WAGE INSURANCE AND WAGE SUPPLEMENTS:

REVIEW OF THE LITERATURE AND SUPPORTING DATA

A Report to the United States Department of Labor



Ray Marshall Center for the Study of Human Resources

LBJ School of Public Affairs
The University of Texas at Austin
3001 Lake Austin Blvd.,
Suite 3.200
Austin, TX 78703

Phone: 512-471-7891 www.raymarshallcenter.org

Prepared by:

Christopher T. King Kristie Tingle

September 2015





TABLE OF CONTENTS

Table of Contents	i
Acknowledgements	ii
Abstract	iii
Introduction	1
Unemployment Insurance Overview	1
The Problem in Brief	3
A Topical Review	5
Employment and Earnings Losses and Other Costs of Job Displacement	5
Incentives and Disincentives Associated with Traditional UI	9
Wage Insurance and Supplements: Design Parameters	10
Experience with Wage Insurance/Supplement and Reemployment Programs	13
United States	13
Canada	15
Possible Datasets	16
Concluding Observations and next steps	20
Bibliography	21

ACKNOWLEDGEMENTS

We thank the following members of the Wage Demonstration Project Advisory Committee for their support and their insightful comments on drafts of this report: Doug Holmes, Richard Hobbie, and William Spriggs, Jr. A number of other individuals with the U.S. Department of Labor's Employment and Training Administration, Unemployment Insurance Program and Chief Evaluation Office also provided comments and suggestions that improved the quality of the final product, including: Scott Gibbons, Wayne Gordon, Richard Mueller, Demetra Nightingale, Rob Pavosevich, and Ron Wilus.

Several Ray Marshall Center staff also contributed to the project and the preparation of this report, including: Greg Cumpton, Heath Prince, and Susie Riley.

ABSTRACT

The U.S. labor market has evolved significantly since the creation of the unemployment insurance (UI) program in 1935. The provision of the temporary cash benefits associated with UI has changed as well, yet the basic structure of the UI program remains the same. Due to the possibility that features of the UI program prolong periods of unemployment, many are looking to alternative measures to encourage rapid reemployment.

This paper examines the literature surrounding the provision of wage insurance and wage supplements to unemployed individuals. We begin with an overview of UI from its inception to its present form, then examine the problems surrounding the dynamism of today's labor markets. An overview of the costs associated with job displacement is presented, along with a look at incentives and disincentives associated with the provision of UI. We then look at the design parameters suggested in recent literature for wage insurance and/or wage supplements as an alternative to UI, including supplement amount, duration, financing, costs, and necessary administrative infrastructure. Evaluations of wage insurance/supplements and reemployment programs in the United States and Canada are discussed, and a description of publicly available datasets used for analysis of job and earnings losses is provided. We conclude with an outline of the next steps toward the creation of a demonstration and evaluation of providing wage insurance and/or wage supplements as an alternative to traditional UI.

INTRODUCTION

The University of Texas at Austin's Ray Marshall Center is conducting background research for the U.S. Department of Labor's Employment and Training Administration to support the design of a demonstration and rigorous evaluation of providing wage insurance and/or wage supplements to unemployed individuals in lieu of more traditional unemployment insurance (UI). As part of this project, Center researchers have reviewed existing research on the topic, as well as supporting data. Subsequently, we plan to identify options for further research and/or demonstration(s) to test various wage supplement/insurance strategies and to analyze the feasibility of these options. This report presents the results of the literature and data review.

The next section provides an overview of the UI program in the United States, after which the third section states the problem that wage supplements and wage insurance are intended to address. The fourth section then offers a review of the available research on issues related to the provision of wage supplements and/or insurance, organized topically. The fifth section examines the experience with wage insurance and wage supplement efforts to date in the United States and Canada. The sixth section briefly describes datasets that might be accessed to evaluate the outcomes and impacts from a possible demonstration evaluation of a wage insurance/supplement program. The final sections offer conclusions and a number of next steps for moving forward on a wage insurance/supplements demonstration.

UNEMPLOYMENT INSURANCE OVERVIEW

Following the lead taken by Wisconsin (1932) and a handful of other states (CA, MA, NH, NY, UT and WA), the United States initially created UI under the Social Security Act in 1935 as a federal/state social insurance program to address deep and widespread unemployment during the Great Depression.¹ Within two years, all 48 states, the District of Columbia, Alaska and Hawaii had established UI programs under these provisions. The UI program was initially designed "to stabilize the economy and alleviate personal hardship stemming from involuntary job loss" (USDOL, 2010). UI provides temporary cash benefits to individuals who become unemployed through no fault of their own, so that they can meet their basic financial needs and provide for their families while searching for work. UI payments help to maintain an individual's purchasing power and thereby serve as one of the more important "automatic stabilizers" in the economy. As Van Horn (2013) and others have noted, UI was designed primarily to address temporary, not permanent, job loss.

.

¹ This discussion draws from USDOL (2010) and USSSA (2011).

Some of the more important changes to the UI program over its history according to USDOL (2010) include these:

- The duration of regular state UI benefits has increased from 16 weeks to the current maximum of 26 weeks in most states.
- Harsher disqualification provisions have been introduced. In the early years of the
 program, states did not have provisions to disqualify individuals for quitting
 work, being fired for misconduct, or refusing suitable work, but deemed them
 ineligible for a certain period of time. All states now have such provisions.
- Requalification standards have become stricter. In 1952, only 12 states required individuals to obtain new employment to requalify for benefits after a disqualification, compared with 50 states currently.
- Coverage requirements have changed over the years. In 1935, employers who employed eight or more workers were covered. In 1954, coverage was extended to those employers who employed four or more workers. In 1970, coverage was further extended to those who employed one or more workers.
- New technologies have substantially changed benefit provision. In the mid 1990s, states began to shift from in-person to remote claims filing, first by telephone, and later via the Internet. Approximately 85% of all UI claims in the U.S. are now filed remotely.²

The onset of the Great Recession and passage of the American Recovery and Reinvestment Act (ARRA) of 2009 and subsequent trade and extended unemployment legislation brought about additional changes and created considerable implementation challenges for the UI and trade adjustment assistance programs (see Chocolad et al., 2013; Eberts & Wandner, 2013; and Wandner, 2013). In the six-year period following the start of the Great Recession, state workforce and UI program administrators had to contend with unprecedented workload increases, funding shifts, and continual changes in program provisions, including competing versions of the nation's trade adjustment assistance and extended UI programs. By all accounts, these programs and their staff responded well under fire but have continued to struggle with program changes and erosion of the resources they have to do their jobs (Barnow & Hobbie, 2013; and Trutko & Barnow, 2013). It is worth noting that \$7 billion in enhanced federal funding became available for states to modernize UI under ARRA — including using alternative base periods, extending UI to part-time workers, and easing eligibility for those leaving jobs for

2

² De-linking of UI claims filing and job-search documentation has become an important issue in policy circles.

family reasons — and 39 states responded to the offer, collecting \$4.4 billion to update their systems (NELP, 2012). The fact that a significant number of states did not update their UI systems may contribute to problems of inter-state variation in and lack of responsiveness to labor market conditions by UI programs identified by Kletzer and Rosen (2008), among others.

From 2008 through 2010, the number of initial UI claimants and benefit payments soared, as the regular UI system paid out more in benefits for longer periods than ever before (Eberts & Wandner, 2013). Moreover, the number of claimants exhausting benefits jumped as well: the UI exhaustion rate peaked at 56% in the first quarter of 2010. Chocolad et al. (2013) note that, while initial claims returned "nearly back to normal" by the start of 2012, the number of continued claims remained quite high at about four million per week (p. 207). According to USDOL,³ by the end of April 2015, seasonally adjusted weekly initial claims were 262,000, which is the lowest level for initial claims since April 15, 2000, when the figure was 259,000. The number of seasonally adjusted insured unemployed during the week ending April 18 was 2,253,000, its lowest level since December 2, 2000 when it was 2,229,000.

