	221,000
Average weekly benefit paid	\$356.48
Total benefits paid (millions)	\$27,483
Average duration of benefits (weeks)	15.35
Insured unemployment rate	1.2%
Exhaustion rate in December 2018	35.5%

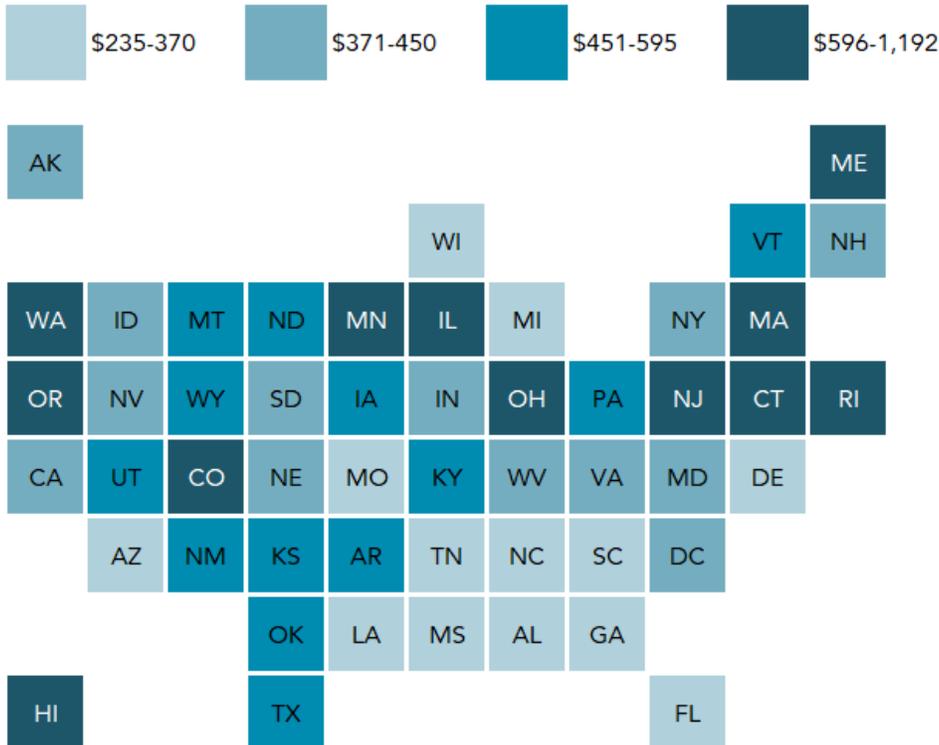
Source: Department of Labor (2019), Bureau of Labor Statistics (2019), and authors' calculations.

Note: Values are 2018 annual averages. The exhaustion rate is defined as the percent of claimants who collect all of the unemployment insurance benefits to which they are entitled (i.e., they do not cease benefit receipt until benefits are exhausted). The U.S. Department of Labor calculates the rate by dividing the 12-month average exhaustions (final payments) by the 12-month average of first payments six months prior.

The other core dimension of UI generosity is the weekly amount paid out to beneficiaries. This amount is a function of the person’s earnings during the base period (described below); the wage replacement rate is often close to 50 percent. States also impose caps on weekly benefit amounts, with the median state offering a maximum weekly benefit of \$450, though a few states offer only \$235to \$275, and others offer substantially more (figure 2).

FIGURE 2

Maximum Weekly Unemployment Insurance Benefit Including Children's Allowances, by State



Source: U.S. Department of Labor (2019).

Note: State maximums are as of January 1, 2019. Includes maximum available dependent allowances.

WORKER ELIGIBILITY REQUIREMENTS

Under federal law, a worker must have become unemployed through no fault of their own to be eligible for unemployment insurance. Within that set of unemployed workers, eligibility requirements vary widely across states. However, most states make eligibility determinations using a few key metrics. The most important is the base period: a set period before job loss during which employment and/or earnings are evaluated. This period

typically consists of four out of the last five completed calendar quarters before the quarter in which the UI claim is filed.⁴

Within the base period, state formulas focus on different earnings and/or employment calculations. For example, one common feature is a focus on “high-quarter” wages, or the quarter in which the claimant earned the most money during the base period. Some states will grant benefits if the claimant’s total base period earnings surpass a certain multiple of the high-quarter wages (e.g., Alabama requires total base period earnings to equal 1.5 times the wages earned in the high quarter). States also commonly require a minimum level of earnings over the entire base period, often with an additional restriction that earnings be obtained in more than one quarter.

Further, each state has different thresholds for required earnings and/or employment.⁵ In some states, these are a multiple of the weekly benefit amount to which a worker would be entitled; in others, they are a multiple of high-quarter wages; and in others these are paired with employment duration (i.e., total weeks or hours) requirements.

Workers must apply for benefits to have their eligibility assessed. In contrast to earlier decades in which claims were generally filed in person, today many applications are received over the phone or online. Perhaps surprisingly, this transition does not appear to have affected UI take-up (Ebenstein and Stange 2010).

For workers who are eligible to begin receiving benefits, continued receipt is conditional on the recipient continuing to search for a job and be available for work. As with worker eligibility, the specifics of these conditions depend on the state, but most states require that a UI recipient contact a minimum number of employers every week (Toohey 2017). The recipient must keep records of these contacts and, in many cases, provide them to state workforce agencies. Audits of worker reports suggest that they are largely accurate and that worker search activity is responsive to variation in state search requirements (Toohey 2017).

JOB TRAINING AND REENTRY SERVICES

Under the DOL’s Worker Profiling and Reemployment Services system, a subset of UI claimants are identified as likely to exhaust benefits and therefore good candidates for reemployment services. These claimants are required to participate in reemployment services (such as job training) and submit weekly attestations of their continued participation in order to continue to receive full benefits. Participation in approved training services can substitute for job search activity, in principle allowing a recipient to build human capital while receiving UI benefits.

Relative to other advanced economies, the U.S. spends relatively little on the public employment service and public job training programs. Historically, this spending has been scattered across several programs targeting distinct groups such as adults, youth, and dislocated workers. Assessments of the labor market impacts of job training have yielded mixed results: for example, although Workforce Investment Act (WIA)

programs for adults appear to have raised earnings, Workforce Investment Act programs aimed specifically at dislocated workers have not (Barnow and Smith 2016; Greenstone and Looney 2011). Job search assistance can have positive effects, particularly for disadvantaged workers (Card, Kluve, and Weber 2017).

The 2014 Workforce Innovation and Opportunity Act reformed and consolidated many of the U.S. government's training functions (including Workforce Investment Act programs), co-locating employment services in American Job Centers in an attempt to enhance UI claimants' access to services. UI funds from the Employment Security Administrative account are allocated to the states to use for certain job search, job matching, and placement services for UI claimants and other workers. Among the services funded are counseling, testing, and furnishing occupational and labor market information, assessment, and referral to employers; making eligibility assessments; and providing unemployment insurance claimants with referrals to, and assistance with their applications for, training and education resources and programs. The latter resources and programs include federal Pell grants; educational assistance, student assistance, state student higher education assistance; and training and education programs.

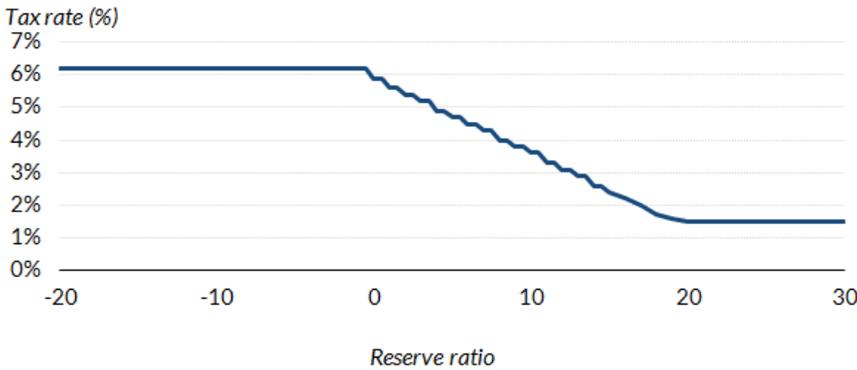
EXPERIENCE-RATED TAXATION TO FUND UNEMPLOYMENT INSURANCE

UI benefits are funded by state and federal taxes levied on employers. The federal tax, after offsetting credits, amounts to a tax rate of 0.6 percent on wages up to the federal wage base of \$7,000 per employee.⁶ The bulk of taxes, however, are collected by state UI agencies. States set a payroll tax rate for each eligible employer, and the payroll tax is levied up to a tax base that ranges between \$7,000 and \$49,800 per employee per year (DOL 2019). The unique feature of the UI system in the United States is that payroll taxes are "experience rated": the employer tax rate is tied to its layoff history. Experience rating in UI was implemented in the 1930s in Wisconsin and was intended to stabilize employment by charging firms more for sending additional workers into the unemployment insurance system (Price 1985).

