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ABSTRACT

Wage insurance is a program that attempts to help permanently displaced workers transition to employment rapidly, effectively, and equitably. Because displaced workers have been found to suffer substantial earnings losses when they become reemployed, a wage insurance program provides a temporary wage supplement that partially reduces the wage loss experienced by targeted, newly reemployed workers. While participating workers receive a “wage supplement,” the program is called “wage insurance” because of its design as a social insurance program rather than an income transfer program. This paper provides a discussion of the development of wage insurance as a policy option in the United States and proposals that have had varying goals and designs.

JEL Classification Codes: J65, J68

Key Words: wage insurance, unemployment insurance, displaced workers, trade adjustment assistance, earnings losses, wage supplement

Wage Insurance as a Policy Option in the United States

Say a hardworking American loses his job—we shouldn't just make sure that he can get unemployment insurance; we should make sure that program encourages him to retrain for a business that's ready to hire him. If that new job doesn't pay as much, there should be a system of wage insurance in place so that he can still pay his bills.

Barack Obama
State of the Union address
January 12, 2016

Wage insurance is a program that attempts to help permanently displaced workers transition to employment rapidly, effectively, and equitably. Because displaced workers have been found to suffer substantial earnings losses when they become reemployed, a wage insurance program provides a temporary wage supplement that partially reduces the wage loss experienced by targeted, newly reemployed workers. While participating workers receive a “wage supplement,” the program is called “wage insurance” because of its design as a social insurance program rather than an income transfer program.

In his State of the Union message, President Obama recently proposed wage insurance as a program for helping all dislocated workers as they recover from the permanent loss of a job. On January 16, 2017, the White House released a description of the proposed program that is to be incorporated in the Fiscal Year 2017 Presidential Budget Request (White House 2016). The specific design of the President's proposal is to replace 50 percent of a displaced worker's lost wages, up to \$10,000 during a period of up to two years. All displaced workers who had been working for their prior employer for at least three years would be eligible for the wage supplement as long as they would be making less than \$50,000 per year when they returned to work. States would be required to administer this federally funded program.

Wage insurance proposals of many different designs have been discussed over the past three decades. They have been targeted to different types of displaced workers, with different replacement rates, and been available for varying periods of time. The Obama wage insurance proposal is of a particular wage insurance design. Below is a discussion of the development of wage insurance as a policy option in the United States and proposals that have had varying goals and designs.

INTRODUCTION

This paper reviews the research, evaluations, and policy pertaining to wage supplements and wage insurance. It concludes that little is known about the behavioral impacts of wage supplements on dislocated workers and suggests that the next policy step in this arena should be to conduct a large-scale, random assignment demonstration project that both evaluates the effectiveness of alternative wage supplement options and compares their impacts to alternative reemployment services and reemployment incentives.

Since the 1980s, policymakers and researchers have examined a number of approaches to create reemployment incentives for dislocated workers. Two concerns have driven interest in this issue: 1) reducing the work disincentive effects of unemployment insurance (UI) and Trade Adjustment Assistance (TAA), thus speeding the return to work; and 2) compensating dislocated workers for the losses they experience in a dynamic economy. In turn, two types of proposals have emerged: 1) reemployment bonuses that try to speed reemployment simply by providing a small, lump-sum payment directly to workers in lieu of, or in addition to, UI; and 2) wage insurance or wage supplements, that is wage-loss replacement supplements that may or may not

be funded through an insurance mechanism but that are designed to both speed reemployment and partially compensate workers for their earnings losses.

Wage supplements and wage subsidies are offered to workers or employers in the form of tax credits or other financial incentives. They are paid to encourage employment and increase workers' earnings. Wage supplements are paid to employees, whereas wage subsidies can be paid to either employees or employers. Wage supplements generally aim to encourage unemployed workers to go to work faster and to reduce the wage loss they experience in new jobs relative to the wages they earned in prior jobs. Wage subsidies to employers have a different goal: they incentivize employers to hire workers they might not otherwise hire. Wage subsidies to employees are paid to workers only after they become employed; they are paid to low-wage workers with the goal of making work pay by raising compensation for work until it reaches a specified earnings threshold. Because wage subsidies are only offered to workers after they become employed, they are not likely to speed reemployment, but as long as employees remain below the earnings threshold, they can encourage continued workforce participation.

The United States has considerable experience with wage subsidies to employers in the form of programs and demonstration projects. These efforts have generally served low-wage or disadvantaged workers. A number of programs were enacted between the 1960s and 1980s that included wage subsidies, including the Job Opportunities in the Business Sector (JOBS) program for young disadvantaged workers under the Comprehensive Employment and Training Act (CETA), the Work Incentive (WIN) tax credit program for Aid to Families with Dependent Children recipients, on-the-job training under the Job Training Partnership Act (and now under the Workforce Innovation and Opportunity Act), the Targeted Jobs Tax Credit, and the New Jobs Tax Credit. In addition, several projects also tested wage supplements. Programs that simply

offer subsidy payments to employers have experienced low participation rates, and, when used, have tended to be ineffective, with large-scale windfall effects (Katz 1996).

Wage subsidy programs that compensate employers for hiring low-wage workers continue to operate today in the United States. The Targeted Jobs Tax Credit (TJTC) was the major wage subsidy program for low-wage workers from 1979 to 1994. It was replaced by the Work Opportunity Tax Credit (WOTC) and Welfare to Work Tax Credit that continue today and are similar to the TJTC.

On-the-job training—wage subsidies to employers combined with reemployment services and training—has been found to be effective at improving employment and earnings for disadvantaged adults under CETA (Barnow 1987) and JTPA (Orr et al. 1995). It appears that the important factor in making these wage subsidies successful is the positive effect that reemployment services and training have on subsequent earnings and employment.

The effect of wage subsidies in the United States has been evaluated, comparing wage subsidies paid to employers and those paid to employees (Dickert-Conlin and Holtz-Eakins 2000). The researchers conclude that wage subsidies programs paid to employers have experienced low participation rates and have been ineffective. By contrast, they find that wage subsidies paid to employees, such as the Earned Income Tax Credit (EITC), are much more effective in targeting the population to be served, increasing workforce participation and supplementing earnings.

In Europe wage subsidies paid to employees generally have been combined with reemployment services, such as job search assistance and training. In this way, these programs are similar to on-the-job training programs in the United States. Betcherman et al. (2004) find that programs in Germany and Great Britain that combined these services had a modest positive

impact, but the combined service package did not have greater impacts than the provision of job search assistance and training provided without wage subsidies. Reviewing a large number of wage subsidy programs in industrial nations, the authors find that only about one-third of the wage subsidies programs had positive employment effects and one-half had positive earnings impacts.

Wage subsidies paid to low-wage workers aim to raise employment and earnings without having work disincentive effects. These programs do not try to speed the return to work; they are only available to people who are already working. They are programs to reduce poverty. For example, the largest wage subsidy in the United States is the Earned Income Tax Credit (EITC) that now pays about \$70 billion per year to over 26 million tax filers. The EITC was first enacted in 1975 and was expanded several times since then. It is available to all low-income workers who file tax returns, and its refundable provisions mean that low-wage workers may receive refunds even if they pay no taxes at all. The EITC is designed to be a safety net for people who work and have earnings; it is designed to “make work pay.” The amount received depends on family living arrangements and earnings. Families with two or more children receive the maximum amount, while families with one child receive a lower amount. Single individuals without children receive only a minimal tax credit (Berlin 2007).

In contrast to the extensive experience with wage subsidies for low-wage workers in the United States, the effectiveness of wage supplements for dislocated workers has not been evaluated. Wage supplements for dislocated workers have been analyzed theoretically and have been found to offer the possibility that offering wage supplements will encourage the return to work, increase employment, and replace part of the wage loss experienced after reemployment. A simulation using a job search model finds that a wage-loss subsidy of half of the wage loss

paid for two years would shorten unemployment spells by nearly two weeks and increase employment slightly, while replacing a significant portion of the wage loss experienced (Davidson and Woodbury 1995). In the United States, however, there has been no empirical testing of these findings, using either a rigorous demonstration project or an evaluation of an existing program. Wage insurance is the payment of a wage-loss supplement that is paid for by an insurance premium levied on employers or employees. Most proposals, however, have been for wage supplement programs that are not funded by insurance premiums but rather would be funded from other revenue sources—e.g., from the federal government

Because a large-scale program of wage insurance/supplements for dislocated workers has never been tried in the United States, and therefore has not been evaluated, it is not clear what the impact of such a program would be. Who would receive the supplements? What effect would the program have on the behavior of workers with respect to searching for work, accepting job offers, and retaining jobs taken? Who would benefit from wage supplements, what percentage of prior wages would be replaced, and how would the distribution of benefits compare to other policy options? More generally, how effective and efficient are wage supplements?

Because of the policy interest in wage insurance/supplements, policymakers and researchers have wanted to find answers to some unanswered questions about the program. Thus, there have been several proposals to test wage insurance in a demonstration mode before implementing it as a full-fledged program. The Advisory Council on Unemployment Compensation (1995) reviewed the potential usefulness of wage supplements to increase the U.S. labor supply and considered the usefulness of introducing it as a new reemployment policy initiative. Finding that “there are no experiments on the effect of wage subsidies to workers,” the commission speculated, based on evaluations of the reemployment bonus experiments, that

“subsidizing workers’ wages could be expected to have a modest effect on unemployment for those to whom the subsidy was offered, but the effect would be offset by some displacement.”