There is growing concern among policymakers, program administrators and researchers that key factors associated with UI receipt, including benefit levels and duration (especially the availability of extended benefits), may unnecessarily delay and otherwise discourage rapid reemployment and that new approaches such as wage insurance and/or wage supplements should be considered.

THE PROBLEM IN BRIEF

Even before the onset of the Great Recession, there was a growing literature about increased dynamism and uncertainty in today's labor markets. Researchers have explored the causes of labor market volatility (e.g., Davis and Haltiwanger, 1999) and its nature and consequences (e.g., Andersson et al., 2005; Brown et al., 2006; Ebenstein et al., 2009; Elsby et al., 2011; Farber, 2010, 2011; Holzer et al., 2010; Hoynes et al., 2012; Kletzer & Rosen, 2008; and Van Horn, 2013).

There are "winners" who benefit from a dynamic economy, e.g., through shifts from manufacturing to services, advances in technology, globalization, offshoring, and increased use of temporary and contingent workers. However, dislocated, displaced and low-skilled, low-wage workers very often are "losers" in this dynamic. In particular, dislocated workers may

³ U.S. Department of Labor, Employment and Training Administration, *Unemployment Insurance Weekly Claims* News Release, April 30, 2015.

experience significant earnings losses when they ultimately become reemployed in a new occupation or industry. To mitigate these effects, a number of economists have supported the concept of wage insurance. *Wage insurance* insures individuals against *future* loss of wages by temporarily making up part of the difference in wages earned in their new job and the wages earned in the one they lost. Typically, added payments are capped at a certain amount and only available to workers whose wages in their new jobs do not exceed pre-determined levels.

Wage supplements are similar. These provide cash to newly reemployed workers to encourage unemployed workers to accept reemployment more rapidly. In practice, a wage supplement is distinct from wage insurance. Under wage insurance some combination of employers and workers pay premiums for indemnification from earnings losses. Wage supplements, in contrast, are paid for by a means similar to unemployment insurance where employers pay a per-employee tax, the burden of which falls on employees. In both instances, upon becoming unemployed and rehired in a lower-paying job, workers receive a capped supplement over a specified period to afford them an opportunity to regain some wage parity. Both wage insurance and wage supplements subsidize *reemployment* rather than unemployment. For eligible persons who become reemployed within a specified time period in a full-time job that pays less than the job that was lost, the incentive makes up a percentage of the earnings loss for a specified period.

Under most proposed approaches, wage insurance and wage supplements would act as a complement to existing UI and Trade Adjustment Assistance (TAA) programs. UI minimizes the financial impact of unemployment by providing partial income support while individuals search for new employment. From a macroeconomic perspective, it also serves a useful function as an "automatic stabilizer." TAA assistance payments and training have been used to compensate those whose jobs have been lost due to the adverse impacts of import competition as well as to help them prepare for work in new jobs. Wage insurance minimizes the financial impact of reemployment at lower paying jobs by providing a form of wage supplement. Both are tools to lessen the income insecurity workers face as they transition to new jobs.

Advocates of wage insurance support the concept because it mitigates income losses workers face by making up some of the difference in wages from their prior, higher-paying job and their current job (e.g., Kling, 2008, and Kletzer & Rosen, 2008). They also believe it gives jobless workers an added incentive to take a job they might not have previously considered. This is important because the work experience may help individuals avoid negative effects (including possible skills deterioration⁴) from long spells of unemployment and move up the career ladder

4

⁴ Skills deterioration is often cited as a theoretical impact of long term unemployment, but empirical evidence of the effect has yet to be presented. See Bivens (2008).

in their new field, leading to wage increases over time. This effect is more pronounced when employer-sponsored or employer-provided training is taken into account. Such training could further improve individuals' job skills and earning potential. The distinction between wage insurance and wage supplements lies mainly in the mechanism for financing them and in the time horizon in question: wage insurance is explicitly financed by some combination of employee and employer contributions to address potential losses in some future time period, while wage supplements are supported implicitly through similar contributions to address present losses. In either case, unemployed workers are offered payments to help allay their earnings losses for some period of time when they become reemployed on a new, lower-paying job.

A TOPICAL REVIEW

EMPLOYMENT AND EARNINGS LOSSES AND OTHER COSTS OF JOB DISPLACEMENT

Workers tend to be differentially affected by job losses depending on which industries and occupations are hardest hit by economic downturns, international trade, offshoring, outsourcing, technological change and other factors. Farber (1999, 2003, 2005), Brainard et al. (2005a & b), Ebenstein et al. (2009), Helwig (2004), Kletzer (1998, 2000, 2004), Mishel (2005), and Mukoyama and Sahin (2004) all address various aspects of job loss and its consequences over time, using varying sources of data. Farber (2010, 2011), Hoynes et al. (2012), Van Horn (2013) and Bivens (2014) update the discussion with an examination of job loss in the United States during the Great Recession, which has disproportionately affected certain groups. As Hoynes et al. (2012) state, "the impacts of the Great Recession are not uniform across demographic groups and have been felt most strongly for men, black and Hispanic workers, youth, and low education workers. These dramatic differences in the cyclicality across demographic groups are remarkably stable across three decades of time and throughout recessionary periods and expansionary periods. For the 2007 recession, these differences are largely explained by differences in exposure to cycles across industry-occupation employment." In addition, as Bivens (2014), Eberts and Wandner (2013), and Van Horn (2013) show, longterm unemployment — defined as 27 or more weeks out of work — has been far more serious than in any previous recession and recovery period.

Jacobson et al. (1993a, b & c) were among the first researchers to rigorously measure the costs of job loss. Using Pennsylvania administrative data on experienced workers who separated from their jobs in the 1980s merged with employer records, they found that (1993a, p. 7):

"... experienced workers incur substantial earnings losses immediately after they separate from their firms. Much of this initial loss results from increased unemployment. We also show, however, that these losses are generally shared by workers in all demographic groups and most industrial sectors, and more important, that they persist for several years after displacement. Even in the fifth year following separations, we estimate that annual losses of displaced workers average more than \$6,500, an amount equal to more than 25 percent of their predisplacement earnings. During the first six years following their job losses, we estimate that their discounted earnings losses totaled \$41,000. That estimate holds for both older and younger workers, varies only modestly for workers displaced from different industries, and is only slightly lower for women.

Moreover, we find that the earnings of displaced workers begin to diverge from their expected levels two to three years before they leave their firms. This divergence appears to result from reduced hours, cuts in real wages, and increased temporary layoffs in the period before permanent separations. Temporary layoffs, in particular, account for a significant fraction of predisplacement earnings declines.... [T]hese losses likely result from firms' responses to economic restructuring or to policy changes, and therefore they should be included as part of the costs of worker dislocation. When we include their preseparation losses as well as a reasonable estimate of their losses more than five years after separation, the present value of their losses rises to approximately \$80,000."

They conclude that "... instead of bolstering existing programs, it may be more efficient to assist displaced workers by introducing an income or earnings subsidy" (1993a, p. 8).

Sullivan and Von Wachter (2009), Davis and Von Wachter (2011), Van Horn (2013) and Bivens (2014) explore additional effects of job loss and extended unemployment, including worker happiness and intergenerational and other effects. Sullivan and Von Wachter also use administrative data on the quarterly employment and earnings of Pennsylvania workers in the 1970s and 1980s, matching them to Social Security Administration (SSA) death records covering 1980-2006 in order to estimate the effects of job displacement on mortality. Among other things, they find that mortality rates in the year after displacement for high-seniority males are 50-100% higher than expected and that the effect on mortality hazards declines sharply over time, e.g., a 10-15% increase in annual death hazards 20 years post-displacement. If sustained indefinitely, these would imply a loss in life expectancy of 1.0-1.5 years for a worker displaced at age 40. In addition, workers with larger earnings losses tend to suffer greater increases in mortality, a correlation that remains when predicted earnings declines are examined based on losses in industry, firm, or firm-size wage premiums.