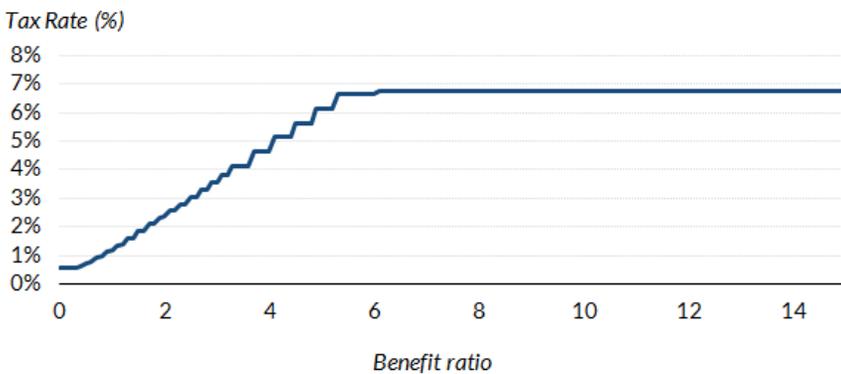
Federal law currently requires states to implement some form of experience rating. Although states vary in their rules, all states implement the basic premise that tax liability increases with an employer's propensity for its workers to draw from the UI trust fund. The two most common methods of experience rating are the reserve ratio and benefit ratio methods. Under a reserve ratio method (currently used by 31 states), a firm's tax rate is determined by benefits drawn net of tax payments as a ratio of its wage bill over a three- to five-year window (DOL 2019). One such tax schedule is used by California and is shown in figure 3,) with the tax rate on the vertical axis and the reserve ratio on the horizontal axis. The salient feature of this schedule, of course, is that as a firm's reserve ratio increases (that is, as fewer UI benefits are drawn by its employees), the tax rate falls.

FIGURE 3

Experience-rated Tax Schedules California



Alabama



Source: Department of Labor, Employment and Training Administration 204 Reports.
Note: Both tax schedules are for 2019.

In the 19 benefit ratio states, the total amount of UI benefits drawn by a firm's workers over a three- to five-year period divided by its wage bill is used to determine the payroll tax rate. Alabama's tax schedule is shown in the right panel of figure 3, again with the tax rate on the vertical axis and the benefit ratio on the horizontal axis. Though the slope of this tax schedule is the opposite of the California schedule's slope, it reflects the same principle: as additional workers draw UI benefits, a firm's payroll tax rate rises. For firms operating on the sloped portion of the tax schedule, laying off an additional worker who receives UI benefits produces an increased tax rate.

The associated cost can be substantial. For example, according to a measure calculated by the U.S. Department of Labor (shown in figure 4), if a firm is responsible (through its layoff decisions) for necessitating the payment of UI benefits equal to 1 percent of the firm's payroll, the firm's cost per employee can rise by \$400. Effects of the experience-rated tax schedule on the labor market have been studied extensively (Feldstein 1976, Topel 1984, Anderson 1993, Card and Levine 1994, Anderson and Meyer 2000, Ratner 2013), highlighting that experience-rated taxes shape labor demand. For example, Card and Levine (1994) showed that higher experience rating reduces the rate of temporary layoffs and the responsiveness of layoffs of seasonal

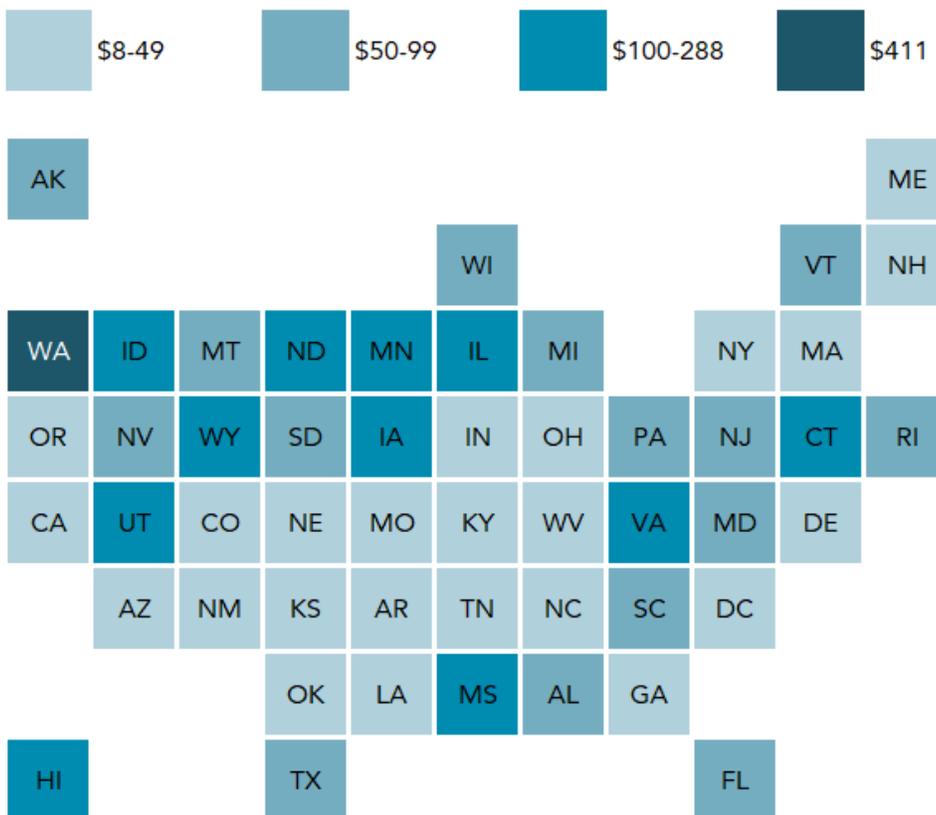
fluctuations in demand. Ratner (2013), following this literature, found that higher experience rating tends to reduce both hiring and firing rates, reducing layoff rates and UI expenditures. Although more research in this area is needed, lower labor market turnover may or may not be beneficial in the aggregate, because it might inhibit beneficial churn in the labor market. For example, a worker’s progress up the job ladder might be slowed, potentially reducing average match quality and productivity.

However, experience rating in UI is considered imperfect in the sense that employer tax rates are not strictly proportional to a firm’s experience. For example, rates do not fall to zero for the lowest-rated firms, and the tax rates are capped at maximum rates for the highest-rated firms. This feature can be seen clearly in figure 3: California’s tax rate varies between 1.5 percent and 6.2 percent, and Alabama’s varies between 0.6 percent and 6.75 percent. This implies that the firms whose workers draw the most UI benefits from the state system are no longer subject to increasing tax rates for additional layoffs.

FIGURE 4

One-Year Marginal Tax Cost of Additional UI Benefits

By state



Source: U.S. Department of Labor (2015).

Note: Additional tax per employee from an increase in benefits charged equal to 1 percent of payroll. The calculation assumes that the firm is located on the sloped portion of the tax schedule and that all employees are paid at least the taxable wage base.

The share of firms that are not subject to increasing tax rates (i.e., those that are not on the sloped portion of the tax schedule) can be substantial in some states. For example, the share of experience-rated firms in a state at the minimum rate ranged from 0 percent to 74 percent, and the share at the maximum rate varied from 0 percent to 27 percent (DOL 2016). States with tax schedules that have fewer firms on the increasing portion of the schedule have weaker experience rating than other states, thereby providing less of a deterrent to layoffs in some states compared to other states (Ratner 2013).