The commission made no recommendations about wage insurance or supplements; the commissioners concluded that there was insufficient evidence available to make a policy decision. The commission research director then requested that the Department conduct a wage subsidy experiment to provide future policy guidance. However, because of lack of will and lack of funding, no experiment was ever conducted.

In 2002, the Bush administration negotiated with Congress to establish a small, new wage supplement demonstration program, called the Alternative Trade Adjustment Assistance (ATAA) program. The ATAA is a program for some workers permanently separated from their jobs due to international trade, if they are eligible for the Trade Adjustment Assistance (TAA) program. It is funded from the same source as the entire TAA program, the Federal Unemployment Benefit Account (FUBA), which in turn is funded from federal general revenue. ATAA was designed through negotiations between congressional and executive branch staff but was not based on empirical evidence. The program is available to TAA-certified workers age 50 or older who have lost their jobs due to international trade. TAA-certified workers are eligible for ATAA wage subsidies if they obtain full-time jobs that pay \$50,000 or less, earn less than they did in their prior jobs, and find employment within 26 weeks of becoming unemployed. They may receive a wage subsidy equal to 50 percent of the difference between their old and new wage for up to two years, but they cannot receive more than a total of \$10,000. They cannot receive ATAA once they receive TAA-approved training.

In the 110th Congress beginning in 2007, a number of ambitious federal legislative proposals for wage supplementation could have resulted in programs of much larger scope and

cost. Some proposals would have made all dislocated workers eligible for wage subsidies; would have included earnings-loss replacement rates of 25, 50, or 75 percent; and would have made payments for up to six years. The estimated cost for some of these larger programs ranged from about \$3 billion to \$20 billion per year, whereas in 2006 the ATAA program paid out roughly \$15 million. Similarly, the ATAA program made payments to about 3,200 new recipients in 2006, whereas a program available to all dislocated workers might make payments to as many as 2 million workers (USDOL 2007). By contrast, the ATAA program began operating in 2003, and by 2007 it paid wage insurance/supplements to fewer than 6,800 workers (Montgomery 2007).

The experience of implementing a small wage insurance/supplement program in the form of the ATAA has generated interest. Rather than limited wage supplements to older workers adversely affected by international trade, interest has expanded to all dislocated American workers regardless of their age. The proposal in President Obama's January 2016 State of the Union address reflects this broader targeting.

This paper reviews some current and past proposals that relate to wage insurance/supplement policy. It also reviews past calls for demonstration projects and recommends a rigorous evaluation of any wage insurance/supplement programs that may emerge from reauthorization of the TAA program in the 111th Congress. It also suggests that a comprehensive random assignment demonstration project be conducted to evaluate and assess alternative designs for large-scale wage insurance/supplement programs.

WAGE INSURANCE/SUPPLEMENT RESEARCH AND POLICY PROPOSALS

A number of Brookings Institution researchers have been the leading advocates for wage insurance or supplementation. Although the discussion of wage insurance/supplements can be found in research literature decades earlier, Brookings researchers initiated a continuing policy debate about wage supplements for dislocated workers beginning in the mid-1980s. Since then, advocates of wage insurance/supplement proposals have periodically renewed, refined, and adapted their proposals to changing policy concerns.

Most wage supplement proposals and programs before the mid-1980s targeted low-wage workers and aimed to reduce poverty and provide income support. Since then, there have been persistent concerns about worker dislocation, particularly about dislocations related to international trade. Emphasis has shifted back and forth as to whether the goal of wage supplements is to ease the impact of domestic or international worker displacements. Brookings' articles and books published in 1984, 1993, 2006, and 2007 propose wage supplements to alleviate the worker dislocation associated with macroeconomic policy to promote economic growth. Interspersed among these proposals are other published Brookings proposals from 1986, 1998, 2006, and 2007 that endorse using wage supplements to ease the adjustment to job loss from international trade. The Hamilton Project, a public policy group housed within the Brookings Institution, has taken up the issue, encouraging the development of federal legislative proposals. A common problem with the Brookings proposals is that they advocate big policy concepts with limited empirical grounding.

U.S. Research and Policy Analysis

The following articles and books are among those that have proposed wage insurance/supplement programs. Most of them were written by Brookings researchers and published by the Brookings Institution. They are reviewed in chronological order and also are summarized in Table 1.

1. Lawrence, Krause, Meyer, and Cohen (1984): Brookings Institution

The first Brookings proposal for providing wage supplements to dislocated workers was presented in 1984. *Economic Choices* (Lawrence et al. 1984) is a book that deals with macroeconomic policy to create sustainable growth and competitiveness in world markets. One chapter, “Adjusting to Economic Change,” calls for microeconomic policy to reduce the losses experienced by adversely affected workers. The authors devote less than a page to call for a broad program for dislocated workers “compensating the most severely affected victims of structural change” (p. 150). Thus, this proposal targets all dislocated workers regardless of the source of their displacement. Partial compensation for wage loss was seen as superior to UI because it would not have the work disincentive effects of UI, but the authors do not consider either the design details of a program or how the program might provide incentives to speed the return to work. Wage supplements were considered to provide a strong incentive to work because they would be paid based on the decline in hourly wages and would therefore encourage workers to work more hours. The authors do note, however, that the UI program did not (and still does not) collect hourly wage rates upon which any supplementation would be based, so a substantial change would be required in the UI tax collection system in every state to add hourly wages to the current quarterly collection of wage data.

2. Lawrence and Litan (1986): Brookings Institution

Two years later, Lawrence and Litan proposed another wage supplement program for dislocated workers, this one targeted more toward dislocated workers who were adversely impacted by international trade. This proposal was part of a book, *Saving Free Trade: A Pragmatic Approach*, aimed at gaining support for a U.S. free trade policy (Lawrence and Litan 1986). The authors were concerned that record trade deficits encourage domestic industries to seek temporary protection from free trade under the escape clause of the Trade Act of 1974. They propose methods to reduce the pressure to circumvent free trade policy. For firms and workers that are adversely affected by international trade, they propose relief. Affected firms would be given relief from antitrust legislation, allowing special provisions for mergers. Workers would receive improved Trade Adjustment Assistance benefits.

Lawrence and Litan propose three types of assistance to affected workers. They would 1) reconfigure trade benefits in the form of “earnings insurance” to encourage rapid adjustment and reemployment, 2) provide extended unemployment benefits to trade-impacted unemployed workers residing in regions of high unemployment, and 3) provide additional training and relocation allowances. Their proposal is for “cost-effective” trade assistance programs that would target only those dislocated workers who lost their jobs as part of serious dislocations that were primarily due to import competition, be available only temporarily, and be cost-effective in the sense of providing subsidies to workers and firms rather than restricting trade.

The “earnings insurance” component of trade benefits would be available to trade-affected workers after they become reemployed, and these benefits would replace UI benefits. This earnings insurance proposal does not provide details with respect to program design or administration. The authors suggest a 50 percent wage replacement rate, but they do not provide

detailed specifications. For example, they do not provide either the maximum annual payment or the maximum payment period. They suggest that the percentage of income replaced could decline over time and could also reflect the age and experience of individual workers, increasing with age and tenure.

3. Baily, Burtless, and Litan (1993): Brookings Institution

Wage supplements were again proposed in 1993 by Baily, Burtless, and Litan in their book, *Growth with Equity: Economic Policy-Making for the Next Century* (1993). The authors propose to reduce the opposition to economic change, and particularly to change caused by trade liberalization, by compensating trade adjustment losers such that their losses will be manageable. They also want to encourage workers to rapidly come to terms with the fact that, having permanently lost their jobs, they need to adjust quickly. The authors propose to offer an incentive to rapid adjustment, eliminating the disincentives of the UI program, and particularly of the TAA program, for which benefits can continue for up to 104 weeks. They expect the change in incentives to speed dislocated workers' return to work, even if those workers take lower paying jobs while partially compensating for this loss.

While the authors concentrate on trade-affected dislocated workers, they also consider the possibility of greatly broadening wage supplements to cover all dislocated workers, whether they are displaced by international trade or domestic causes. They suggest that to limit its costs, eligibility criteria might be considered, perhaps consisting of workers' long job tenure, location in a high unemployment labor market, or being subject to a mass layoff.

For workers who, after displacement due to trade, take new jobs paying less than their prior wage they propose to replace 50 percent of the workers' wage loss for a period of two years. The proposal would be a work incentive only to those dislocated workers who, after

receiving the wage supplement offer, may have to take a job paying less than their prior job. Upon taking a lower paying job, they would become eligible for such payments. The authors' program design is incomplete, however, failing to address program components such as the qualification eligibility period within which a worker must find a job, the maximum payment level, whether participants would have to take full-time jobs, and funding.

The crux of the authors' argument is that the United States should increase labor market equity for those workers adversely affected by trade; in return, the cost to the government of providing additional transfer payments would be reduced, in part, by more rapid reemployment that would reduce the period of unemployment and increase employment and earnings.