Davis and Von Wachter (2011) used longitudinal SSA employment and earnings data from 1974 to 2008 for their analysis, concluding that (pp. 47-48):

- Focusing on displacements from 1980 to 2005, among men 50 or younger with 3 or more years of prior job tenure, job loss in a mass-layoff event reduces the present value of earnings by an estimated \$77,557 (2000 dollars) over 20 years at a 5 percent annual discount rate, or about 1.7 years of predisplacement earnings. Losses are larger for men with greater job tenure, and smaller for women. Wage and hour reductions explain much of the loss in earnings over time.
- Present-value losses rise steeply with the unemployment rate in a linear fashion at
 the time of displacement. The average loss equals 1.4 years of predisplacement
 earnings if unemployment at displacement is less than 6 percent, and 2.8 years if
 unemployment exceeds 8 percent. Tight labor market conditions at displacement
 strongly improve the medium- and long-term future earnings prospects of
 displaced workers.
- In addition to the body of previous research documenting the adverse effects of layoffs on employment and earnings stability, household consumption expenditure, health and mortality, children's educational achievement and subjective well-being, worker perceptions about layoff risks, job-finding prospects, and the likelihood of wage cuts closely track cyclical fluctuations in actual labor market conditions.

Couch and Plazcek (2010) reexamine earnings losses for displaced workers using linked administrative data from Connecticut for the period 1993-2004, making every effort to mimic the Jacobsen et al. data and research methods used in Pennsylvania. They find that (p. 577):

"Earnings losses for workers in Connecticut who separate from firms as part of a mass layoff initially range from 32 percent to 33 percent and remain at 12 percent to 15 percent six years later. The estimates for Connecticut are roughly half the magnitude of those reported for Pennsylvania and are similar to those obtained by other researchers using data sources such as the [Panel Survey on Income Dynamics] PSID and [Dislocated Worker Survey] DWS. For those who separate but are not part of a mass layoff, initial earnings losses range from 32 percent to 33 percent, but six years later their earnings reductions are estimated to vary from 7 percent to 9 percent.... Although long-term losses of high-tenure workers who experience mass layoff in Connecticut and Pennsylvania appear to be different, an important finding is that the losses are totally concentrated among job separators who have difficulty finding new employment and take UI benefits. In both Connecticut and Pennsylvania, there are no long-term losses among those who do not collect UI benefits."

Van Horn's research (2013) echoes these findings. He examines various public data series on dislocation and unemployment, demonstrating rising and persistent long-term unemployment up through the Great Recession and drawn out economic recovery. He also highlights the more personal aspects of dislocation and long-term joblessness, relying on a unique national survey of Americans, including dislocated workers, which was funded by the late John J. Heldrich, for whom Rutgers University's John J. Heldrich Center for Workforce Development was named. The *Work Trends Survey* was launched in the late 1990s and covers several economic recessions and recoveries; his research for the book is based on interviews with nearly 25,000 workers over the period 1998-2012. Van Horn's research echoes the costs of worker dislocation documented in the other studies and uses qualitative information gleaned from their annual surveys to provide a more personal look at these effects.

Bivens (2014) goes beyond the analysis of income losses associated with job loss, which he terms "trivial" in the sense that they are undeniable effects from unemployment. He instead focuses on *scarring*, diminished personal or household capacity "for an extended period of time even after the initial damage is healed." Specifically, he analyzes whether microeconomic scarring has greater effects than macroeconomic scarring and whether the scarring effects of longer-term involuntary joblessness are worse than those of short-run spells. He distinguishes between *microeconomic scarring* — i.e., the damage any spell of job loss inflicts on an individual's or household's future economic health even after the spell of joblessness ends — and *macroeconomic scarring* — i.e., the damage done to the economy's estimated long-term potential output as a result of periods of elevated unemployment. He concludes (p. 20):

"The very large increase in unemployment has surely left deep, long-lasting scars on American households. On the other hand, the vast bulk of evidence on both microeconomic and macroeconomic scarring identifies only the increase in total involuntary unemployment—not long-term unemployment—as the driving mechanism. Further, to the limited degree that microeconomic scarring does exist, it seems that it is overwhelmingly driven by employers using long-term unemployment as a signal to screen workers. As such, any greater difficulty the long-term jobless have in securing employment is not a result of long durations of unemployment lowering their potential productivity.... [F]ighting the determinants of overall unemployment will continue to be the most effective way to reduce long-term unemployment.... Additionally, measures to convince employers to stop using unemployment duration as a signal would be a more direct attack on the problem than solutions that presume long-term unemployed workers' skills have been degraded."

Evidence of systemic discrimination against the long-term unemployed is presented by Kroft et al. (2013), who conducted a field experiment and found that the likelihood of a job

applicant receiving a callback for an interview decreases with the length of their unemployment, and that this effect is larger during tight labor markets. They note that "[a]lthough we emphasize that we do not rule out a role for human capital depreciation, our results are most consistent with employer screening playing an important role in generating duration dependence" (p. 1161-1162). As noted above, similar evidence of skill erosion among the long-term unemployed has yet to be presented.

INCENTIVES AND DISINCENTIVES ASSOCIATED WITH TRADITIONAL UI

Decker (1997) offers a theoretical look at the incentives and disincentives inherent in the provision of UI and reviews the evidence from a series of reemployment demonstration evaluations. He explains that the UI "system must address a fundamental trade-off between two important factors: (1) the need to provide unemployed workers with benefits that are 'adequate' ..., and (2) the need to minimize the disincentive to rapid reemployment implicit in the provision of UI benefits. The intent to provide adequate benefits tends to encourage more generous ones, which would ensure that the economic needs of a larger proportion of claimants are met. However, more generous benefits tend to strengthen the reemployment disincentive" (p. 285). Based on both labor-supply and job-search theories, he shows that increasing UI payments and duration lead to longer spells of unemployment as workers consume more leisure and reduce the intensity of their job search, or become more selective in accepting a job offer than they would be in the absence of UI.

Kling (2008) and Kletzer and Rosen (2008) add to our understanding of these disincentives with more recent data for the period that ended with the onset of the Great Recession. They present a litany of issues and concerns with the existing UI program (e.g., the base period, coverage, taxable wage base, equity, financing) and offer proposals for revamping it as well as adding wage insurance and supplements. Barnow and Hobbie (2013), Chocolad et al. (2013) and Eberts and Wander (2013) update the situation with TAA, UI and other workforce programs with data extending through the Great Recession and ensuing recovery (through 2012), encompassing the enactment of ARRA, TAA and numerous UI benefit extensions.

Following the Great Recession, nine states reduced the maximum benefit duration of UI. The U.S. Government Accountability Office (2015) examined the impact of these reductions and concluded that "available research on UI duration and claimants' reemployment offers little support to the premise that reducing duration increases reemployment" (p. 32). Farber and Valetta (2013) examine evidence from the Great Recession period and the subsequent extension of UI benefits to 99 weeks. They find that the increased number of weeks of UI benefits available resulted in a small reduction in the unemployment exit rate and small increase in the

number of weeks an individual is expected to remain unemployed. They conclude that the driver of these effects is a reduction in exits from the labor force rather than a decrease in the reemployment rate.

WAGE INSURANCE AND SUPPLEMENTS: DESIGN PARAMETERS

In response to the concerns and issues raised above, various proposals for wage insurance or wage supplements have been offered since the late 1970s, and they have appeared with increasing frequency in recent decades. Among the more prominent proposals are those put forth by Altman (2013), Brainard et al. (2005), Jones (2009), Kletzer (2004), Kletzer and Rosen (2008), Kling (2008), LaLonde (2007), and Wandner (2010). The discussion is organized around key design parameters: purpose; eligibility and targeting; supplement amount or level; duration; financing and costs; and administrative infrastructure.