Experience rating varies across states in other ways as well. Two such dimensions are prominent with respect to a state's degree of experience rating.⁷ First, new firms are not subject to experience rating for between one and three years, depending on the state, and these new-employer tax rates can vary by the employer's industry. Second, the shares of UI benefits that are charged to employer accounts rather than to a general state UI account vary greatly; experience rating is more intense when the share is higher. This share varied from 63 percent to 87 percent in 2016 (DOL 2016).

In the aftermath of the Great Recession, the large influx of beneficiaries—combined with inadequate tax collections in the prior business cycle expansion—led to large deficits in the unemployment insurance trust fund and led to some states needing to draw loans from the federal government to cover UI expenses. This exacerbated a longer-term problem of many states not sufficiently funding their UI systems. Although this is not the focus of our report, proposals to reform the UI financing system have been written by O'Leary and Wandner (2018) and Vroman and Woodbury (2014).

PRINCIPLES FOR OPTIMAL DESIGN

Building on the previous section’s summary of UI design aspects and drawing from the optimal UI research literature, we assert and explain a series of principles with implications for a range of questions about UI design. We group these principles into worker and financing categories, with employer-facing policies included in the latter set. Although these principles are not intended to encompass all worthwhile UI reforms, they illuminate some critical choices policymakers face.

For each principle, we present illustrative calculations that show either the quantitative significance of the issue or highlight the trade-offs involved. A full accounting of how unemployment insurance affects worker outcomes and employer decisions—and how aspects of UI design matter for relevant outcomes—is beyond the scope of this paper. However, we highlight a few key relationships and stylized facts that underlie the principles articulated in this section.

- Front-load unemployment benefits to mitigate worker moral hazard.
- Smooth the transition from UI to work by allowing for part-time work (and partial UI receipt).
- Use minimally restrictive earnings and hours requirements for worker eligibility.
- Accommodate labor market churn, including nontraditional employment.
- Encourage ambitious job searches and progress up the job ladder.
- Consider the benefits of worker reallocation when designing UI taxes.
- Adjust experience-rated taxes to support hiring of workers with high ex-ante layoff risk.

BALANCING WORK DISINCENTIVES WITH CONSUMPTION INSURANCE

Early work by Baily (1978) examined a fundamental trade-off in the provision of UI. On the one hand, UI benefits prolong unemployment spells by making benefit receipt contingent on continued unemployment. This constitutes an economic distortion that generates a loss in economic efficiency. On the other hand, UI is specifically addressed to involuntary layoffs, which are largely (if not entirely) outside the control of workers and are consequently a source of risk for workers. By partially replacing the lost income during an unemployment spell, UI helps workers avoid dramatic, inefficient reductions in their consumption. The trade-off between these two considerations (and the empirical magnitude of their effects) is the basis for determining optimal UI benefits.

Research following on Baily (1978)—including Shavell and Weiss (1979), Hopenhayn and Nicolini (1997), Acemoglu and Shimer (1999), Fredriksson and Holmlund (2001), and Chetty (2006, 2008)—has elaborated on

this framework in several important ways. This body of literature has yielded many robust policy prescriptions, some key elements of which are described below.

Principle: Front-Load Unemployment Benefits to Mitigate Worker Moral Hazard

Most involuntary unemployment consists of workers going through short unemployment spells that are followed either by exit from the labor force or reemployment. (As explained below, however, long-term unemployment has become more common.) Figure 5 shows the share of involuntarily unemployed people who report spell length within a given interval in 2018. Of short-term unemployed, 72 percent have been unemployed for less than 12 weeks.

FIGURE 5

Involuntary Short-Term Unemployment

Distribution, by duration

Percent of unemployed (%)



Source: Bureau of Labor Statistics (2018) and authors' calculations.

Note: Data are from the pooled 2018 months of the Current Population Survey. Columns indicate the percent of involuntary short-term (i.e., less than 27 weeks) unemployed who have been unemployed for a specified range of weeks.

Typical UI benefits are paid in a fixed amount that continues until reemployment or benefit exhaustion, whichever comes first. The final week of benefits is the same amount as the first week of benefits. Although simple, this design comes with an important drawback: relative to front-loaded payout, the current system discourages participants from taking new employment. When contemplating reemployment, a UI recipient who has just started to receive benefits stands to lose the large majority of the cumulative benefit to which she is entitled. To the extent that worker's search effort or reservation wages affect the probability of reemployment, the flat benefit schedule generates a moral hazard.

This consideration and others (such as the insurance value of UI and the effectiveness of worker search) are likely to change substantially during economic downturns. The appropriate UI benefit schedule during a time of low unemployment would therefore not be optimal during a time of high unemployment. Accordingly,

maintaining a flat schedule of benefits whenever emergency or extended benefits are triggered is likely desirable.

However, during tight labor markets, different benefit profiles are worth examining. In an extreme case, suppose that participants received only a lump-sum unemployment benefit immediately after job loss and received no subsequent payments regardless of unemployment duration. A person in this situation would stand to lose no UI benefits upon becoming reemployed. Thus, UI would have no direct effect (i.e., no effect except through increased wealth) on the decision to take new employment. In other words, there would be no moral hazard associated with UI benefits. However, this extreme policy would be undesirable because of its inability to provide insurance to those who suffer longer unemployment spells through no fault of their own: someone whose job search takes two weeks would receive the same benefit as someone whose search takes 20 weeks.⁸ Moreover, it would create an incentive—depending on how experience-rated taxes were structured—to capture the front-loaded UI benefit through short spells of unemployment. (We discuss this problem later in the report when discussing experience rating.)

As UI is currently designed, people with longer unemployment spells receive proportionately larger cumulative payments. An intermediate solution would be to implement a time profile of UI benefits that slowly diminishes as the spell lengthens. This would balance the conflicting objectives of providing more insurance for the long-term unemployed (which helps smooth consumption and encourages workers to find good new matches) and minimizing moral hazard. Because moral hazard would be diminished with this structure, total UI spending would optimally be set somewhat higher. In other words, benefits for the newly unemployed would be higher than they are currently, and they would remain so for some period of their unemployment duration.

Most research on this topic—including Shavell and Weiss (1979), Hopenhayn and Nicolini (1997), and Fredriksson and Holmlund (2001)—finds that a diminishing profile of benefits would be optimal. The exact slope of the schedule depends on the empirical importance of (a) the diminution of moral hazard and (b) the reduction in insurance benefit associated with a steepening of the duration-benefit profile (as well as the loss of potential match quality benefits from prolonged job search).

Principle: Smooth the Transition from UI to Work by Allowing for Part-Time Work and Partial UI Receipt

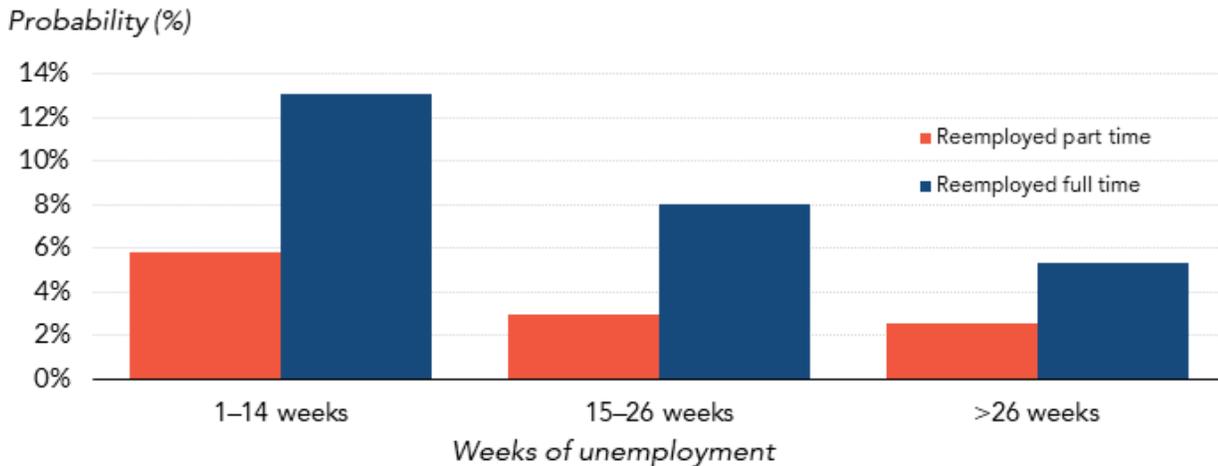
Job loss is often associated with large, persistent negative income shocks (Jacobson, LaLonde, and Sullivan 1993; Farber 1997). It can also lead to occupation and industry shifts, such as when mass layoffs occur in shrinking sectors (Baicker and Rehavi 2004). For many workers, this means that obtaining new employment is not a simple process. As workers reenter employment, they may find it necessary to take part-time work at first.