4. Burtless, Lawrence, and Litan (1998): Brookings Institution

In 1998, the same Brookings researchers were again promoting free trade, trying to overcome fear of global competition in their book, *Globaphobia* (Burtless et al. 1998). Searching for effective programs to gain support for international trade policy, the authors criticized existing policy and identified three flaws in the TAA program. First, they concluded that providing cash payments under the Trade Readjustment Assistance (TRA) portion of the program delayed workers finding jobs. Second, they observed that the requirement to enroll in training did not increase earnings. Finally, they noted that TRA payments did not compensate workers for reductions in earnings.

In response to these flaws, they proposed that the entire TAA program be replaced with an "earnings insurance" program. The program would be narrowly tailored to respond to specific new trade agreements and would be available to all unemployed workers in specified affected industries for a limited period of time subject to congressional authorization. In the authors' example, affected workers would receive 50 percent of their earnings loss. While all

affected workers could be eligible, they suggest that eligibility could be limited based on age—considered to be reasonable on equity grounds—or minimum job tenure (e.g., two years). Although the source of the funding is not identified, benefits would be capped at \$10,000 per year. Workers could only receive benefits for up to two years after their displacement. This means that the maximum period of reciprocity would be two years, but delaying reemployment would reduce the amount of potential entitlement. It is this declining entitlement that they believed would act as an incentive to search for work and promptly accept a new job. The authors suggest that if this trade-related program were successful, it could be expanded to cover a broader class of displaced workers (Burtless, Lawrence, and Litan 1998).

This proposal to provide "earnings insurance" to all dislocated workers also was more administratively practical than the Lawrence et al. (1984) proposal by proposing to pay wage supplements on a monthly or quarterly basis. Thus, it might be possible to use quarterly UI wage records as the basis for payments rather than to require nearly every state in the country to change their UI wage records systems to add hourly wages (Burtless et al. 1998).

5. Kletzer and Litan (2001): Brookings Institution

In 2001, Kletzer and Litan published "A Prescription for Worker Anxiety," which suggests the need for wage supplements both for domestic and international economic purposes. They seek to retain support for flexible labor markets and free trade and suggest that wage supplements would be a better safety net than the TAA program. The authors would retain the current UI program but suggest replacing the TAA program with a wage insurance/supplement program available to all dislocated workers (as well as subsidies for medical insurance for all dislocated workers for up to six months while they are unemployed) when they become reemployed. Wage supplements would replace 50 percent of lost wages up to an annual

maximum of \$10,000. They would be time limited, available for only two years after the initial job loss, encouraging rapid reemployment, since each additional week of unemployment would reduce the wage supplement entitlement by a week. The 50 percent replacement rate might vary with the age and tenure of the workers. Kletzer and Litan estimate that such a program would have cost \$3.0 billion in 1999 and \$2.3 billion in 1997 when the unemployment rate was lower.

The year after the publication of Kletzer and Litan's paper, a small, targeted wage supplement program (ATAA) was enacted as part of the 2002 TAA reauthorization bill.

6. Brainard, Litan, and Warren (2006): Brookings Institution

In "A Fairer Deal for America's Workers in an Era of Offshoring," Brainard, Litan, and Warren (2006) propose wage supplements to address an emerging international trade issue—offshore outsourcing. The main objectives of this version of wage supplements are to speed reemployment, act as an on-the-job training subsidy for employers, and encourage workers to try new types of jobs in stronger sectors of the economy.

Despite their concern about the loss of jobs through foreign trade, and more specifically from offshore outsourcing, the authors recommend that wage supplements be targeted to all dislocated workers, regardless of the source of their dislocation. Workers would be eligible if they were displaced from full-time jobs and accept new full-time employment. Wage supplements would pay one-half of lost wages up to a maximum of \$10,000 per year for up to two years. The benefits would only be available for two years after workers find a job or for 26 weeks after becoming reemployed, depending on which comes sooner. The authors expect this design to encourage workers to return to work quickly and to limit the subsidy to the early period of employment during which most on-the-job training is provided.

They estimate and compare the cost of their wage supplement program to other programs. They estimate the cost at \$20,000 per worker, about the same as the ATAA wage supplement program (\$19,350), but considerably less than the TAA program (\$32,700). On other hand, it would cost more per person than the combination of UI payments and providing Workforce Investment Act program services, and much more than George W. Bush administration proposals for Personal Reemployment Accounts or Career Advancement Accounts. Brainard, Litan, and Warren estimate the total cost of the wage supplement programs using alternative designs for the years 2000–2004. Their basic proposal of a program that replaces 50 percent of lost income for up to two years, with a cap of \$10,000 per year, would have cost a low of \$2.6 billion in 2000 and a high of \$5.1 billion in 2002, varying with economic conditions.

7. Rosen and Kletzer (2006): The Hamilton Project

The Hamilton Project began in 2006 as a public policy effort within the Brookings Institution under the leadership of Robert Rubin, Gene Sperling, and others. The Project has considered a wide variety of federal policy issues, including those dealing with the revision of current income transfer programs. One of the Hamilton Project’s founding principles is that there is no incompatibility between economic security and economic growth, so the Project has been searching for new ideas to improve economic security. Two early Hamilton Project papers propose wage supplementation.

In “Reforming Unemployment Insurance for the Twenty-First Century Workforce,” Rosen and Kletzer (2006) propose modest reform of the UI program but also include a wage supplement proposal as an addition to, not a substitute for, unemployment insurance. Their wage supplement program would target all dislocated workers, regardless of the source of their displacement. Their proposal is not specific—it simply suggests that eligible workers receive a

fraction of their wage loss, and that the fraction replaced might depend on factors such as age and employment tenure. They do, however, refer to the more specific proposal discussed above by Brainard et al. (2006).

8. Kling (2006): The Hamilton Project

In “Fundamental Restructuring of Unemployment Insurance: Wage-Loss Insurance and Temporary Earnings Replacement Accounts,” Kling (2006) proposes a more radical approach. He would eliminate the current UI program altogether, while retaining the basic UI tax system. UI would be replaced with a private savings plan, similar to the previously proposed “UI savings accounts” (Feldstein and Altman 1998). Unemployed workers could make withdrawals from government-administered individual unemployment savings accounts (Kling calls them temporary earnings replacement accounts, or TERAs). Withdrawals would be governed by rules similar to the current UI eligibility and benefit payment rules. One-third of the continuing UI tax would be used to supplement TERA withdrawals for workers who do not have enough funds in their TERAs for withdrawals either because they experience low earnings or do not go back to work. Loan repayment of the TERAs would be made through employer-administered payroll deductions as a percent of future earnings.

Kling would use the other two-thirds of the UI tax to pay “wage-loss insurance,” his name for wage supplements. Workers permanently separated from an employer would be eligible for wage supplements if they had worked for one year or more for their former employers and met all of the eligibility requirements for UI benefit receipt. Unemployed workers, however, would be eligible for wage supplement payments even if they went directly to work for another employer and did not make withdrawals from their TERA accounts. In UI terminology, they could have “never filed” for benefits and still be eligible for wage insurance payments. Workers

would receive one-quarter of the difference between their prior hourly wages and their current hourly wages, although wage-loss compensation would be constrained by limiting the computational prior wage to no more than \$15 per hour. Workers would be eligible to receive wage insurance for up to six years. Kling's proposal is estimated to cost approximately \$20 billion per year when fully operational.

Kling's proposal is designed to be revenue neutral to the federal budget when compared to the current UI program. Funding his wage insurance proposal could only be accomplished by privatizing the UI program—he would shift unemployment wage-loss payments from a government-sponsored social insurance program to a worker-funded private saving program. This shift would allow the redirection of most of the continuing UI tax revenue to fully fund a new wage insurance program. The proposal's goal is to substantially shift income support programs from insuring short-term earnings losses during unemployment to long-term earnings losses after workers become reemployed.

In "Strengthening Unemployment Insurance: A Critique of Individual Accounts and Wage Loss Insurance," Wayne Vroman (2007) critiques the Kling proposal. Among other things, he questions the policy priority of establishing a wage supplement compared to 1) making policy improvements to the UI program itself; and 2) other forms of support for dislocated workers, including job matching, provision of labor market information, relocation allowances, and training and education. He also advocates the need for conducting a random assignment experiment to evaluate the behavioral responses to wage supplement interventions. Such an experiment could also be used to compare the effectiveness and efficiency of wage supplements to alternative financial incentives (e.g., reemployment bonuses) and reemployment services.

9. LaLonde (2007)

In “The Case for Wage Insurance,” LaLonde (2007) makes the case for using wage supplements as a tool to increase support for international trade for the Council on Foreign Relations. The policy goal of this proposal is to reduce opposition to free trade at a time of great fear of the adverse impact of international trade on American jobs. Although he acknowledges that wage supplements cannot assure trade liberalization, he believes they can help.

LaLonde, points out that the greatest cost of worker dislocation to long-tenured, middle-income workers is the wage loss after reemployment, rather than wage loss during unemployment. He also believes that wage supplements are desirable regardless of their positive impact on public acceptance of free trade because the failure to provide this type of catastrophic insurance represents a market failure in the U.S. economy.