Purpose. Bloom et al. (2000, p. 506) posit four main reasons or goals for such programs. First, by helping workers return to work and earn higher wages, these programs improve workers' future welfare by avoiding "scarring" and skills deterioration that can result from long-term unemployment, which is increasingly a problem in today's labor markets. Second, they compensate losses incurred by workers adversely affected by the effects of trade as well as other economic events, e.g., outsourcing and economic downturns. The current UI and TAA systems, it is argued, fail to adequately compensate the losers (e.g., Mishel, 2005). Kletzer (2004) points out that "presumptions of an ability to compensate have only weakly translated into a record of compensations policies and programs" (p. 724). Third, providing such assistance increases acceptance of freer trade among workers and other stakeholder groups. Resistance tends to be high when workers feel they are unlikely to be so compensated, as has been the case over time. And, finally, providing wage supplements and/or insurance has the potential to reduce the costs of UI to taxpayers, employers and workers⁵.

Eligibility and Targeting. As noted above, job displacement and unemployment have differential effects in terms of earnings loss and other adverse outcomes, so eligibility and targeting are among the first issues to address. Looked at another way, the question is whether to make the offer of a wage supplement universal or conditional on such characteristics as age, gender, years of job tenure, prior earnings, reason for job loss (e.g., trade-related, nontrade-related, voluntary), length of time out of work, intensity of job search, and/or industry. Any of these could be used to determine eligibility for and/or inform targeting of wage supplements. As

10

⁵ Workers are included here as UI taxpayers because employers pass along the burden of the tax to workers in the form of less employment or lower wages.

Wandner (2010) points out, greater targeting through the use of such tools as the Worker Profiling Reemployment System (WPRS), which is almost universally used by states in their dislocated worker programs, holds "promise" for improving the effectiveness and efficiency of reemployment bonuses. The same would be expected to apply to targeting wage supplements.

Kletzer's "stylized" facts about import-competing (or trade-affected) job loss for the 1990s include the following, among others (p. 704):

- 1. Import-related job loss is a sizeable share of manufacturing job loss but a much smaller share of economy-wide losses.
- 2. Like manufacturing workers displaced for other reasons, import-competing displaced workers are older, less formally educated, and more tenured than displaced workers in nonmanufacturing, and these are not traits associated with successful retrainees.
- 3. Probability of reemployment is low for import-competing displaced workers v. nonmanufacturing workers with large earnings losses on average.
- 4. Import competition is associated with low reemployment rates because workers vulnerable to import job loss have traits that make them harder to reemploy: low educational attainment, advanced age, high tenure, minority group membership, and unmarried status.
- 5. For most workers, the costs of job loss occur as reemployment earnings losses, such that wage insurance can be seen as compensation for lost job-specific skills.
- 6. Reemployment in manufacturing minimizes earnings losses generally.

Two important concerns arise related to eligibility and targeting. First, program eligibility and targeting need to be crafted so as to avoid giving rise to *moral hazard*, i.e., providing incentives for workers to conduct poorer job searches leading to poor job matches or lower pay than they might have obtained otherwise or to settle for work in occupations and/or industries with less stable employment (Kling, 2008; Kletzer & Litan, 2001; Kletzer, 2004). Second, *adverse selection* may be an issue if the offer of wage insurance, wage supplements or reemployment bonuses disproportionately attracts workers who have less stable work histories and employers that provide more unstable employment. Strategies, e.g., using WPRS for targeting, are available for addressing both concerns.

Supplement Amount. The amount of the wage supplement, either absolute or relative to earnings in the previous job held, is also a key parameter. Because wage supplements are

intended to restore a portion of the earnings loss experienced by workers when they become reemployed, devising supplements as a multiple of states' weekly benefit amounts (WBAs) does not make sense.

It is important to note that while some workers returning to work after a period of unemployment induced by trade or other factors enjoy earnings the same or greater than those on their pre-displacement job, most do not. For example, Kletzer (2004) estimated that, among the 63% of high-import competing dislocated workers who returned to work by the survey date, only about 35% returned to work at the same or higher wages in the 1990s; one-quarter of these workers reported substantial (30%) earnings losses upon reemployment.

Most proposals not only limit the length or duration of supplements but "cap" them in terms of dollar amounts as well. For example, Kletzer and Litan (2004) and Kletzer and Rosen (2008) suggest a \$10,000 cap on a wage supplement for eligible workers.

For workers reemployed at the same or greater wages, wage *insurance* would be a more sensible option, encouraging workers (and their employers) to contribute to a program to insure against *future* earnings losses.

Duration. Proposals for a wage supplement program typically envision limiting the duration of these supplements for a number of reasons, the main ones being that an unlimited offer potentially would expose taxpayers to large uncontrolled liability for expenditures and that it would create further disincentives to effective job search for workers displaced from their jobs. The former concern looms even larger in light of slow employment growth, the shift to contingent and temporary employment, and continued wage stagnation in the aftermath of the 2007 recession. The most common time period proposed for wage supplements is two years from first receipt of the supplement (e.g., Kletzer & Rosen, 2008), although LaLonde (2007) proposes using four years and Kling's (2008) proposed Temporary Earnings Replacement Accounts (TERAs) would pay out for up to six years, though for a more narrowly targeted group of displaced workers.

Financing and Costs. As indicated, how earnings losses are defrayed and the time orientation (future or present) of that defrayal may be the primary distinctions between wage insurance and wage supplements, the former being more explicitly shared by workers and employers and geared to possible future losses rather than ongoing ones. In addition, there have been heated debates about how government should pay for a wage supplement program, leading into a discussion about whether such an effort should operate as a complement to existing TAA and UI programs or as a substitution for them (Brainard et al., 2005a & b; Kling, 2008). On the other hand, Mishell (2005), LaLonde (2007) and Kletzer and Rosen (2008) envision wage supplements (and insurance) as an addition to the existing program tool kit and argue that they

should be viewed as a way of addressing our poor track record of "compensating the losers" over many years in the United States.

Administrative Infrastructure. The principal candidate for administering wage insurance and/or wage supplements would be the state Employment Security Agency (ESA) that has had responsibility for administering the federal-state UI program in every state for almost eighty years. The structure is well established and could be augmented modestly to enable it to carry out these efforts. States with prior experience operating reemployment bonus experiments (n=4) and work-sharing or short-time compensation programs (n=24) might serve as laboratories for "best practices" in administering the new efforts.

Potential stigma effects should be considered in the design of a demonstration. Burtless (1985) found that job seekers with hiring vouchers were less likely to find work than those without, and Hollenbeck (1991) found a similar effect for all except nonwhite male youth. Both identified the vouchers as a potential screening device for employers to identify economically disadvantaged job seekers. The potential for an employer's knowledge of a wage supplement to affect hiring behavior could therefore be a concern. O'Leary (2010) summarizes the repeated experimental evidence for discrimination against job seekers receiving vouchers or supplements and notes that the "importance of the Earned Income Tax Credit (EITC) may be largely due to the fact that it is paid directly to working families without any employer knowledge" (p. 45).

EXPERIENCE WITH WAGE INSURANCE/SUPPLEMENT AND REEMPLOYMENT PROGRAMS

UNITED STATES

The United States has limited experience with wage insurance and supplements, although a series of reemployment bonus demonstrations that were operated by a handful of states in the 1980s have been rigorously evaluated (see Corson et al., 1989, 1991; Spiegelman et al., 1992; Woodbury & Spiegelman, 1987). Bloom et al. (2000), King (2004), and Meyer (1995), among others, have summarized the results of these evaluations. Wandner's (2010) summary and interpretation of the evaluation findings from these bonuses and the short-lived Personal Reemployment Accounts (PRAs) that followed is thorough. Wandner notes that Japan has used such bonuses since 1975 and may have been the first country to do so. It is important to note that reemployment bonuses differ in at least one important respect from wage supplements: they are paid out as *lump sums* either one time or at multiple points; they are not provided to reemployed workers on a weekly or monthly basis as wage supplements would be. They are also

typically viewed as "cash-outs" for workers' remaining UI eligibility, rather than additional payments to workers to become reemployed.