Figure 6 shows this is the case. We examine job transitions in 2009, a period of depressed hiring and high unemployment, using longitudinally matched Current Population Survey microdata. Defining part-time work as 29 hours or less in a week, we find that in a period of high unemployment, unemployed people often transition

to part-time employment (at about 35 to 45 percent of the transition rate to full-time employment).⁹ This suggests that part-time employment is an important channel out of unemployment.

FIGURE 6

Monthly Transition Probability From unemployment to part- and full-time work



Source: Bureau of Labor Statistics (2009) and authors' calculations using the IPUMS-CPS.

Note: Data are for 2009.

If UI makes no provision for this on-ramp to full-time employment, it may inadvertently discourage recipients from taking the most effective paths back to work. A simple solution is to smooth the transition from UI to work by allowing for partial UI receipt during part-time employment, as proposed by Kugler (2015) and used at times in states such as Georgia and North Carolina. One extension of this approach is to temporarily replace a fraction of any reduction in earnings experienced by a reemployed UI participant.¹⁰ This UI-linked “wage insurance” program could further encourage workers to take up new employment, but it could have the side effect of discouraging workers from searching for the best matches.

MAKING BENEFITS BROADLY AVAILABLE

Unemployment insurance serves several vital purposes. Foremost, it buffers workers from the largest economic shock that the large majority of them face. (This is particularly true for low-skill workers [Mukoyama and Şahin 2006].) In so doing, it allows workers to take more labor market risks, such as searching for better job matches (Nekoei and Weber 2017). It also provides effective fiscal stimulus during economic downturns, mitigating the severity and duration of recessions (Chodorow-Reich and Coglianese 2019).

Given these important objectives, it is unsurprising that benefits are substantial, with roughly half of worker earnings replaced by most state UI systems (up to state-specified maximum weekly benefits). However, it may

be surprising that so many workers are ineligible for UI or do not successfully apply and that UI participation (as a share of total unemployment) is currently only a bit over one-quarter. Moreover, UI take-up has fallen considerably when measured as a share of all unemployed people who receive regular UI benefits.

WHY IS UNEMPLOYMENT INSURANCE TAKE-UP LOW AND FALLING?

The share of all unemployed workers receiving regular UI benefits has been low for the past 40 years. Indeed, researchers noticed this at least 35 years ago: by some measures, the number of UI recipients in regular state programs was less than half that of total unemployment (Burtless 1983).

Figure 7 shows the number of regular UI recipients (i.e., excluding those receiving emergency and extended benefits) as a share of total unemployment from 1967 through early 2019.¹¹ From 35 to 50 percent in the 1970s, that share has since fallen to 28 percent as of early 2019. Periodic spikes in the share are associated with economic downturns. For example, during the Great Recession, the share of unemployed workers receiving UI benefits rose to 45 percent in May 2009 and quickly fell thereafter. But a secular downward trend is evident.

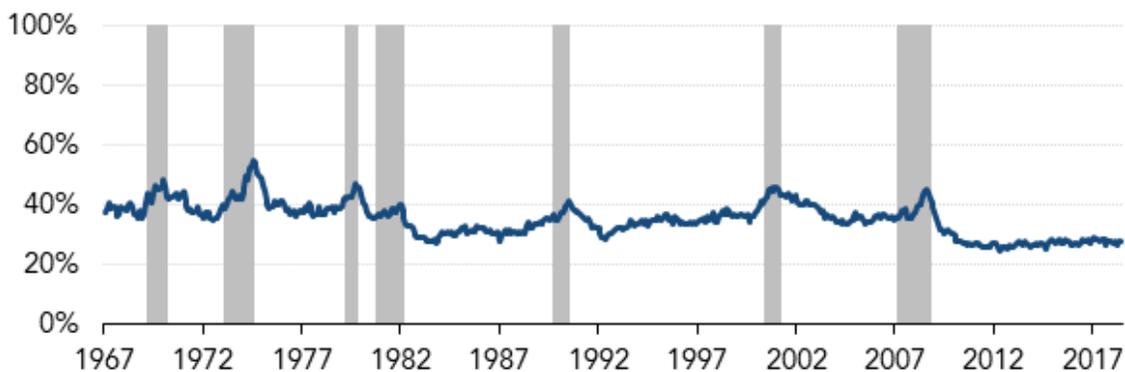
We focus on regular benefits to the exclusion of emergency and extended benefits because these provide a clearer, less procyclical picture of how typical UI reciprocity has evolved over time. This underlying picture is generated by state policy decisions, the nature and duration of unemployment, and the characteristics of workers and job spells that are relevant for eligibility.

FIGURE 7

Regular Unemployment Insurance Recipients As a share of unemployed workers, 1967–2019



Unemployment insurance recipients (%)



Source: Bureau of Labor Statistics 1967–2019, U.S. Department of Labor 1967–2019, and authors' calculations.

Note: Only recipients of regular state unemployment insurance programs are included. Data are seasonally adjusted.

Some of the long-term decline in the share of unemployed workers receiving regular UI benefits is attributable to the rise in long-term unemployment (i.e., unemployment for 27 weeks or more), which is

generally not covered by regular state UI programs. The share of unemployed workers with long spells of unemployment increased from 11 percent in 2000 to 21 percent in 2018.

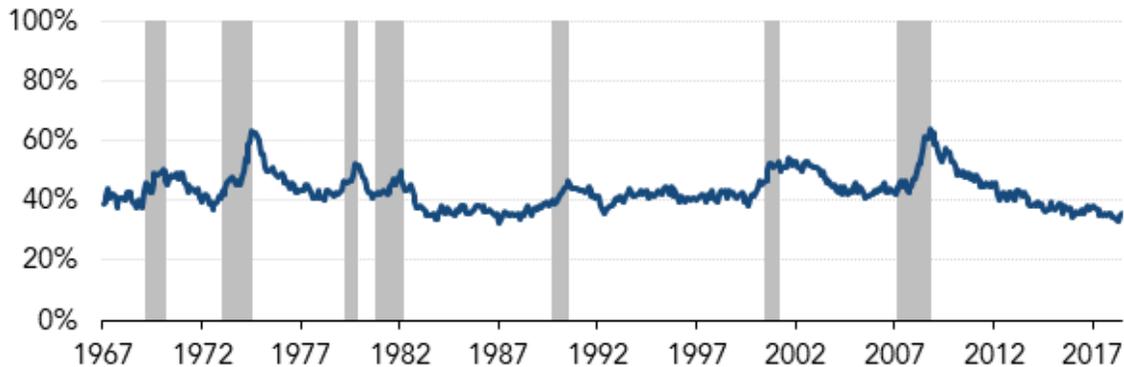
One way to see how this affected UI reciprocity is to limit the analysis to people unemployed for 26 weeks or less. Figure 8 does exactly this, revealing a much smaller secular decline in UI reciprocity. Adjusting for the duration of unemployment, UI reciprocity has declined by substantially less than initially appears to be the case, although current rates of take-up remain near all-time lows.

FIGURE 8

Regular Unemployment Insurance Recipients As a share of short-term unemployed workers, 1967–2019



Unemployment insurance recipients (%)



Source: Bureau of Labor Statistics 1967–2019, U.S. Department of Labor 1967–2019, and authors' calculations.