Starting from a “consensus” wage supplement proposal model that targets all dislocated workers, provides them 50 percent replacement of lost wages for up to two years, caps supplements at \$10,000 per year, and restricts supplements to workers earning up to \$50,000 per year, LaLonde nonetheless believes that this model is inadequate. He questions a number of these parameters as being inadequate to helping middle-income workers suffering the largest wage loss from displacement, but he does not suggest alternatives other than recommending increasing the maximum duration of receipt from two to four years. LaLonde also recommends limiting eligibility to long-tenured dislocated workers, defining them as workers employed for 12 or more quarters with their primary predisplacement employer.

Although LaLonde’s goal is to increase support for free trade policy, he does not target his proposal only to dislocated workers adversely affected by international trade. He would provide benefits to *all* dislocated workers to reduce the fear of international trade, a fear that

American workers may harbor regardless of whether they eventually lose their jobs due to domestic or international factors.

LaLonde suggests that the resulting program would cost about twice the estimated \$2–\$3 billion per year of the traditional program design, apparently following the Kletzer and Litan (2001) estimates. He suggests four potential methods to fully finance the program: 1) imposing a tax or “insurance premium” of \$2–\$3 per month; 2) imposing a deductible, restricting wage supplement payments to workers with earnings losses of greater than 5 percent; 3) diverting dislocated worker program funding from less cost-effective training programs; or 4) extending the UI waiting period by two weeks.

10. Burtless (2007)

In “Income Supports for Workers and Their Families,” Burtless (2007) reverses field from his 1998 *Globaphobia* book with respect to the scope of wage supplements. He presents arguments for providing wage supplements (“time-limited earnings insurance”) to all dislocated workers, whether they are impacted by international trade or not, in large part to deal with the trend toward increasing durations of unemployment. He also proposes what has become the “consensus” wage supplement model, which would be targeted to dislocated workers with minimum tenure (two or three years) with their prior employer. The wage supplement would replace 50 percent of the earnings reduction of workers, capped at \$10,000 per year and available for up to 18 months or two years.

Burtless’s proposal also addresses a number of behavioral and other issues. Wage supplements would be time limited, with eligibility ending 18 or 24 months after layoff, encouraging workers to take new jobs rapidly. He offers the option of restricting supplements to workers who find full-time jobs or reduce payments to part-time workers. On equity grounds, he

suggests increasing the wage replacement rate for older workers or workers with longer job tenure.

Burtless also discusses the limitations of wage supplements. Supplements would help, but not solve, the problem of increasing durations of spells of unemployment, and they would help workers with middle and upper earnings, but not low-wage workers. Something else would have to be done to help the poor.

Summary of the Brookings Institution Approach to Wage Supplements

The Brookings Institution researchers involved in the wage supplement debate are all economists who have looked at how U.S. government policy and programs have dealt with both dislocated workers in general and dislocated workers adversely affected by international trade in particular. The main players over the years also have divided between international trade specialists (e.g., Lawrence and Litan 1986) and labor economists (e.g., Burtless and Baily). Their economic specialties have tended to shape the policy concerns between international trade and domestic labor force policy (Burtless 2008).

The Brookings economists share common concerns. They believe that some current employment and training programs have not been effective, particularly those that provide short-term training. If those programs result in no net benefits, the researchers reason that substituting wage supplements for less effective programs would yield positive results for recipients.

All of the Brookings economists' proposals, with the exception of Kling (2006), have supported the UI program. Their proposals have treated wage supplements as a substitute for ineffective reemployment services rather than as a substitute for UI. Burtless, however, goes further and suggests that, although the basic UI program should be preserved and strengthened, wage supplements are a better investment than providing additional weeks of benefits to trade-

affected unemployed workers. An argument for substituting wage supplements for UI benefits is that the latter provides some disincentive to work while the former does not. Although the modest wage replacement rates and duration of proposed wage supplements, as well as narrow targeting, make such a proposal unlikely to significantly raise support for international trade, Burtless notes that countries that are more open to international trade have stronger social safety nets, and he argues that wage supplements could be an important additional component of the American safety net (Burtless 2008).

Canada Tests Wage Supplements: The Earnings Supplement Project (ESP) Experiment

In 1995 and 1996, the Canadian government ran a type of wage supplement demonstration called the Earnings Supplement Project (ESP) experiment. Canada had been exploring approaches to provide reemployment incentives to dislocated workers, looking at both reemployment bonus experiments and the concept of wage supplements in the United States. In the end, Canada tested a wage insurance program based on the Brookings models but called an “earnings supplement.” This different title was not an idle change; the Canadians did not need to sell this concept as “insurance,” and they were willing to make the supplements much more generous, reflecting greater concern about equity.

Like most of the Brookings proposals, the Canadian approach was designed to both speed the adjustment of dislocated workers—encouraging them to take lower paying jobs if necessary—and partially compensate these dislocated workers for their lost income when they took these jobs. The target group was all dislocated workers, not just those adversely affected by trade policy. Treatment group members were offered generous payments of 75 percent of their earnings loss for up to two years. They received a payment only if they suffered an earnings loss and became employed in a nearly full-time job (32 hours per week) within 26 weeks of the offer

date. To receive benefits, the new job had to be in employment covered by the UI program. It also had to be with a new employer or in a job with the previous employer at a new location. Benefits were capped at C\$250 per week, allowing benefits of up to C\$13,000 per year (Bloom et al. 1999).

Out of a sample of 5,912 dislocated workers—split equally between the treatment and control group—20 percent of the treatment group drew an earnings supplement within the six-month job-search/qualification period. The average payment for supplement recipients was C\$8,705, and the average weekly supplement payment was C\$127. The median number of weeks for which supplements were paid was 73 weeks and the mean was 64 weeks. Fifteen percent received less than 27 weeks, and 41 percent received more than 78 payments (Bloom et al. 1999).

The net impacts of the experiment did not support the concept of wage supplements increasing labor market efficiency. The treatment group was more likely than the control group to take both a full-time job and a low-wage job. The experiment, however, did not reduce UI costs or lead to greater earnings. The impacts on weeks of unemployment benefits received and annual earnings were actually of the wrong sign, although they were not significant. Indeed, average annual weeks of unemployment benefits increased by 0.2 weeks, and average annual earnings decreased by C\$546 (Bloom et al. 1999).

The Canadian ESP experiment did not fulfill the expectations of the wage insurance proposal in the sense that ESP participants did not accelerate their return to work. They did not reduce their UI benefit durations, and they did not increase their earnings. The evaluators of ESP (Bloom et al. 1999) summarize their findings:

The overall effect of ESP was quite small . . . Two out of ten displaced workers who were offered the supplement program actually received supplement payments. The effect of the program was a small increase in early full-time employment, with a small countervailing reduction in wages, and no decrease in unemployment benefits. The net financial benefits of the supplement were modestly positive for displaced workers overall, although it was a major source of temporary income for a small fraction who received supplement payments. Furthermore, the supplement was a net cost to the Canadian government.

In summary . . . ESP suggest(s) that even a generous re-employment incentive will not make a big difference for large numbers of displaced workers . . . this approach has to date neither markedly improved labour market outcomes nor substantially reduced unemployment benefits . . .

Kling (2006, p. 17) recognizes this problem: “Some observers have viewed the [ESP] program as a failure because UI expenditures were not reduced appreciably; the primary goal of the program was to accelerate reemployment and reduce traditional UI expenditures. . . . The primary motivation of the proposal in this paper, however, is not to reduce government payments.” Most other Brookings researchers, however, have expected wage supplements to accelerate the return to work and reduce UI expenditures.

The ESP experiment, however, is not a fair test of wage insurance in the United States. The replacement rate of 75 percent was greater than the rates currently being proposed here. The job- search/qualification period of 26 weeks to find a job was longer than one would set in the United States if a program targeting all dislocated workers were designed to reduce the duration of UI receipt because the total potential entitlement to United States UI regular benefits is only 26 weeks. The insured unemployment duration, thus, could only be reduced if the qualification period were set well below the maximum UI duration.

Reemployment Bonuses

The reemployment bonus research, discussed above, is relevant to the discussion of wage supplements. In all of the reemployment bonus experiments, the design required that dislocated

workers find jobs within 12 weeks or less, and the bonus offer amount was modest. When implemented, the project design had to reduce the duration of unemployment to permit the possibility of cost-effective outcomes. To be cost-effective to the government sector, the total cost of reemployment bonuses (bonus amount and administrative cost) had to be less than the total benefits (reductions in UI benefit payments and increases in tax payments during longer periods of work). By contrast, the Canadian ESP design was so generous that it could not be cost-effective.

A wage supplement program offered to all dislocated workers in the United States would have to have a shorter qualification period than that of the Earnings Supplement Project—about 12 weeks—if it were to speed the workers’ return to work. Similarly, a program that offers much larger payment amounts would not be cost-effective to the government. Much more generous programs could likely be designed to compensate for wage loss, but they would have to be evaluated as to whether they would have positive behavioral impacts on the return to work. Regardless of their behavioral effect, they likely would not be cost-effective to the government.