Reemployment bonus experiments were conducted in Illinois (1984-1985), New Jersey (1985-1986), Pennsylvania (1987), and Washington (1989) with bonus amounts ranging from four times to as much as nine times the weekly UI benefit amount (WBA), and differing eligibility periods, targeting strategies and other features. In each case, researchers evaluated the impacts, benefits and costs of the experiment using random assignment. Illinois was the first state to implement a reemployment bonus experiment, followed by New Jersey, which combined bonuses with mandatory job search assistance (JSA) before evaluation findings were available from the Illinois experiment. Pennsylvania and Washington State benefited from Illinois' early results and opted to create ten reemployment bonus variations — e.g., high/low and high/medium/low bonuses with varying payment durations — in the hopes of providing better estimates of the nature and effectiveness of different bonus features.

Lessons learned from these state reemployment experiments and their reanalysis include the following (Wandner, 2010, pp. 434-435):

- "[C]ash bonuses have a significant impact on job search behavior and lead to a reduction in the average duration of unemployment, resulting in a desirable speeding of reemployment. Larger bonuses also had the largest impacts on reducing unemployment durations.
- [B]onuses had no effect on wages, indicating no decline in the quality of the jobs taken in response to the offer of reemployment bonuses. There was also no evidence that the bonuses had any effect on worker attachment to their previous employers, as they had no effect on worker recall to their prior jobs.
- [T]here was not the continuously increasing effect that might have been expected. The large effect of intermediate-level bonuses makes findings less certain about what would be an optimum bonus.
- Reemployment bonuses are not cost effective if they are not targeted to populations that have some or all of the characteristics of dislocated workers.
- A more targeted program using profiling [e.g., WPRS] promises to be costeffective and to minimize external validity problems related to implementation of an ongoing program."

Only a few states currently provide some form of *wage subsidy* program, among them New York and New Jersey. In both states, the wage subsidy is provided to the employer to defray initial training costs of an eligible new employee who was enrolled in a reemployment

plan. This scheme has a significantly different structure from most proposed wage supplements program, in which benefits would go directly to the employee.

CANADA

Canada operated the Earnings Supplement Project (ESP), which was actually a reemployment supplement and wage insurance program, in the mid-1990s that was evaluated by SRDC, MDRC's Canadian affiliate. Canada's Employment Insurance (EI) program, its version of UI, is more uniform, generous and of longer duration than its U.S. counterpart. At the time of the ESP demonstration, EI replaced 55% of workers' lost earnings and often paid benefits for up to a year, depending on the regional unemployment rate. ESP was offered by Human Resources Centers of Canada (HRCCs) in five cities in four provinces (Quebec, Ontario, Manitoba and Saskatchewan). The Canadian government wanted the sites/regions to be as representative of the country's economic conditions and types of dislocated workers as possible but also needed sites to have the capacity to generate adequate treatment and comparison group samples for the evaluation.

For displaced workers who were considering accepting a new job at a rate of pay below that of their previous job, ESP offered an *earnings supplement* if they were able to secure a full-time job within 26 weeks of becoming unemployed. The supplement would restore up to 75% of the difference in wages up to a maximum of \$250 weekly for two years or less. The supplement began as soon as workers found new jobs. This offer was both more generous and much less restrictive than under the U.S. reemployment demonstrations. Supplement recipients could receive up to \$26,000 over the two-year period; actual payments were just over \$8,700 per recipient (p. 508). On the other hand, dislocated workers who found new full-time employment at higher wages were not immediately eligible for earnings supplements but were offered the opportunity to sign up for relatively inexpensive *earnings insurance* that would make them eligible for the earnings supplement if at some time in the ensuing two years they worked at a full-time job at lower pay. Both sets of workers were aware of the program and seemed to understand what was being offered, though awareness and understanding were greater for the supplement than for the insurance. Workers who clearly understood the offer of earnings insurance simply were not interested.

The SRDC random assignment evaluation conducted by Bloom et al. (2001) found few statistically significant impacts from either the earnings supplement or the earnings insurance:

15

_

⁶Details about ESP can be found in Bloom et al. (2000), pp. 508ff.

ESP had little measurable effect on job search behavior, employment prospects, or EI benefits received. Among other ESP evaluation findings were these:

- Earnings supplements may have induced workers to consider a broader range of jobs as part of their job search to a modest degree.⁷
- Supplements may have induced more intensive job search as the supplement period came to a close.
- Supplements may have expedited reemployment "slightly," by 4.4 percentage points in just the first six months, and may have induced workers to shift from part-time to full-time employment by about 2 percentage points.
- For those workers who actually received them, supplements represented a major source of financial assistance.
- Supplements had no real effects on weeks of unemployment or on the amount of EI benefits received.
- Supplements represented a net cost to government and cost \$89 per recipient to administer. They also represented a transfer of resources from taxpayers to dislocated workers who received them.

Thus, the evidence from rigorous evaluations of U.S. reemployment bonuses and the Canadian ESP, a combined wage supplement and wage insurance program, can be characterized as mixed. Measurable effects tended to be modest at best.

POSSIBLE DATASETS

A variety of datasets have been used for examining and analyzing dislocation, job losses, and earnings losses, as well as the role of UI and possible wage insurance/supplement schemes. The major *available datasets* for understanding labor market disruptions and program responses over time are described below.

Displaced Workers Survey. DWS is a national survey conducted by the Bureau of the Census as part of its Current Population Survey (CPS) of 55,000-60,000 households each month to measure the severity of job displacements and assess employment stability during a period of downsizing at many firms. It also gauges increased use of temporary and contract labor

_

⁷ This finding was significant at the .10 level.

(https://catalog.data.gov/dataset/current-population-survey-displaced-workersjob-tenure-supplement). The survey universe is all persons who are eligible for the CPS labor force items. DWS is a proxy response survey that is sponsored by USDOL's Bureau of Labor Statistics. Data are available since 1997 and are updated every other year in this ongoing survey. More information about the DWS and other CPS surveys can be found at http://www.census.gov/cps/methodology/techdocs.html. Researchers including Farber (2003, 2005, 2010, 2011), Couch and Plazcek (2010) and others have used DWS data for their analysis.

Current Population Survey Merged Outgoing Rotation Group (CPS-MORG). The CPS-MORG, or CPS Annual Earnings Files, is another survey conducted by the Bureau of the Census as part of the CPS with data currently extracted and maintained by the National Bureau of Economic Research (http://www.nber.org/morg/annual/). Extracts of some 25,000 records per month including all adults in the outgoing rotation group extend from 1979 through the most recently completed calendar year, i.e., 2014. More than fifty variables are selected for continuity across years. Key variables include the availability of weekly (not annual) earnings, as well as basic demographic (e.g., age, sex, race, marital status, education) and geographic information (e.g., state, MSA), but detailed information about children's ages is typically not provided (except for the period 1984-1993). Work-related variables include employment status, usual hours of work, full- and part-time status, earnings per hour, union membership and union contract coverage, industry, and occupation. Researchers including Ebenstein et al. (2009) have utilized CPS-MORG data in their analysis.

Survey of Income and Program Participation. SIPP, a household survey, is designed as a continuous series of panels, each of which features a nationally representative sample interviewed over about four years. The Census Bureau notes that SIPP allows researchers to examine "the interaction between tax, transfer, and other government and private policies" and "collects information for assistance received either directly as money or indirectly as in-kind benefits." SIPP provides "the most extensive information available on how the nation's economic well-being changes over time, which has been SIPP's defining characteristic since its inception in 1983" (http://www.census.gov/sipp/). Among others, variable categories include adult well-being; assets; child care; education; family and household size?; language; nativity and citizenship; education and enrollment (including credentials attained); and employment and earnings. A more detailed description of SIPP variables is available at http://www.census.gov/programs-surveys/sipp/about/sipp-content-information.html. SIPP appears to be an underutilized resource for work on dislocation and program responses.