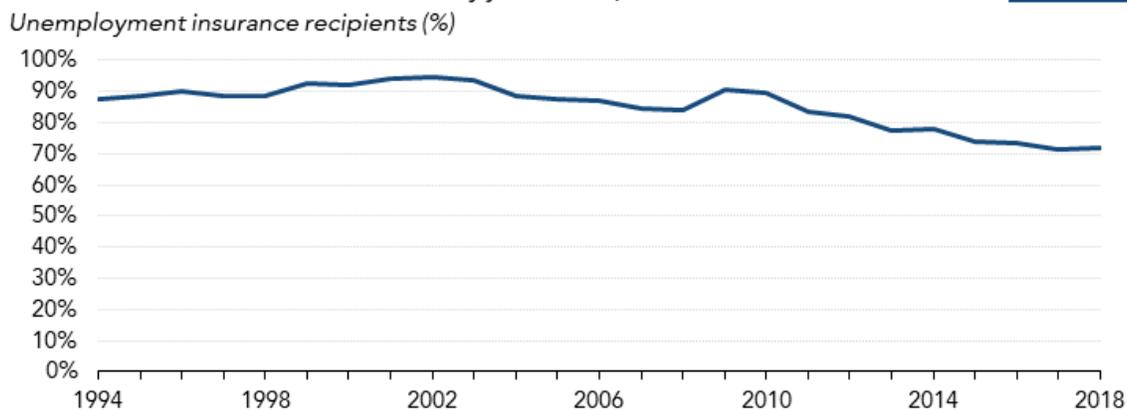
Note: Only recipients of regular state unemployment insurance programs are included. All series are seasonally adjusted. The denominator is the number of unemployed for durations 26 weeks or less.

But UI reciprocity rates remain low for several other reasons unrelated to unemployment duration. In particular, reciprocity is lowered by the ineligibility of many of the short-term unemployed whose job separation was not of a type that qualified for UI. Generally speaking, being fired for cause and quitting voluntarily do not trigger UI eligibility for a worker, and some unemployment is caused by these. Figure 9 therefore shows regular UI recipients as a share of all short-term *involuntary* unemployment (26 weeks or less).¹²

This figure yields two insights. First, the reciprocity rate—particularly from 1994 to 2010—is much higher than if voluntary unemployment is included in the denominator.¹³ Second, the reciprocity rate declines more dramatically from 1994 to 2018 than it does in figures 7 and 8. A rising ratio of involuntary to voluntary unemployment accounts for the difference.

FIGURE 9

Regular Unemployment Insurance As a share of short-term involuntary job losers, 1994–2018



Source: Bureau of Labor Statistics 1994–2018, U.S. Department of Labor 1994–2018, and authors' calculations.

Note: Only recipients of regular state unemployment insurance programs are included. The denominator is the number of unemployed workers for durations 26 weeks or less who report having become unemployed due to temporary layoff, involuntary job loss, or the ending of a temporary job. Series begins in 1994 due to limited data availability prior to this year, and is shown at the annual frequency due to lack of seasonally adjusted data.

Involuntary job loss and nonexhaustion of benefits are not the only conditions for UI eligibility, of course. Many of the unemployed are ineligible for UI because their earnings history was insufficient to meet state requirements, as discussed in the next section. And even for those who are eligible, take-up can be imperfect. O’Leary and Wandner (2018) discuss state practices that can suppress take-up: for example, Florida is characterized by unusually low UI participation, which is in part caused by its requirement that UI applications be made over the internet and its closure of UI application call centers.

SUPPORTING WORKER ELIGIBILITY

In principle, worker eligibility for UI could be increased if states with restrictive provisions loosened any of the restrictions just discussed (the duration of unemployment, the allowable reasons for unemployment, and the required earnings and hours history). The first two types of limitation have sensible rationales, some of which we discussed above. However, the third type of eligibility restriction could be loosened without compromising UI’s objectives. Indeed, the importance of UI’s social insurance role may be greater for those workers who currently do not meet earnings history requirements.

The following three best practices aim to broaden the consumption smoothing benefits of UI to a wider population of workers. They therefore entail targeted relaxations of worker eligibility requirements.

Principle: Use Minimally Restrictive Earnings and Hours Requirements for Worker Eligibility

Regular unemployment insurance is structured as an employer-funded benefit. The trust funds that pay for benefits are supported by experience-rated taxes on employment. Therefore, the benefits paid to workers can naturally be restricted to those who were employed before unemployment (as opposed to those who enter the labor force and begin searching for work).

However, worker earnings history requirements could be loosened without abandoning the basic structure of the UI system. This would necessitate more funding for UI, which could be obtained either from increased experience-rated employer taxes or (preferably) from state general revenues.¹⁴ We prefer the latter because the additional UI participants would have relatively low earnings and employment, and as such would be a smaller part of the employer tax base.

What would the characteristics be of additional participants if eligibility restrictions were relaxed? In table 2, we compare UI recipients to (1) people whose UI claims were denied because of earnings and hours restrictions and (2) people who did not apply because they believed they were not eligible for the same reason. UI recipients tend to be substantially older, more highly educated, and higher-income than unemployed people not receiving UI.¹⁵ New recipients (if eligibility rules were relaxed) would also be less likely to be white and married.

TABLE 2

Characteristics of UI Recipients and Nonrecipients



	Unemployment insurance recipient	Did not qualify because of work/hours requirement	Did not apply because of work/hours requirement
Percent female	0.47	0.39	0.44
Mean age (years)	42.09	34.50	29.09
Percent white	0.63	0.52	0.51
Percent married	0.48	0.27	0.18
Median family income	37,500	17,500	27,500
Percent without high school diploma	0.13	0.16	0.30

Source: Current Population Survey Unemployment Insurance Non-Fileers Supplement 2005. Data compiled by the Inter-university Consortium for Political and Social Research.

Note: Sample is limited to those 18–64 who were unemployed at the time of the supplemental interview.

Callan, Lindner, and Nichols (2015) studied several UI proposals, some of which were encouraged under the American Recovery and Reinvestment Act in 2009. They look at a suite of reforms including relaxing the work history requirement, expanding UI eligibility to those who are looking for part-time rather than just full-time work, and expanding eligibility to those who separated from their employer for good causes. They find that these reforms could raise UI eligibility by about 20 percentage points, with many of the newly eligible having lower earnings and diminished labor force attachment.¹⁶

Principle: Accommodate Labor Market Churn, including Nontraditional Employment.

A rigid, permanent separation of individuals into labor force participants and nonparticipants is less and less reflected in labor market data, particularly for prime-age men. By one estimate, one-third of the decline in prime-age male participation since 1977 can be accounted for by the increasing number of workers who frequently transition in and out of the labor force (Coglianese 2018). Today, many workers have erratic and

volatile employment and earnings, and safety net institutions that fail to acknowledge this reality often serve their target populations poorly (Bauer, Schanzenbach, and Shambaugh 2018).

Because of its earnings history requirements (including some states' provisions that earnings must be dispersed throughout the base period) unemployment insurance is often unavailable to people who move in and out of employment or full-time employment. For example, Pennsylvania requires that an applicant have (a) at least 49.5 percent of base period wages earned outside of the highest quarter of earnings and (b) 18 weeks of the base period in which at least \$116 was earned. These requirements exclude some workers with intermittent labor force participation who would otherwise satisfy a total base period earnings requirement.

The Bureau of Labor Statistics recently released a supplemental survey studying the phenomenon of contingent and nontraditional work. One of the key questions asked in this survey was about workers' expectations of continuity in their current job. A small fraction of workers (3.8 percent) are considered by the BLS to have contingent work as their primary employment, some (but not all) of which is gig work. Of these workers—and focusing on workers who report duration expectations—more than half expect their employment to last six months or less (BLS 2017; authors' calculations).

"Gig work," defined as employment mediated by an online platform such as Lyft or TaskRabbit, remains a marginal labor market phenomenon, at least when considering only people who use it as their primary employment.¹⁷ However, states' methods of calculating UI eligibility have come under scrutiny for their inapplicability to the many workers who have seasonal employment, are gig workers, or are otherwise employed in a nontraditional relationship.