WAGE SUPPLEMENTS IN OPERATION: THE ALTERNATIVE TRADE ADJUSTMENT ASSISTANCE (ATAA) PROGRAM

Wage Supplements under the 2002 Reauthorization of the Trade Adjustment Assistance Program

The TAA Act authorizes benefits and provides training to workers who are determined to be adversely affected by international trade. It is a small program relative to the number of workers who are dislocated each year; fewer than 100,000 workers begin receiving income support each year (see Table 2), compared to 2–3 million workers who are dislocated each year. These newly certified workers make up only a small percentage of the 7–10 million workers who

receive UI benefits each year. The Trade Readjustment Allowances (TRA) program is administered by the state UI programs, while the non-TRA portion of the TAA program is administered separately by the state workforce agency.

If they believe that the workers qualify for the program, the workers or their representatives in individual firms file petitions on behalf of the workers. The petitions are investigated and reviewed by federal staff, and the workers are determined to be trade impacted or not. Between 1,000 and 3,000 petitions are filed each year, and approximately 60 percent are certified under the TAA program. Although 100,000–200,000 workers are certified to receive benefits each year, only half or fewer eventually receive income support. A smaller proportion—one-third or fewer—actually receive training each year, in part because of limited funding.

At the beginning of 2002, White House policymakers began to consider the terms for reauthorization of the TAA program. A proposal for Structural Adjustment Accounts (SAA) was developed to use private market incentives to encourage displaced workers to find jobs quickly. The Bush administration thought that existing TAA and WIA Dislocated Worker programs gave workers training they did not need, which delayed reemployment. In response, SAAs were proposed to alter the incentives. The accounts were considered to be applicable to all workers who were permanently separated from industries with declining employment, whether or not international trade was the source of this displacement. SAAs could be used to pay for training, relocation, or income maintenance, and they would be offered in addition to regular UI. However, since SAAs would be expensive, if offered in the amount of a \$5,000 voucher, they were proposed as a replacement for the current TAA program. When expanded and offered to all dislocated workers, they also would replace the WIA Dislocated Worker program. Initially the SAAs were proposed to be made available only to TAA-eligible workers under the upcoming

reauthorization of the TAA program, and could be offered either on a large scale or as a small-scale social science experiment (Council of Economic Advisers 2002).

In the spring of 2002, the author developed a proposal for the Department of Labor to test the wage supplement concept as a social science experiment using random assignment. The experimental design followed the Council of Economic Advisers' small-scale experiment approach. For the demonstration, approximately 10,000 TAA beneficiaries were proposed to be assigned to the treatment and control groups. The wage supplement would have been paid for up to two years to TAA-eligible workers who were 50 years of age or older. Treatment group members would have been offered payments of up to half the difference between their prior wage and their current wage, up to a maximum of \$10,000 over two years, but only if they took a job within six months of their layoff. There were no earnings levels restrictions for the new job. The demonstration was estimated to cost \$27.8 million, and the initiative would have been authorized under the new TAA program (Wandner 2002).

In the negotiations between the Bush administration and Congress during the summer of 2002, the wage supplement demonstration project was dropped. The Senate Finance Committee under Senator Max Baucus (D-MT) was developing its own TAA bill. The committee hired labor economist Howard Rosen as a consultant to work on developing the bill. Rosen specializes in international and labor market adjustment issues and had been an advocate of the TAA program. He was first introduced to wage supplement proposals by Lori Kletzer, who had conducted research in this area. Rosen wrote a trade bill for the committee that included a wage supplement section. He was opposed to having the Department of Labor run a wage supplement experiment because he knew that the planned 1988 experiment had never been completed, and he did not believe that the Department would be able to conduct a new experiment. Based on his

formulation, the Senate passed its TAA bill before the House considered the measure. Senator Baucus then met with Rep. William Thomas (R-CA), chair of the Ways and Means Committee. He convinced Thomas that a wage supplement was a sound proposal. Thomas championed the provision and gave it its name, Alternative Trade Adjustment Assistance (Rosen 2008).

Thus, the Bush wage supplement experiment was replaced with an expanded entitlement program that was available to the same eligible workers and payable under the same terms and conditions, except for a ATAA restriction that the new job could not pay more than \$50,000 per year. This program is funded from federal general revenue. The legislative heading for the ATAA provision still reflects that it was designed as a demonstration program—Section 124 of TAA is still titled “Demonstration Project for Alternative Trade Adjustment Assistance for Older Workers,” even though it was enacted as an entitlement program available to all eligible TAA recipients in all states.

The ATAA is a limited wage supplement program for a small subset of trade-impacted workers. The design was clearly informed by the policy discussion of the preceding two decades. It follows aspects of the Brookings models in that it replaces 50 percent of the wage loss of the new job relative to the old job, is available for two years, and provides annual payments not to exceed \$10,000 to workers who obtain full-time jobs.

However, some of the design components differ from the Brookings’ models. ATAA is limited to TAA-certified workers who are age 50 or older. ATAA also is limited to workers who receive new earnings of \$50,000 or less per year. There is no time limit for drawing wage supplements. Workers who find employment within 26 weeks of becoming unemployed can draw benefits for up to two years. Workers cannot receive ATAAs if they receive TAA-approved training.

The age limitation is a way of favoring older workers. It excludes younger workers altogether and provides older workers with greater benefits. The requirement that workers find a job within 26 weeks likely provides a weaker incentive to return to work than a time-limited program. This 26-week requirement also is approximately twice as generous as the qualification period for reemployment bonuses, so it is likely to provide far less of an incentive to return to work quickly.

While the ATAA program was enacted as part of TAA reauthorization in 2002, the Department of Labor did not immediately develop program specifications and provide guidance to state employment security agencies. Guidance to the states was provided in 2003, and states implemented the program in 2003 and 2004. Because the states could administer the program for five years after initial implementation, the state programs did not lapse until 2008 and 2009 (Clark 2008).

Thus, the ATAA program has been small and slow to start. Once operational in all states operating TAA programs, it served between 2,000 and 4,000 workers in FY 2005–2007, representing less than 3 percent of certified workers and less than 6 percent of TAA program participants who receive income support. ATAA outlays during FY 2005 and 2006 were approximately \$50 million, less than 10 percent of outlays on TAA income support (See Table 3).

Little is known about the operation or impacts of the ATAA program. The Department of Labor funded an evaluation of the TAA program as reauthorized in 2002, but the evaluation dealt only indirectly with ATAA. The evaluators found that the ATAA program is either administered solely by state UI programs or cooperatively with non-TRA state agencies that provide training and reemployment services. Early administrative problems in setting up the

ATAA program have eased substantially. The take-up rates for ATAA-eligible workers, however, have been very low. In late 2005, the evaluator estimated the average take-up rate at between 4 and 5 percent, but for individual states the take-up rates ranged from 0 to 10 percent. The reason for the low take-up rate was not determined, but possible explanations appeared to be that 1) workers did not know about the program, 2) workers might have mistakenly thought that TAA is only a training program, 3) workers could not find a job within 26 weeks, or 4) workers did not want to forgo training that is accompanied by generous TRA payments (Social Policy Research Associates 2007).

WAGE SUPPLEMENT LEGISLATIVE PROPOSALS IN THE 110TH CONGRESS

When the newly Democratic-controlled 110th Congress began its first session in January 2007, it quickly began consideration of a number of bills that would expand then current ATAA program as part of the TAA reauthorization. One bill, proposed by Senators Max Baucus (D-MT) and Norm Coleman (R-MN), would have lowered the minimum age of eligibility for ATAA from 50 to 40. Senator Charles Schumer (D-NY) and Rep. Jim McDermott (D-WA) developed a bill that looked more like the Brainard (2006) proposal in that almost all dislocated workers of any age would be eligible. An early newspaper article indicated that dislocated workers might be eligible if they earned less than \$97,500 per year, and benefits might be as high as \$20,000 per year (Montgomery 2007). Other senators were said to support only much more modest expansions of ATAA that were tied to international trade.

On the international trade side, the impetus for congressional action was the fact that the 2002 TAA program was authorized for only five years, and it expired in September 2007. Since

ATAA was only a small program in the TAA programs, the issue became whether to continue ATAA unchanged or expand it, and, if it were to be expanded, by how much.

Wage Supplements for All Dislocated Workers

Interest in wage supplement proposals increased with the start of a new Democratic Congress in early 2007. The House Ways and Means Committee held a hearing on wage insurance in February 2007. The hearing was called by Rep. James McDermott, chair of the Subcommittee on Income Security and Family Support, the subcommittee that has jurisdiction over the UI and TAA programs. The key witness at the hearing was Lael Brainard of the Brookings Institution.

Brainard testified again before the Joint Economic Committee on February 28, 2007. Her wage supplement proposal was based on proposals in Kletzer and Litan (2001) as well as her own 2006 paper. She advocated making wage supplements available to all dislocated workers unemployed for any reason, whether or not they lost their jobs because of international trade. Unemployed workers would be eligible if they were permanently separated from full-time jobs and had at least two years of tenure at their previous jobs. They would be eligible to receive weekly payments of half of the difference between their prior and current wages, up to a maximum of \$10,000 per year. They could receive these payments for up to two years. Brainard estimated the cost of her proposal at \$3.5 billion per year. It would be paid for by an added tax of \$25 per year on every worker. The tax would be paid in equal amount by workers and employers and would be collected along with the current federal unemployment tax (FUTA) that pays for UI administration, UI extended benefits, and the provision of loans to state UI trust fund accounts.