Panel Survey of Income Dynamics (PSID). The PSID is an important dataset used in analyzing issues of dislocation, job loss and earnings loss over time. Operated by the University of Michigan and made available free to researchers, PSID is touted as "the longest running longitudinal household survey in the world" (http://psidonline.isr.umich.edu/). It was launched in 1968 with a nationally representative sample of 18,000+ individuals in 5,000 families, and information on these individuals (and their descendants) has been collected continuously for almost five decades. Data are collected on employment, income, wealth, expenditures, health, marriage, childbearing, child development, philanthropy, education, and other topics.

Researchers who have used PSID data in their research on dislocation and program responses include Couch and Plazcek (2010) and Kling (2008), who used the data to simulate the effects of his proposed Temporary Earnings Replacement Account (TERA).

Social Security Administration (SSA) Records. SSA data were once quite difficult for researchers to access for longitudinal labor market research but have been used more often in recent decades as research using administrative data of all types has become more common. Recent actions suggest this trend may continue. President Obama issued an Executive Order on May 9, 2013 entitled "Making Open and Machine Readable the New Default for Government Information," directing all federal agencies, including Social Security, to make "information resources easy to find, accessible, and usable" (http://www.ssa.gov/data/). The Office of Management and Budget subsequently issued M-13-13, "Open Data Policy—Managing Information as an Asset," which explicitly requires SSA and other federal agencies to use machine-readable and open formats. SSA data publicly available for research include information on retirement and disability benefit receipt, covered employment and earnings by state and county, deaths, and other topics. More detail on SSA data can be found at www.ssa.gov/data.json. What has been of greater interest to labor market researchers has been the ability to link individual program records to SSA data longitudinally to support analysis. This process, though much improved, can still be cumbersome. Researchers who have relied on linked SSA data in their analysis include Davis and Von Wachter (2011) and Sullivan and Von Wachter (2009).

Work Trends. Work Trends, the nationally representative annual survey of workers and the unemployed conducted since 1998 by the Heldrich Center for Workforce Development at Rutgers University, now contains more than 35,000 workers in its survey dataset (see http://www.heldrich.rutgers.edu/research/products/work-trends-reports?tid_2[0]=43). To date, only researchers affiliated with the Heldrich Center have accessed these data for research (e.g., Van Horn, 2013). Work Trends data files are archived and available to researchers without

charge at the Roper Center for Public Opinion Research at the University of Connecticut (http://www.ropercenter.uconn.edu/). Reports using Work Trends data are available at www.heldrich.rutgers.edu.

Public Workforce System Dataset (PWSD). The PWSD was launched by the USDOL's Employment and Training Administration to help researchers and policy analysts more easily access data to answer questions about a number of public workforce programs (e.g., Wagner-Peyser, WIA, UI), including how participants flow through them, and how they operate within the overall workforce system and interact with changing economic conditions. Data coverage currently extends from 1995:Q1 through 2008:Q4. PWSD also features economic variables including labor force, employment, unemployment, unemployment rate, and gross domestic product. Only limited use has been made of these data to date. More information about PWSD can be found at http://catalog.data.gov/dataset/public-workforce-system-dataset-pwsd.

Linked State Administrative Records. The most common approach to conducting research on program responses to worker dislocation, including job search assistance, retraining, and reemployment bonuses, has been to link individual-level state program records for participants and comparison or control group members to each state's longitudinal UI and employer (ES-202) records. State UI and employer records allow researchers to examine employment, industry of employment, quarterly earnings and, in rare instances, hours of employment. Studies utilizing linked state administrative records have been conducted in Connecticut (Couch & Plazcek, 2010), Illinois (Woodbury & Spiegelman, 1987; Spiegelman et al., 1992; and Meyer, 1996), New Jersey (Corson et al., 1989), Pennsylvania (Corson et al., 1991; Jacobsen et al., 1993a, b & c), Texas (Bloom, 1990) and Washington (Speigelman et al., 1992). They have also been used in multi-state evaluations of WIA programs for adults and dislocated workers (Heinrich et al., 2008; and Hollenbeck et al., 2005). It is important to note that in recent years, some states, e.g., Oklahoma, have passed legislation severely restricting access to such data, which they can do in this federal-state program (see King et al., 2015).

State Workforce Data Quality Initiative (WDQI) Datasets. State WDQI data may offer opportunities for research on dislocation and program responses in the future. Some thirty state workforce agencies have received WDQI grants from USDOL/ETA, some of them more than once, since the WDQI was first funded by Congress in 2010 (see http://www.doleta.gov/performance/workforcedatagrant09.cfm). The program is now starting its fifth round of funding. WDQI provides support to state workforce agencies and their research partners, if any, to link longitudinal administrative records, e.g., workforce, education, UI wage

and claimant records, for both program and policy research uses. Whether such files will be made available for wider use by researchers not directly affiliated with the specific state projects remains to be seen. However, according to the USDOL's WDQI website, the purpose of the program is as follows:

"Each WDQI grantee is expected to fully develop (or expand in the case where states have a database underway) their workforce longitudinal database in addition to using that database to conduct analysis of state workforce and education systems. Additionally, WQDI grantees are expected to use this data analysis to create materials on state workforce performance to share with workforce system stakeholders and the public."

CONCLUDING OBSERVATIONS AND NEXT STEPS

There is still much to be learned from operating an expanded set of wage supplement and wage insurance experiments and rigorously evaluating them, especially given the increasing dynamism in U.S. labor markets and continuing concerns with the traditional UI system. Given ongoing labor market trends and concerns, the time for testing out such UI options is long overdue.

Ray Marshall Center researchers are working with USDOL/ETA to draft more detailed specifications for a proposed wage insurance/supplement demonstration and evaluation that will be presented in a subsequent paper in late 2015.

BIBLIOGRAPHY

- Altman, Nancy J. (2013). "The Striking Superiority of Social Security in the Provision of Wage Insurance." *Harvard Journal on Legislation*, Vol. 50, pp. 109-168.
- Andersson, Fredrik, Harry J. Holzer, and Julia I. Lane (2005). *Moving Up or Moving On: Who Advances in the Low-Wage Labor Market?* New York: Russell Sage.
- Barnow, Burt S., and Richard A. Hobbie, eds. (2013). *The American Recovery and Reinvestment Act: The Role of Workforce Programs*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Bivens, Josh (2014). Long-Term Unemployment Has Not Damaged the Productivity of Workers: A Review of the Evidence on Long-Term Unemployment's Lasting Effects on Workers, Households, and the Economy. Washington, D.C.: Economic Policy Institute, EPI Briefing Paper No. 384, September 29.
- Bloom, Howard S. (1990). *Back to Work: Testing Reemployment Services for Dislocated Workers*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Bloom, Howard S., Saul Schwartz, Susanna Lui-Gurr, and Suk Won Lee with Jason Peng and Wendy Bancroft (2001). "Testing a Financial Incentive to Promote Re-employment among Displaced Workers: The Canadian Earnings Supplement Project (ESP)." *Journal of Policy Analysis and Management*, Vol. 20, No. 3, pp. 505-523.
- Brainard, Lael, Robert Litan, and Nicholas Warren (2005a). "A Fairer Deal for America's Workers in a New Era of Offshoring." *Brookings Trade Forum*, pp. 427-447.
- Brainard, Lael, Robert Litan, and Nicholas Warren (2005b). "Insuring America's Workers in a New Era of Offshoring." Brookings Institution, Policy Brief No.143.
- Brown, Clair, John Haltiwanger, and Julia Lane (2006). *Economic Turbulence: Is a Volatile Economy Good for America?* Chicago: University of Chicago Press.
- Burtless, Gary (1985). "Are Targeted Wage Subsidies Harmful? Evidence from a Wage Voucher Experiment". *Industrial and Labor Relations Review* Vol. 39 pp. 105-114.
- Cappelli, Peter (2012). Why Good People Can't Get Jobs: The Skills Gap and What Companies Can Do About It. Philadelphia, PA: Wharton Digital Press.
- Chocolad, Yvette, Wayne Vroman, and Richard Hobbie (2013). "Unemployment Insurance." In Burt S. Barnow and Richard A. Hobbie, eds., *The American Recovery and Reinvestment Act: The Role of Workforce Programs*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Corson, Walter, Paul T. Decker, S. Dunston, and A. R. Gordon (1989). *New Jersey Unemployment Insurance Reemployment Demonstration Project: Final Evaluation Report*. Princeton, NJ: Mathematica Policy Research.
- Corson, Walter, Paul T. Decker, S. Dunston, and Stuart Kerachsky (1991). *Pennsylvania Reemployment Bonus Demonstration. Final Report.* Princeton, NJ: Mathematica Policy Research.