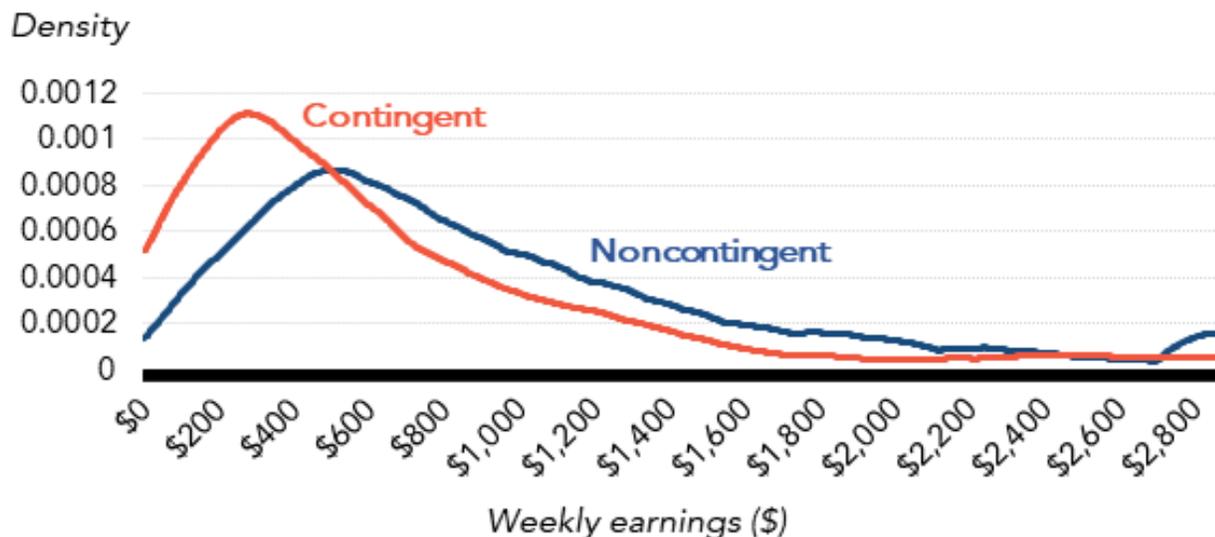
Moreover, contingent workers earn substantially less than noncontingent workers (figure 10). Contingent workers are especially likely to fail UI earnings tests both because of volatility and because of insufficient total earnings.

Supporting transitions from UI into successful self-employment should also be an objective of the UI system. A few states currently offer self-employment assistance as part of their UI system, which allows recipients to receive benefits while establishing their own businesses. Job search and availability requirements are suspended for UI recipients participating in a self-employment assistance program (DOL 2016).

State UI programs usually require workers to be actively seeking and available for traditional full-time work. State eligibility requirements also emphasize stability and continuity of employment. To the extent that some work is organized along different lines, perhaps with more volatility of hours and diminished (or no) involvement of a traditional employer, then UI rules may serve this segment of the labor force poorly.¹⁸

FIGURE 10

Wage Density, by Contingency Status Among employed workers



Source: BLS (2017) and authors' calculations.

Note: Contingent workers are defined according to the conditions assumed for BLS Estimate 3.

SUPPORTING HIGH-QUALITY REEMPLOYMENT

As a core labor market institution, unemployment insurance shapes worker behavior in key ways. Researchers and policymakers sometimes focus on unemployment spell duration effects to the exclusion of other labor market outcomes, but all are important for understanding UI. In particular, the size and duration of benefits could have effects on post-unemployment earnings and more generally the quality of matches between firms and workers.

Principle: Encourage Ambitious Job Searches and Progress up the Job Ladder.

On one hand, UI may prolong unemployment spells by discouraging search efforts or raising reservation wages. This can in turn impair the quality of post-unemployment labor market outcomes, whether through deteriorating human capital or (through other channels) diminishing employer willingness to hire people with long unemployment spells. On the other hand, UI may enhance post-unemployment outcomes by funding a more ambitious job search. Rather than accepting the first job that presents itself, a UI recipient might conduct a lengthier or costlier search that yields a higher-wage position.¹⁹ The empirical literature on post-unemployment UI impacts has generated widely different results: some studies have found substantial positive effects of UI generosity on match quality (Acemoglu and Shimer 2000; Centeno 2004; Van Ours and Vodopivec 2008; Nekoei and Weber 2017), some have found modest positive effects (Addison and Blackburn 2000), and still others have found zero or negative effects (Card, Chetty, and Weber 2007; Schmieder, von Wachter, and Bender 2016).

The design of UI benefits can shape the duration and type of job search people undertake and therefore affects their post-unemployment outcomes. Regular and emergency benefits are both portable across state boundaries. This allows job searchers to conduct a broad search that might take them from a depressed local economy to a booming labor market; this process is part of the historical mechanism that drives recovery from negative economic shocks (Katz and Blanchard 1992). By contrast, extended benefits are not portable, and workers traveling from a state that is “triggerred on” for extended benefits to a state that is not will find their benefits cancelled after a maximum of two additional weeks.

Nunn, Kawano, and Klemens (2018) find evidence that this lack of portability affects interstate migration patterns, reducing mobility in the way that theory predicts. As shown in table 3, migration is lower from states that are triggered on to extended benefits ($EB_t^O = 1$) to those states that are not ($EB_t^D = 0$), even after adjusting for labor market conditions, weekly benefit generosity, and typical state migration patterns. Table 3 indicates that although the migration effect of one additional week of UI in the state of origin is a 0.24 percent increase in the probability of migration, lack of extended benefits portability roughly offsets this effect

TABLE 3
Effect of UI Weeks Available on Probability of Interstate Migration



	(1)	(2)	(3)
$TotalUI_t^O$	0.00236*** (0.00003)	0.00281*** (0.00003)	0.00188*** (0.00005)
$EB_t^O \cdot 1(EB_t^D = 0)$	-0.00194*** (0.00007)	-0.00292*** (0.00007)	-0.00285*** (0.00007)
State-pair fixed effects	Yes	Yes	Yes
Quadratic unemployment rates	No	Yes	Yes
Maximum benefit amount	No	No	Yes

One reform that could enhance the ability of UI to support an ambitious job search is a provision for more generous benefits for unemployed people who move between states or switch careers. Interstate migration in particular is costly in both monetary and non-monetary terms (Wozniak 2018). Higher weekly benefits, a lump-sum payment, or additional weeks of benefits could all help offset the costs that prevent workers from switching states or occupations. To the extent that workers do not internalize all the social benefits associated with such actions, UI subsidies would correct a market failure.

INTERNALIZING LAYOFF COSTS WITHOUT DISTORTING HIRING DECISIONS

Like any government program, unemployment benefits must be funded. One possibility (not chosen by policymakers, except for emergency and extended UI benefits) is to fund UI largely or entirely from state or federal general revenues.

Reflecting its origins as a social insurance program, regular UI has always been funded primarily with taxes on employers, the economic incidence of which is at least partly on workers themselves. Workers implicitly pay into the UI program during periods of employment (in the form of slightly lower wages than they would otherwise receive) and receive benefits in the event of an adverse shock.

Economic theory provides useful guidance in thinking about optimal UI funding and evaluating the current design, much as it does for setting optimal UI benefits. When a worker is laid off without cause, the UI system incurs a liability: the expected payments that worker is entitled to until she becomes reemployed or benefits are exhausted. Absent experience-rated taxes, however, an employer does not consider this liability when deciding whether to lay off a worker and will consequently lay off more workers than is socially optimal (Blanchard 2004; Blanchard and Tirole 2008).

Assuming no other spillover effects from a layoff, the optimal policy is to have a tax on layoffs that equals the expected costs of supplying UI benefits. However, this statement yields at least two important problems. The first is that the spillover assumption is likely violated. The second is that a layoff tax can reinforce socially undesirable hiring behavior. We discuss each objection below in the context of a UI principle.

Principle: Consider the Benefits of Worker Reallocation when Designing UI Taxes

Absent any UI experience-rated taxes, firms and workers would have a joint incentive to capture the UI payments, at least in certain circumstances. For example, rather than take paid or unpaid leave, employees would simply be “laid off” and receive UI until returning to work. Agency scrutiny would reduce but perhaps not eliminate such abuses as long as a strong monetary incentive remained. Penalizing employers for layoffs reduces this incentive, consistent with the findings by, for example, Topel (1983) and Card and Levine (1994), that temporary layoffs are reduced by experience rating.