On March 15, 2007, the Subcommittee on Income Security and Family Support of the House Ways and Means Committee held a follow-up hearing on a wage insurance bill (The Worker Empowerment Act) that the subcommittee chair, Rep. McDermott, proposed to introduce. The bill would have paid wage insurance to workers with two years of tenure who permanently lost their jobs through no fault of their own. Half of the lost wages would be replaced, up to \$10,000 per year for two years, as long as earnings were \$100,000 or less. (Low-wage workers earning less than half the median wage would receive replacements calculated at somewhat greater rates.) The program would be financed by a new federal payroll tax paid into a new Wage Insurance Trust Fund. The tax paid would be at the rate of 0.1 percent on a tax base equal to the Social Security wage base. The proposed program was estimated to cost \$40 per year for each covered worker. With 135 million covered workers in the second quarter of 2008, the program would generate revenue of over \$5 billion per year.

This proposal would have enormously expanded wage insurance compared to the current ATAA program. It would have doubled the amount of wage supplementation each year to \$10,000 per year for each of two years. It also would have doubled the maximum annual earnings for which supplements would be paid up to \$100,000 per year. And, most significantly, it would have been payable to all workers who permanently lose their jobs through no fault of their own. The sponsors estimated that the legislation would have provided wage supplements to 350,000–500,000 dislocated workers per year, depending on economic conditions.

On May 8, 2007, the Worker Empowerment Act of 2007 was introduced in the House of Representatives as H.R. 2202 by Rep. Jim McDermott and as S. 1330 in the Senate by Senator Charles Schumer (D-NY). It would have paid “Wage Insurance” of 50 percent of lost wages up to a maximum of \$10,000 per year. No maximum annual earnings were set above which

individuals would not receive wage supplements, but the replacement rate would have declined for workers earning more than the Social Security wage base. Wage insurance would have been paid for by employers at a tax rate of 0.06 percent of employee wages up to the Social Security wage base, and the funds generated would have been deposited in a Wage Insurance Trust Fund. Neither bill had any cosponsors. There was no further action on these bills in the 110th Congress.

Wage Supplements for Trade Impacted Workers

On October 22, 2007, Rep. Charles Rangel (D-NY) introduced H.R. 3920, the Trade and Globalization Assistance Act. This legislation would have reauthorized and expanded the TAA programs. The legislation also would have reauthorized and expanded the wage supplement program, which would have been renamed the Reemployment Trade Adjustment Assistance program. Many more people would have been potentially eligible for the program because of the expanded eligibility. Service workers would have become eligible for TAA for the first time, more manufacturing workers would have been eligible—as workers adversely affected by offshore outsourcing could draw benefits even if imports did not increase—and there could have been industry-wide worker certifications.

The wage supplement provisions were greatly liberalized in the Rangel bill as well. Under that bill, workers could elect to receive wage supplements and not be subject to group certification. The qualification period was extended as the requirement that workers find jobs within 26 weeks of being laid off would have been eliminated. Participants could have received training and received wage supplements as well. Participants had to be working full time, but if they were in training at the same time that they were collecting wage supplements, they would have to be working at least 20 hours a week. Workers could have drawn up to \$12,000 in wage insurance benefits during a two-year eligibility period. Workers would still have to have been 50

years old or older to qualify for benefits, but they could have earned up to \$60,000 per year after reemployment.

On the Senate side, Senator Max Baucus introduced S.1848 on October 22, 2007. The bill had the same name and similar provisions. The name of the wage supplement provisions, however, was changed to “Wage Insurance,” and the eligibility provisions were changed to allow workers 40 years of age or older to collect wage supplements.

The Trade Adjustment Assistance Act, however, was not reauthorized in the 110th Congress.

WAGE SUPPLEMENT DEMONSTRATIONS AND EVALUATIONS

From the beginning of the policy initiatives supporting wage supplement in the mid-1980s, researchers and policymakers recognized that this new approach should be tested by implementing demonstration projects that would determine how they would work in the United States and what the behavioral response of workers would be to the offer of wage supplements. The demonstrations would be rigorously evaluated, requiring that they would be implemented as random assignment experiments. A series of such demonstrations have been recommended or mandated by law. None has been implemented.

Proposed Wage Supplement Experiment under the Trade Act of 1988

In 1988, TAA was amended to place greater emphasis on reemployment efforts and make receipt of trade benefits more restrictive. Participation in training became an entitlement under the trade program, and training participation was mandated. Participation in reemployment services was generally encouraged.

As part of the 1988 legislation (Public Law 100-418), Section 246, “Supplemental Wage Allowance Demonstration Projects,” mandated that the Department of Labor conduct a wage supplement demonstration. The target population for the demonstration was dislocated workers receiving Trade Readjustment Assistance (TRA) benefits. Trade recipients who obtained a job paying less than 80 percent of their prior wages would be eligible to receive a supplement that brought them up to the 80 percent level. TRA recipients needed to work nearly full time—32 hours per week—to receive the supplement. They could receive a supplement for up to one year, but the supplement would not begin until workers began collecting TRA benefits, after receipt of six months of regular UI benefits. The legislation and the resulting wage supplement proposal were not nearly as generous as the Canadian ESP project.

A design for this wage supplement demonstration was developed by the Department of Labor (Corson and Haimson 1995), which contacted the states with the largest TAA workloads and requested their participation. Ultimately, the demonstration was never implemented. The key states that had enough trade program recipients to run an experiment—Ohio and Pennsylvania—were unwilling to participate. They did not see how an experiment that raised some of their state residents up to only 80 percent of their prior wages could benefit either the workers or the states. After much negotiation and delays, the implementation of the experiment became moot after the enactment of the Emergency Unemployment Compensation program in 1991 made it impossible to test a wage supplement program during a recessionary extension of UI.

The terms of the 1988 wage supplement demonstration were determined by legislators rather than social scientists. It was not clear to researchers why the 80 percent threshold was set, why the goal of bringing workers up to no more than a 20 percent loss was an optimal goal, or

why the duration of the wage supplement was one year. The researchers would have preferred to be given the ability to test a number of different designs to determine which was the most effective and efficient. The states that the Department of Labor asked to participate also questioned the design, but their concern was that the design was not generous enough, and they saw no reason to have TAA recipients in their states offered such restricted wage supplements.

Advisory Council on Unemployment Compensation Proposal

As noted above, the members of the Advisory Commission on Unemployment Compensation (ACUC, 1995) determined that there was insufficient evidence to develop policy recommendations on wage supplements and that any recommendations would have to be grounded on experimental evaluations. Since no rigorous evaluations were available, the ACUC members concluded that policy recommendations should await such analysis. The research director of the ACUC recommended to the author and to others that the Department of Labor conduct a wage supplement experiment.

Because of the ongoing interest in wage supplements as a policy option, discussions have taken place for many years among researchers and policymakers about conducting a wage supplement demonstration, but no such demonstration has ever been conducted.

Proposed Wage Supplement Experiment in 2006

Most recently, in 2006, the Department of Labor's Employment and Training Administration staff considered testing a broad wage supplement program using a random assignment experiment. Under the proposed design of the experiment, wage supplements would have been available to all UI claimants who had suffered a permanent job loss, were employed a minimum of three years, and were monetarily eligible for UI. Prior to unemployment, eligible

claimants would have had annual wages or salaries of between \$35,000 and \$85,000 per year. If they found a job within 26 weeks of becoming unemployed, they would be eligible for wage-loss payments of up to 50 percent of their earnings loss over a two-year period. They could receive up to \$5,000 per year for two years, so total wage supplement payments could reach a total of no more than \$10,000.

The proposed experiment would have been available to all dislocated workers, regardless of the reason for unemployment. Thus, unlike ATAA, there would be no connection to layoffs related to international trade (Office of Policy Development and Research 2006). This proposal was considered, but it was not implemented.

WAGE SUPPLEMENT EVALUATION PROPOSALS

The efficacy of wage supplements should be evaluated, whether they are targeted to all dislocated workers or only to those impacted by international trade. Large-scale wage supplement programs are expensive. To avoid unnecessary waste of public funds, empirical research should be undertaken to determine whether they are effective and efficient, and, if so, what the optimal design might be.

The key work that needs to be done to develop federal policy regarding wage supplements is the launching of a random assignment demonstration project. This demonstration project should also include alternative treatments to be able to compare the outcomes of wage supplements to other interventions. Other options that could be tested include job search assistance, in-depth training and education, and reemployment bonuses, some of which might be much less expensive and more cost-effective. For example, a reemployment bonus offered to profile dislocated workers would likely cost approximately one-tenth as much as wage

supplements of the sort advocated in the Worker Empowerment Act proposal. Such a large-scale demonstration project should be conducted regardless of what other policy or legislative initiatives are also pursued.

Future reauthorizations of the TAA program are likely to retain a wage supplement component. A new wage supplement program could be larger and more expensive if it were to expand the ATAA program. It is particularly important to include an evaluation component in any new wage supplement program, since the ATAA program has not been evaluated. This evaluation should include a quasi-experimental analysis of participants in the new ATAA program. It also should include a random assignment demonstration to evaluate the impact of further extending the new ATAA program to individuals who are not currently eligible for the program.