- Corson, Walter, Paul Decker, Phillip Gleason, and Walter Nicholson (1993). *International Trade and Worker Dislocation: Evaluation of the Trade Adjustment Assistance Program. Final Report.* Princeton, NJ: Mathematica Policy Research.
- Couch, Kenneth A., and Dana W. Placzek (2010). "Earnings Losses of Displaced Workers Revisited." *American Economic Review*, Vol. 100, No. 1, pp. 572–589.
- Davidson, Carl, and Stephen A. Woodbury (1995). *Wage-Rate Subsidies for Dislocated Workers*. Upjohn Institute Staff Working Paper No. 95-31 (January). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Davis, Stephen J., and John C. Haltiwanger (1999). "Gross Job Flows." In Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, Vol. 3B. Amsterdam, New York, and Oxford: Elsevier Science, North Holland, pp. 2711–2805.
- Davis, Steven J., and Till Von Wachter (2011). "Recessions and the Costs of Job Loss." *Brookings Papers on Economic Activity*, Economic Studies Program, Vol. 43, No. 2, pp. 1-72.
- Decker, Paul T. (1997). "Work Incentives and Disincentives." In Christopher J. O'Leary and Stephen A. Wandner, eds. *Unemployment Insurance in the United States: Analysis of Policy Issues*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Decker, Paul T., and Walter Corson (1995). "International Trade and Worker Displacement: Evaluation of the Trade Adjustment Assistance Program." *Industrial and Labor Relations Review*, Vol. 48, pp. 758–774.
- Decker, Paul T., and Christopher J. O'Leary (1995). An Analysis of Pooled Evidence from the Pennsylvania and Washington Reemployment Bonus Demonstrations. Unemployment Insurance Occasional Paper 92-7. Washington, D.C.: U.S. Department of Labor.
- Decker, Paul T., and Christopher J. O'Leary (1995). "Evaluating Pooled Evidence from the Reemployment Bonus Experiments." *Journal of Human Resources*, Vol. 30, no. 3, pp. 534-550.
- Ebenstein, Avraham, Ann Harrison, Margaret McMillan, and Shannon Phillips (2009).

 Estimating the Impact of Trade and Offshoring on American Workers Using the Current Population Surveys. Working Paper 15107. Cambridge, MA: National Bureau of Economic Research.
- Eberts, Randall W. and Stephen A. Wandner (2013). "Data Analysis of the Implementation of the Recovery Act Workforce Development and Unemployment Insurance Provisions." In Burt S. Barnow and Richard A. Hobbie, eds. *The American Recovery and Reinvestment Act: The Role of Workforce Programs*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Elsby, Michael, Bart Hobijn, Aysegul Sahin, and Robert Valletta (2011). *The Labor Market and the Great Recession: An Update*. Federal Reserve Bank of San Francisco Working Paper Series, Working Paper No. 2011-29.
- Farber, Henry (1999). "The Incidence and Costs of Job Loss: 1982–1991." *Brookings Papers on Economic Activity: Microeconomics*. Vol. 1, pp. 73–119.

- Farber, Henry S. (2010). "Job Loss and the Decline in Job Security in the United States." In Katharine G. Abraham, James R. Spletzer, and Michael Harper, eds., *Labor in the New Economy*., Chicago: University of Chicago Press, pp. 223-262.
- Farber, Henry S. (2011). "Job Loss in the Great Recession: Historical Perspective from the Displaced Workers Survey, 1984-2010," National Bureau of Economic Research Working Paper No. 17040 (May).
- Farber, Henry (2003). "Job Loss in the United States 1981–2001." Princeton, NJ: Princeton University, Industrial Relations Section Working Paper No. 471 (May).
- Farber, Henry (2005). "What Do We Know about Job Loss in the United States?: Evidence from the Displaced Worker Survey, 1984–2004." *Economic Perspectives*, Vol. 29, No. 2. Federal Reserve Bank of Chicago, pp. 13–22.
- Farber, Henry S. and Robert G. Valletta (2013). "Do Extended Unemployment Benefits Lengthen Unemployment Spells? Evidence from Recent Cycles in the U.S. Labor Market." National Bureau of Economic Research Working Paper No. 19048 (May).
- Freeman, Richard (2003). "Trade Wars: The Exaggerated Impact of Trade in Economic Debate." National Bureau of Economic Research Working Paper No. 10000 (September).
- Heckman, James J., Robert J. LaLonde, and Jeffrey Smith (1999). "The Economics and Econometrics of Active Labor Market Programs," in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics*, Vol. 3A. Amsterdam: North Holland, pp. 1865–2097.
- Heckman, James J., Lance Lochner, and Ricardo Cossa (2002). "Learning-By-Doing vs. On-the-Job Training: Using Variation Induced by the EITC to Distinguish Between Models of Skill Formation." National Bureau of Economic Research Working Paper No. 9083 (July).
- Heinrich, Carolyn, Peter Mueser, and Kenneth Troske (2008). Workforce Investment Act Non-Experimental Net Impact Evaluation: Final Report to the U.S. Department of Labor, Washington, D.C.: U.S. Department of Labor, Employment and Training Administration.
- Helwig, Ryan (2004). "Worker Displacement in 1999–2000." *Monthly Labor Review* (June), pp. 54–68.
- Hollenbeck, Kevin, Daniel G. Schroeder, Christopher T. King, and Wei-Jang Huang (2005). *Net Impact Estimates for Services Provided through the Workforce Investment Act*.

 Baltimore: Jacob France Center, ADARE Project, University of Baltimore (October). Prepared for the U.S. Department of Labor, ETA.
- Hollenbeck, Kevin, and Richard J. Wilke (1991). *The Employment and Earnings Impact of the Targeted Jobs Tax Credit*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Holzer, Harry, Julia I. Lane, David B. Rosenblum, and Fredrik Andersson (2010). *Where Are All the Good Jobs Going?* New York: Russell Sage.
- Hoynes, Hilary, Douglas L. Miller, and Jessamyn Schaller (2012). "Who Suffers during Recessions?," *Journal of Economic Perspectives*, Vol. 26(3), Summer, pp. 27-48.