However, this dynamic does not characterize most layoffs. Much of the labor reallocation in the U.S.—the millions of hires and separations that occur every month—is economically and socially beneficial (Topel and Ward 1992, Mukoyama 2014). Layoffs tend to eliminate relatively low-quality job matches, allowing workers and firms to form new relationships that are more productive (Foster, Grim, and Haltiwanger 2016; Hershbein and Kahn 2018).

Changes in UI or other policies that reduce layoffs through higher experience-rated taxes will generally also reduce hires (Ratner 2013); this in turn, as an unintended side-effect, reduces the scope for improvements in match quality and wages. Worker reallocation raises average match quality and can help workers achieve more bargaining power in their existing jobs (Shambaugh, Nunn, and Liu 2018).

Indeed, the potential for increased hiring (and the job switching it generates) to raise aggregate wages (Haltiwanger et al. 2018) is suggested by wage growth patterns for individuals in longitudinal data. In figure 11, we show nominal median and mean earnings growth for workers who remain in the same job, switch jobs but

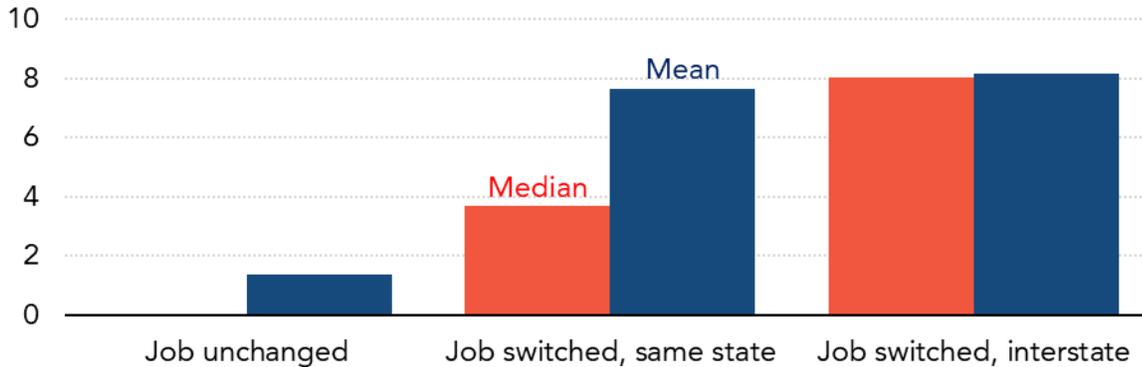
remain in the same state, and switch jobs while also moving across states. Job switching is associated with substantially stronger earnings growth.²⁰

FIGURE 11

Median and Mean Earnings Growth 2013, by mobility status



Percent change (%)



Source: U.S. Census Bureau 2014; authors' calculations.

Note: The sample is restricted to workers ages 25-54 who worked at least 35 hours per week. Means are winsorized at the 5th and 95th percentiles.

However, these match quality and wage benefits should be weighed against the fiscal cost (in the form of UI expenditures) that an employer generates when it lays people off, as well as the persistent labor market deficits experienced by some workers who are laid off (Jacobson, LaLonde, and Sullivan 1993). Experience rating may also provide other labor market improvements (e.g., less volatile business cycles).

What do these considerations mean for the optimal experience-rated tax? One implication is that the optimal experience-rated tax should penalize employers by some amount below the full cost of expected UI spending associated with a layoff (potentially well below it). In other words, the tax incurred by an employer after a layoff should generally be lower than the expected expenditures on UI for that worker. Although the marginal tax cost of a layoff is very difficult to calculate in practice, estimates by Ratner (2013) and Topel (1983) suggest that on average it is indeed well below the full UI cost.

At the same time, there is no strong justification for maintaining flat portions of the UI tax schedule (figure 3). The implication of the minimum and maximum flat portions of the tax schedule is that low-experience firms subsidize the fiscal cost of high-experience firms. Only firms on the upward-sloping portion of the tax schedule or that expect to be on it at some point in the future have any incentive to adjust their layoff behavior. Krueger (2008) suggests that the maximum tax rate should be raised to bolster experience rating and reduce the costs layoffs impose on society. Going further, policymakers should consider eliminating these minimum and maximum rates as part of an overall reform to UI funding.²¹

Finally, it is also important to distinguish (if possible) between spurious employment cycling that aims to capture UI benefits and job flows that are socially beneficial. One simple way to make such a distinction is to focus on layoffs that do not lead to returns to the same employer, because such returns seem less likely to result in higher match quality. That is, a higher tax rate could be assessed for layoffs that are followed by re-hiring by the same employer; Fujita and Moscarini (2017) find this to be a substantial share of overall hiring.

If experience-rated taxes will not optimally cover all UI spending needs, how should the remainder be funded? Currently, some UI spending is funded through UI taxes that are not experience rated (or not fully experience rated, in the sense that employers face minimum and maximum UI tax rates). This type of taxation has the substantial disadvantage of lowering the joint after-tax return to employment. Given that much of the rest of state and federal employment policy is aimed at encouraging employment, it may be counterproductive to raise substantial revenues from taxes that do the opposite. (Other sources of general revenues, such as progressive income taxes, may have smaller negative effects on the return to work for low- and middle-wage workers.)

Funds that are not obtained from experience-rated taxes should therefore be supplied from general revenues, which are less likely to discourage employment.

Principle: Adjust Experience-Rated Taxes to Support Hiring of Workers with High Ex-Ante Layoff Risk.

Very few employers hire workers with the explicit intention of laying them off (with the exception of seasonal hiring). Job turnover is costly (Muehleman and Leiser 2018) and employers seek to avoid it, even absent experience-rated taxes. But experience-rated taxes, which penalize layoffs, could intensify employers' desire to hire workers with low subsequent layoff risk.

In a labor market with ex-ante undifferentiated workers, this desire would have no implications. Employers would find out later whether their employees were likely to be fired, but they would not be able to act on this information when conducting their hiring processes. Because the labor market plausibly provides many signals of ex-ante layoff risk, it is necessary to take them into account when setting UI policy.

Indeed, easily observable demographic information is correlated with the probability of a layoff at the labor market level. Although these layoff probability differences are likely not the same as those that exist conditional on application to a particular firm, they are suggestive of an empirical role for the dynamic described above.

We examine longitudinally matched Current Population Survey microdata, finding that demographic information that is readily observable (to the employer) is strongly correlated with layoff probability after controlling for the worker's state of residence, industry, and occupation. Black and Hispanic workers, younger workers, and those with less education all face a higher probability of layoff.

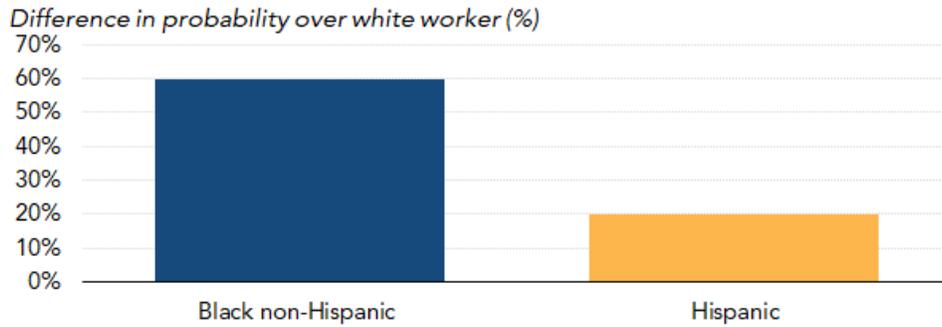
Some of the largest differences are associated with race and education. Black non-Hispanic workers are fully 60 percent more likely than white workers (the omitted race category in figure 12) to experience a layoff. Those with a four-year college degree are nearly 80 percent less likely to experience a layoff than those without a high school degree (the omitted education category).

Discriminatory hiring practices may therefore increase when firms face additional incentive—generated by experience-rated taxation—to minimize the likelihood of future layoffs. Moreover, workers in groups with higher layoff risks typically have a harder time finding a job as well (Cajner et al. 2017). If a laid-off worker experiences a longer UI spell, that can in turn raise a firm’s experience rating more than a worker who is quickly reemployed. This may lead to further incentives to hire workers from groups that typically have more favorable labor market outcomes.