Experimental Evaluation of Wage Supplements for All Dislocated Workers

A random assignment demonstration project would evaluate the potential impacts of wage supplement programs that would be available to all dislocated workers. The demonstration would be conducted in a small number of states. Individuals would be selected into treatment and control groups from the entire population of dislocated workers who apply for unemployment insurance benefits. Selecting from a large population would allow adequate sample sizes. Because participants generally would be dislocated workers who do not collect TAA and would not otherwise be eligible for a wage supplement, conducting the experiment should be accomplished without opposition from state agencies or from TAA advocates. Also, no one would be denied services. Nonparticipating dislocated workers would have all current services available to them, while treatment group members would be offered additional services and incentives, including a wage supplement.

A number of different wage supplement offers could be tested. These offers might differ with respect to the amount and duration of the wage supplement. A short (e.g., 13 weeks) and long (e.g., 26 weeks) qualification period could be tested, as could different wage supplement amounts. The treatments would be able to measure differences in the response to each offer. Wage supplement treatments tested in this experiment also could be compared to other treatments that include in-depth job search assistance, a reemployment bonus, and long-term training and education. Comparing the effectiveness of the treatments would allow researchers to determine the most cost-effective result.

For example, it might be worthwhile to compare two reemployment incentive programs, measuring the impacts of wage supplement proposals to cheaper reemployment bonuses. A reemployment bonus would cost no more than \$1,200 per participant, while wage insurance could cost up to \$10,000 or more during a two-year eligibility period. Reemployment bonuses also have been analyzed as add-on programs to the regular UI program, and only would be offered to UI claimants likely to exhaust their entitlement to regular UI benefits through the Worker Profiling mechanism, which would also reduce costs. By comparing the two treatments, one a reemployment bonus and the other a wage supplement, a determination could be made about which approach is most effective and efficient.

Finally, wage supplements could be tested in combination with other reemployment services. The effects on American dislocated workers might be similar to the effects on Canadian welfare recipients who benefitted from the provision of additional employment services in addition to an earnings supplement in the SSP Plus component of the Self-Sufficiency Project (Robins et al. 2008). In the United States, job search assistance services could be added to the offer of a wage supplement.

SUMMARY

Over the past three decades, there have been many proposals for implementing wage supplement programs. Almost all of the proposals have had two goals: 1) speeding the return to work of dislocated workers, and 2) temporarily reducing the monetary loss that many workers experience when they return to work. Yet it still is not known if wage supplements would accelerate the return to work in the United States and who would benefit from the wage supplements.

Wage supplement proposals have differed with respect to the problems that they try to solve, either to gain support for freer international trade or to reduce the post-unemployment cost to all dislocated workers. Most of the proposals have had similar specifications, but some have suggested variations, such as the duration of supplement payments or replacement rates.

Despite the policy discussions of the past two and a half decades, wage supplements have not been tested as a random assignment experiment in the United States. While a small, targeted wage supplement program exists in the TAA program, it has not been studied and little is known about how well it works.

One issue that has not been seriously considered, for example, is the qualification period. Many authors have accepted a 26-week qualification period during which individuals would have to have taken a job if they were to receive wage supplements. Twenty-six weeks was the qualification period in the Canadian demonstration, but it would be too long in the United States if wage supplements aim to speed the return to work and reduce UI-compensated durations of unemployment. A 26-week eligibility period for wage supplements is likely to yield adverse behavioral responses since the potential duration of regular UI benefits generally is 26 weeks.

Wide disparities between the cost estimates of the various wage supplement proposals are a concern. For example, the Kling wage insurance program was estimated to cost approximately \$20 billion per year—about six times more than the estimates from Brainard (2006) and nearly three times as much as the LaLonde (2007) proposal. While some of these variations are based on design differences, it appears to be difficult to accurately estimate the cost of wage supplements until they are tested and evaluated.

CONCLUSION

For over three decades, policy makers have been concerned about the difficulty displaced workers have had returning to work and the earnings losses that they experience in their new jobs. Wage insurance/supplements has been a policy response that has been considered and analyzed repeatedly during this period as temporary layoffs have diminished and permanent layoffs have become the rule. In response to numerous waves of displacement, many different approaches and designs for wage insurance have been considered.

The Obama administration has examined wage insurance/supplements proposals and the one operational wage insurance program in the United States—Alternative Trade Adjustment Assistance program—and it has chosen a comprehensive approach for its wage insurance program design. The proposed program’s goal is to speed reemployment and reduce the associated monetary losses to displaced workers. The program would be targeted to all displaced workers whether they were adversely affected by international trade or not. The design parameters are similar to the ATAA program: displaced workers who return to work earning less than \$50,000 and had worked for their prior employer for at least three years could receive half of their earnings losses up to a maximum of \$10,000 over a two years eligibility period. States

would be required to administer this federally-funded wage insurance program (White House 2016). The proposal does not currently specify how quickly displaced workers would have to return to work to be eligible to collect wage supplements. Enactment of this program would reveal how a wage insurance program like ATAA would work when made available to all displaced workers, regardless of age and regardless of the cause of their displacement. One thing, however, is clear. The program would substantially reduce the wage loss experienced by most reemployed displaced workers.

Table 1 Wage Supplement Proposals, 1984–2007

| Proposal | Brookings 1984 | Brookings 1986 | Brookings 1993 | Brookings 1998 | Brookings 2001 | ATAA 2002 | Brookings 2006 | Rosen /Kletzer 2006 | Kling 2006 | LaLonde 2007 | Burtless 2007 | House Ways & Means 2007 |
|-----------------------|-------------------|--------------------------|-------------------|-------------------|--------------------------|--------------|-------------------|---------------------------|---------------|-----------------|------------------------|----------------------------------|
| | Dom. | Intl. | D/I | Intl. | D/I | Intl. | Intl. | Dom. | Dom. | Intl. | Dom. | Dom. |
| Component | | | | | | | | | | | | |
| Replace rate (%) | — | 50 and declining | 50 | 50 | 50 | 50 | 50 | 50 | 25 | 50 | 50 | 50 and declining |
| Yearly max. (\$) | — | — | — | 10K | 10K | 5K | 10K | 10K | — | 10K | 10K | 10K |
| Earnings max. (\$) | — | — | — | — | — | 50K | — | — | — | 50K | — | — |
| Years of eligibility | — | Temporary | — | 2 yr. | 2 yr. | 2 yr. | 2 yr. | 2 yr. | 6 yr. | 4 yr. | 18–24 mo. | 2 yr. |
| Time limited | — | — | 2 yr. | 2 yr. | 2 yr. | — | 2 yr.+ | — | — | — | 18–24 | 2 yr. |
| Replace | — | — | — | Trade | Trade | — | — | — | UI | — | — | — |
| UI/trade | — | — | — | — | — | — | — | — | — | — | — | — |
| Targeting | | | | | | | | | | | | |
| Intl./all dislocated | All | Intl. | All | Intl. | All | Intl. | All | All | All | All | All | All |
| Older/tenure | — | More to older and tenure | — | Age | Vary with age and tenure | 50 yr. | — | 2 yr. T | 1 yr. T | 3 yr. | More to older, 2–3 yr. | — |
| Full-time/PT | — | — | — | — | F/T | — | F/T | F/T | — | — | — | — |
| High Un-N | — | — | — | — | — | — | — | — | — | — | — | — |
| Serious dislocation | — | — | Yes | — | — | — | — | — | — | — | — | — |
| Financing | | | | | | | | | | | | |
| General rev. | — | — | — | — | — | Gen R | — | — | — | — | — | — |
| Special tax | — | — | — | — | — | — | — | — | — | Option | — | Payroll |
| UI reduction | — | — | — | — | — | — | — | — | Elimin | Option | — | — |
| UI waiting Wk | — | — | — | — | — | — | — | — | — | Option | — | — |
| Reduce trg. | — | — | — | — | — | — | — | — | — | Option | — | — |
| Admin | | | | | | | | | | | | |
| Qtr./Month/Week/ Hour | Hourly | — | — | Qtr./M | — | — | — | — | — | — | — | Week/ Month |
| Cost (\$) | | | | | | | | | | | | |
| | — | — | — | — | 2.3–3.0B | — | — | 2.6–4.4B | 20B | 7B | — | — |

Table 2 Trade Adjustment Assistance Program Data, Fiscal Years 2000–2007

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|------------------------------|--------|---------|---------|---------|---------|---------|----------|-----------|
| Petitions for certification | 1,382 | 2,353 | 1,647 | 1,890 | 2,992 | 2,636 | 2,478 | 2,218 |
| Petitions certified | | | | | | | | |
| Number | 843 | 1,029 | 1,647 | 1,890 | 1,806 | 1,545 | 1,426 | 1443 |
| Percent | 61 | 44 | 69 | 53 | 60 | 59 | 58 | 65 |
| Workers certified | 98,007 | 139,587 | 235,072 | 197,359 | 149,650 | 117,904 | 120,199 | 146,680 |
| Workers denied | 53,433 | 59,607 | 74,760 | 82,181* | 56,444* | 37,998* | 49,292* | 43,741* |
| New income support recipient | | | | | | | | |
| Number | 32,808 | 31,459 | 37,426 | 44,136 | 81,248 | 55,293 | 53,493 | 47,048 |
| Percent of workers certified | 34 | 23 | 16 | 22 | 51 | 54 | 45 | 32 |
| New training recipients | | | | | | | | |
| Number | 22,665 | 24,843 | 37,186 | 43,206 | 50,929 | 37,774 | 35,958 | 49,322 |
| Percent of workers certified | 23 | 18 | 16 | 22 | 34 | 32 | 30 | 34 |
| New ATAA recipients | | | | | | | | |
| Number | — | — | — | 288** | 1,115** | 2,349** | 3,204*** | 3,951**** |
| Percent of workers certified | — | — | — | 0.15 | 0.75 | 1.99 | 2.67 | 2.70 |

SOURCE: USDOL, ETA reporting system.