- Jacobson, Louis, Robert LaLonde, and Daniel Sullivan (1993a). *The Costs of Worker Dislocation*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Jacobson, Louis, Robert J. LaLonde, and Daniel Sullivan (1993b). "Earnings Losses of Displaced Workers." *American Economic Review*, Vol.83, pp. 685–709.
- Jacobson, Louis, Robert LaLonde, and Daniel Sullivan (2005). "Is Retraining Displaced Workers a Good Investment?" *Economic Perspectives*, Vol. 29, No. 2, pp. 47–66.
- Jacobson, Louis, Robert J. LaLonde, and Daniel Sullivan (1993c). "Long-term Earnings Losses of High-Seniority Displaced Workers." *Economic Perspectives*, Vol. 17, No. 6, pp. 2–20.
- Jacobson, Louis, Robert J. LaLonde, and Daniel Sullivan (2005). "The Impact of Community College Retraining on Older Displaced Workers: Should We Teach Old Dogs New Tricks?" *Industrial and Labor Relations Review*, Vol. 58, pp. 398–415.
- Jacobson, Louis, Robert J. LaLonde, and Daniel Sullivan (2005). "The Returns from Classroom Training for Displaced Workers." *Journal of Econometrics*, Vol. 125, pp. 271-304.
- Kane, Thomas, and Cecila Rouse (1999). "The Community College: Educating Students at the Margin Between College and Work." *Journal of Economic Perspectives*, Vol. 13 (Winter), pp. 63–84.
- King, Christopher T. (2004). "The Effectiveness of Publicly Financed Training in the United States: Implications for WIA and Related Programs." In C. O'Leary, R. Straits, and S. Wandner, eds., *Job Training Policy in the United States*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research, pp. 57-99.
- King, Christopher T., Heath Prince, Bryan Wilson, and Brooke DeRenzis (2015). *Who Is Being Served Well? Using Pathway Evaluators for State Workforce Planning*. Washington, D.C.: National Skills Coalition (February).
- Kletzer, Lori G. (1998). "Job Displacement." *Journal of Economic Perspectives*, Vol. 12, pp. 115–36.
- Kletzer, Lori G. (2000). "Trade and Job Loss in U.S. Manufacturing, 1979–94." In Robert C. Feenstra, ed., *The Impact of International Trade on Wages*. Chicago: University of Chicago Press, pp. 349–93.
- Kletzer, Lori G. (2004). "Trade-related Job Loss and Wage Insurance: A Synthetic Review." *Review of International Economics*, Vol. 12, pp. 724–748.
- Kletzer, Lori G., and Robert E. Litan (2001). "A Prescription to Relieve Worker Anxiety." *Institute for International Economics Policy Brief*, PB01-2.
- Kletzer, Lori G. and Howard Rosen (2008). "Reforming Unemployment Insurance in the Twenty-First Century." In Jason Furman and Jason E. Bordoff, eds., *Path to Prosperity: Hamilton Project Ideas on Income Security, Education and Taxes*. Washington, D.C.: Brookings Institution.
- Kling, Jeffrey R. (2008). "Fundamental Restructuring of Unemployment Insurance: Wage Insurance and Temporary Earnings Replacement Accounts." In Jason Furman and Jason E. Bordoff, eds., *Path to Prosperity: Hamilton Project Ideas on Income Security, Education and Taxes.* Washington, D.C.: Brookings Institution.

- Knudsen, Eric I., James J. Heckman, Judy L. Cameron, and Jack P. Shonkoff (2006). "Economic, Neurobiological, and Behavioral Perspectives on Building America's Future Workforce." *Proceedings of the National Academy of Sciences*, Vol. 103, pp. 0155-10162.
- Kroft, Kory, Fabian Lange, and Matthew J. Notowidigdo (2013). "Duration Dependence and Labor Market Conditions: Evidence from a Field Experiment." *Quarterly Journal of Economics*, (2013) doi: 10.1093/qje/qjt015 First published online: April 16, 2013
- Kuhn, Peter (2002). *International Perspectives on Worker Displacement*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- LaLonde, Robert J. (2007). "The Case for Wage Insurance." *Council on Foreign Relations CSR*, No. 30 (September).
- LaLonde, Robert J. (2002). "Employment and Training Programs." In Martin Feldstein and R. Moffitt, eds., *Tested Transfer Programs in the United States*. Chicago: University of Chicago Press.
- LaLonde, Robert J. (1995). "The Promise of U.S. Employment and Training Programs." *Journal of Economic Perspectives*, Vol. 9, pp. 149–168.
- Leigh, Duane E. (1990). *Does Training Work for Displaced Workers? A Survey of Existing Evidence*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Meyer, Bruce D. (1995). "Lessons from the U.S. Unemployment Insurance Experiments." *Journal of Economic Literature*, Vol. 33 (March), pp. 91-131.
- Meyer, Bruce D. (1996). "What Have We Learned from the Illinois Reemployment Bonus Experiment?" *Journal of Labor Economics*, Vol. 14, No. 1, pp. 26-51.
- Mishel, Lawrence (2005). "A Fairer Deal for America's Workers in a New Era of Offshoring: Comment and Discussion." *Brookings Trade Forum*, pp. 448-456.
- Mukoyama, Toshihiko, and Aul Ayseg Sahin (2004). "Why Did the Average Duration of Unemployment Become So Much Longer?" New York: Department of Economics, Concordia University and CIREQ, Federal Reserve Bank of New York.
- National Employment Law Project (2012). Modernizing Unemployment Insurance: Federal Incentives Pave the Way for State Reforms. Briefing Paper. Washington, D.C.: NELP, May.
- Neal, Derek (1995). "Industry-specific Capital: Evidence from Displaced Workers." *Journal of Labor Economics*, Vol. 13 (October), pp. 653–677.
- O'Leary, Christopher J. (2010). *Policies for Displaced Workers: An American Perspective*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- O'Leary, Christopher J., and Stephen A. Wandner, eds. (1997). *Unemployment Insurance in the United States: Analysis of Policy Issues*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Parsons, Donald, and Shuaizhang Feng (2004). "Insuring Displaced Workers: Human Capital Losses and Severance Pay Design." Mimeo, George Washington University (December).

- Ruhm, Christopher (1991). "Are Workers Permanently Scarred by Job Displacements?" *American Economic Review*, No. 81, pp. 319–323.
- Spiegelman, Robert G., Christopher J. O'Leary, and K. J. Kline (1992). *The Washington Reemployment Bonus Experiment: Final Report, Occasional Paper 92-6.* Washington, D.C.: U.S. Department of Labor, Unemployment Insurance Service.
- Sullivan, Daniel, and Till Von Wachter (2009). "Job Displacement and Mortality: An Analysis Using Administrative Data." *The Quarterly Journal of Economics*, Vol. 124, No. 3, 1265-1306.
- Trutko, John and Burt S. Barnow (2013). "Challenges and Accomplishments: States' Views." In Burt S. Barnow and Richard A. Hobbie, eds. *The American Recovery and Reinvestment Act: The Role of Workforce Programs*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- [U.S. Department of Labor (2010).] "Unemployment Insurance 75th Anniversary." Mimeo. Washington, D.C.: U.S. Department of Labor.
- U.S. Social Security Administration (2011). "Annual Statistical Supplement, Unemployment Insurance."
- U.S. Government Accountability Office (2015). "Unemployment Insurance: States' Reductions in Maximum Benefit Durations Have Implications for Federal Costs." Washington, D.C.: U.S. Government Accountability Office.
- Van Horn, Carl (2013). Working Scared (or Not at All): The Lost Decade, Great Recession, and Restoring the Shattered American Dream. Lanham, MD: Rowman and Littlefield Publishers.
- Van Horn, Carl, Cliff Zukin, and Allison Kopicki (2014). *Left Behind: The Long-Term Unemployed Struggle in an Improving Economy*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Edward J. Bloustein School of Planning and Public Policy (September).
- Wandner, Stephen A. (2010). *Solving the Reemployment Puzzle: From Research to Policy*, Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Wandner, Stephen A. (2013). "Trade Adjustment Assistance Program." In Burt S. Barnow and Richard A. Hobbie, eds. *The American Recovery and Reinvestment Act: The Role of Workforce Programs*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Woodbury, S.A., and Spiegelman, R.G. (1987). "Bonus to Workers and Employers to Reduce Unemployment: Randomized Trials in Illinois." *American Economic Review*, Vol. 77 (September), pp. 513-530.