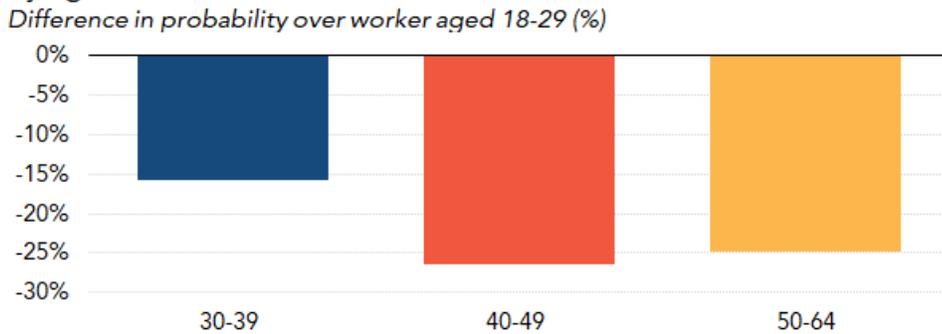
What can be done to mitigate this risk, aside from simply reducing the intensity of experience rating? One possibility is to credit firms against their experience-rated taxes for hiring workers from groups (e.g., those with a high school degree or less) with higher layoff risks. That is, employers would see an increase or decrease in their overall tax liability in proportion to their hiring of groups with lower or higher ex-ante layoff risk. This type of reform could undermine the statistical discrimination that would otherwise diminish the hiring of high-layoff (and typically disadvantaged) labor market groups.

FIGURE 12

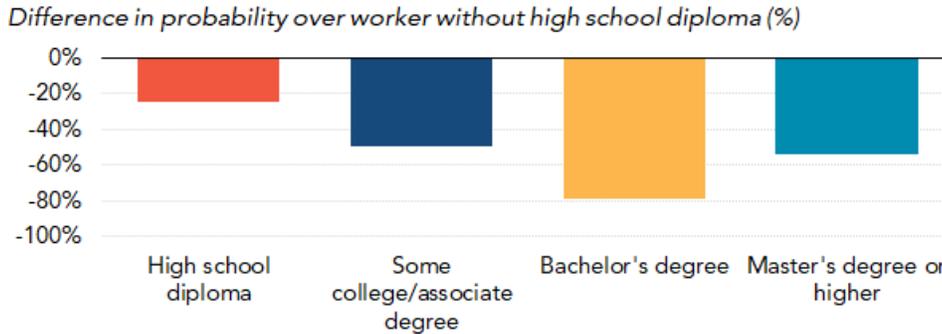
Differences in Layoff Probability By race



By age



By education level



Source: Bureau of Labor Statistics (2018) and authors' calculations.

Note: Sample restricted to workers 18-64 who are non-self-employed in the private sector. The sample is further restricted to those who were employed in the previous month. The regression is a weighted probit with controls for four age categories, sex, race, education, major industry, major occupation, and state. A layoff is defined as those who transitioned from employment to unemployment and gave one of the following reasons: job loser/on layoff, other job loser, temp job ended. All coefficients shown are statistically significant at the 0.05 level. The authors thank Chris Nekarda for providing the matched CPS data.

CONCLUSION

Unemployment insurance protects more than 140 million workers from some of the worst consequences of job loss. By replacing a share of earnings while workers look for new employment, UI allows for smoother consumption during unemployment spells and an economy that is more robust in the face of negative shocks.

But UI also has a host of ancillary effects that require careful study, the results of which must be incorporated into the design of the program. UI affects employer behavior through its system of experience-rated employer taxes. UI affects worker search behavior and reemployment decisions through the timing and generosity of its unemployment-contingent benefits. And through its eligibility rules, UI policy determines who is protected from labor market shocks.

Economic theory and evidence regarding these questions yield useful insights into the optimal design of UI. Although UI is in many respects a well-functioning program that accomplishes its core objectives, many opportunities are available to improve it. A better-functioning UI program is one that can be more readily expanded in its generosity and reach to enhance the insurance that workers need when navigating a volatile labor market.

NOTES

- ¹ Excellent summaries of different aspects of UI policy can be found from the Department of Labor (2019), Wandner (2018), Whittaker and Isaacs (2016), and a wide variety of Center on Budget and Policy Priorities publications.
- ² State variation in reciprocity could in principle be caused by differences in eligibility or take-up rates. Wandner (2018) suggests that it is primarily caused by differences in eligibility rules.
- ³ North Carolina adopted a policy in 2013 that reduced the maximum weekly benefit amount from \$530 to \$350 and reduced the maximum number of benefit weeks from 26 weeks to a variable cap that depends on the state unemployment rate (Isaacs 2018).
- ⁴ Some states will also use an “alternate base period” (ABP)—the last four calendar quarters before the claim filing—when a worker does not qualify under the traditional base period but has earned wages in the quarter directly before the quarter in which they filed for unemployment.
- ⁵ For details, see table 3-3 in Department of Labor (2016).
- ⁶ The credit against the federal tax rate is available to firms who are current on their UI taxes and operate in states with conforming UI systems, including states that have outstanding loans from the Federal Unemployment Insurance Trust Fund.
- ⁷ For additional details, see chapter 2 of Department of Labor (2019).
- ⁸ As discussed above, this disadvantage would become even more pronounced during weak labor markets, when jobs are scarce and the insurance value of UI is even higher.
- ⁹ This relationship is qualitatively similar throughout the most recent business cycle (not shown).
- ¹⁰ See, for example, Wandner (2016), Kling (2006), and Kletzer and Rosen (2006).
- ¹¹ One important note is that the numerator and denominator for this figure (and the next two figures) are obtained from different sources. The numerator is reported by the U.S. Department of Labor and is based on administrative counts of recipients. The denominator is based on published tables or public-use microdata from the Current Population Survey, a Bureau of Labor Statistics survey. The calculation implicitly assumes that workers are appropriately classified as unemployed or not in the labor force. If, for example, some individuals in the Current Population Survey are classified as “not in the labor force” while still receiving UI benefits, the UI reciprocity rate would be biased upward.
- ¹² Note that microdata availability limits this figure to 1994–2018.
- ¹³ If the Current Population Survey concept of “involuntary” unemployment is more restrictive than the effective average state definition of involuntary unemployment (or if some UI recipients classify themselves as labor force nonparticipants in the Current Population Survey) this fraction would be biased upward. The high shares shown in figure 9 suggest this is the case.
- ¹⁴ A shift in experience-rated taxes could be an increase in the intercept of the tax schedule as opposed to an increase in the slope.
- ¹⁵ We follow Vroman (2009) and use the 2005 Unemployment Insurance Non-Filers supplement that was conducted in January, May, July, and November of 2005. The data we used were compiled by the Inter-university Consortium for Political and Social Research. We restrict our sample to unemployed respondents who received benefits since their last job (first column of table 2), applied for but did not receive benefits, or did not apply for benefits because they had not worked or earned enough to qualify (according to their self-reports).
- ¹⁶ Expanding eligibility of UI to those seeking part-time work is somewhat different than the policy proposed above, which is to permit partial UI receipt through a part-time employment spell. Of course, the latter would necessitate expanding UI eligibility to those seeking part-time employment as well.
- ¹⁷ See Jackson, Looney, and Ramnath (2017) for details.

NOTES

- ¹⁸ That said, it is not clear whether unemployment insurance is an appropriate institution for workers who have control over their hours of work. If a gig worker is able to switch easily between employment and unemployment, the moral hazard associated with UI could be much higher than for traditional employees. Harris and Krueger (2015) take this view, arguing that workers in alternative employment arrangements (whom they term “independent workers”) should receive more protections than independent contractors but not the full set of protections available to traditional employees.
- ¹⁹ This dynamic is partially in tension with—and should be balanced against—the recommendation above to implement a downward-sloping schedule of benefits, given that the latter diminishes worker insurance against the risk of a lengthy job search. However, front-loaded benefits can provide liquidity-constrained workers with the up-front resources to pay for a move or for other costs associated with an ambitious job search.
- ²⁰ Median wage growth is zero for job stayers in this sample.
- ²¹ One objection to this reform is that employers in high-turnover industries would face a greater tax burden than they did previously. If this is a concern, policymakers could rebate some experience-rated tax revenues as a lump sum to employers in industries with high turnover.

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