NOTE: * Data are estimates and subject to change based on court decisions and other factors that could change the decision of a case over time. The workers denied numbers for 2003 through 2007 were obtained in May 2008 and represent the results under the Trade Act of 2002. However, information from 2000 to 2002 was based in the previous program. ** Data based on estimates from informal state contacts in conjunction with funding information from the UI program. *** Formal data collection began March 31, 2006 and the 2006 result is based on reporting from calendar year 2006; **** the 2007 result is based on reporting for fiscal year 2007.

Table 3 Trade Adjustment Assistance Budget Authority and Outlays (millions of current dollars)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|-----------------------------|-------|-------|-------|-------|--------|--------|-------|-------|
| Income support and benefits | | | | | | | | |
| Authority | 283 | 275 | 284 | 720 | 1,069 | 750 | 655 | 572 |
| Outlays | 272 | 259 | 249 | 339 | 520 | 637 | 707 | 566.1 |
| Training | | | | | | | | |
| Authority | 132 | 132 | 132 | 259.2 | 259.2 | 259.3 | 259.4 | 259.6 |
| Outlays | 133 | 141 | 142 | 212 | 179 | 243 | 259 | 259.6 |
| ATAA | | | | | | | | |
| Authority | — | — | — | — | 10 | 48 | 52 | 23.5 |
| Outlays | — | — | — | — | 2.2 | 48 | 52 | 23.4 |
| Total | 415.2 | 406.6 | 415.6 | 972.2 | 1338.2 | 1057.3 | 966.4 | 837.6 |

SOURCE: U.S. Department of Labor budget documents.

REFERENCES

- Advisory Council on Unemployment Compensation. 1995. *Unemployment Insurance in the United States: Benefits, Financing, Coverage: A Report to the President and the Congress*. Washington, DC: Advisory Council on Unemployment Compensation.
- Baily, Martin N., Gary Burtless, Robert E. Litan. 1993. *Growth with Equity: Economic Policy-Making for the Next Century*. Washington, DC: Brookings Institution.
- Barnow, Burt. 1987. "The Impact of CETA Programs on Earnings: A Review of the Literature." *Journal of Human Resources* 22(2): 157–193.
- Barth, Michael. 1974. "Market Effects of a Wage Subsidy." *Industrial and Labor Relations Review* 27(4): 572–585.
- Berlin, Gordon L. 2007. "Rewarding Work of Individuals: A Counterintuitive Approach to Reducing Poverty and Strengthening Families." MDRC Working Paper. New York: MDRC.
- Betcherman, Gordon, Karina Olivas, and Amit Dar. 2004. "Impacts of Active Labor Market Programs: New Evidence from Evaluations with Particular Attention to Developing and Transition Countries." The World Bank, Social Protection Discussion Paper Series No. 0402. Washington, DC: World Bank.
- Bloom, Howard, Barbara Fink, Susanna Lui-Gurr, Wendy Bancroft, Doug Tattrie. 1997. *Implementing the Earnings Supplement Project: A Test of a Re-employment Incentive*. Toronto: Social Research and Demonstration Corporation.
- Bloom, Howard, Saul Schwartz, Susanna Lui-Gurr, Suk-Won Lee. 1999. *Testing a Re-employment Incentive for Displaced Workers: The Earnings Supplement Project* (Draft Report). Toronto: Social Research and Demonstration Corporation.
- Brainard, Lael. 2007. "The Case for Wage Insurance: Testimony before the Joint Economic Committee, February 28, 2007." <http://www.jec.senate.gov/archive/Hearings/02.28.07%20Income%20Instability/Testimony%20-%20Brainard.pdf> (accessed January 14, 2016).
- Brainard, Lael, Robert E. Litan, and Nicolas Warren. 2006. "A Fairer Deal for America's Workers in an Era of Offshoring." In *Brookings Trade Forum 2005: Offshoring White-Collar Work*, Susan B. Collins and Lael Brainard, eds. Washington, DC: Brookings Institution Press, pp. 427–456.

- Burtless, Gary. 2007. "Income Supports for Workers and Their Families." In *Reshaping the American Workforce in A Changing Economy*, Harry J. Holzer and Demetra Smith Nightingale, eds. Washington, DC: Urban Institute, pp. 239–271.
- . 2008. Telephone interview with the author (July 17).
- Burtless, Gary, Robert Z. Lawrence, and Robert E. Litan. 1998. *Globaphobia: Confronting Fears about Open Trade*. Washington, DC: Brookings Institution.
- Clark, Terry. 2008. Telephone interview with the author (July 21).
- Corson, Walter, Paul Decker, Phillip Gleason, and Walter Nicholson. 1993. *International Trade and Worker Dislocation: Evaluation of the Trade Adjustment Assistance Program*. Princeton, NJ: Mathematica Policy Research.
- Corson, Walter, and Joshua Haimson. 1995. *Wage Supplements for Dislocated Workers: The TAA Wage Supplement Demonstration*. Princeton, NJ: Mathematica Policy Research.
- Council of Economic Advisers. 2002. "Assistance for Displaced Workers through Structural Adjustment Accounts." Washington, DC: Council of Economic Advisers.
- Davidson, Carl, and Stephen A. Woodbury. 1995. "Wage-Rate Subsidies for Dislocated Workers." Upjohn Institute Working Paper No. 95-31. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Decker, Paul T., Christopher J. O'Leary, and Stephen A. Wandner. 2005. "Cost-Effectiveness of Targeted Reemployment Bonuses." *Journal of Human Resources* 40(1): 270–279.
- Dickert-Conlin, Stacy, and Douglas Holtz-Eakin. 2000. "Employee-Based versus Employer-Based Subsidies to Low-Wage Workers: A Public Finance Perspective." In *Finding Jobs: Work and Welfare Reform*, David Card and Rebecca Blank, eds. New York: Russell Sage Foundation, pp. 262–395.
- Eberts, Randall W. 2007. "Evaluation of International Active Labor Market Programs: Net Impact Methodologies and Results." Prepared for the ILO/MOLSS Initiative on ALMP Evaluations.
- Feldstein, Martin S., and Daniel Altman. 1998. "Unemployment Insurance Savings Accounts." NBER Working Paper No. W6860. Cambridge MA: National Bureau of Economic Research.
- Katz, Lawrence F. 1996. "Wage Subsidies for the Disadvantaged." NBER Working Paper No. 5679. Cambridge, MA: National Bureau of Economic Research.

- Kletzer, Lori G., and Robert Litan. 2001. "A Prescription to Relieve Worker Anxiety." Policy Brief No. 73. Washington, DC: Brookings Institution.
- Kling, Jeffrey R. 2006. "Fundamental Restructuring of Unemployment Insurance: Wage-Loss Insurance and Temporary Replacement Accounts." Hamilton Project Discussion Paper No. 2006-05. Washington, DC: Brookings Institution.
- LaLonde, Robert J. 2007. *The Case for Wage Insurance*. Council Special Report No. 30. New York: Council on Foreign Relations.
- Lawrence, Robert Z., Lawrence B. Krause, Robert H. Meyer, and Linda Cohen. 1984. "Adjusting to Economic Change." In *Economic Choices 1984*, Alice M. Rivlin, ed. Washington, DC: Brookings Institution, pp. 119–156.
- Lawrence, Robert Z., and Robert E. Litan. 1986. *Saving Free Trade: A Pragmatic Approach*. Washington, DC: Brookings Institution.
- Montgomery, Lori. 2007. "Making Up for Lower Pay: Lawmakers Seek to Expand Insurance for Wage Drop-Offs." *Washington Post*, March 6, D:1.
- Office of Policy Development and Research. 2006. "Canada's Earning Supplement Project, Similar ETA Initiatives and Proposed Wage Insurance Demonstration Project." Memorandum from Maria K. Flynn to Emily DeRocco, August 23.
- Orr, Larry, Howard Bloom, Stephen Bell, Fred Doolittle, Winston Lin, and George Cave. 1995. *Does Training for the Disadvantaged Work? Evidence from the National JTPA Study*. Washington, DC: Urban Institute Press.
- Rivlin, Alice M, ed. 1984. *Economic Choices 1984*. Washington, DC: Brookings Institution.
- Robins, Philip K., Charles Michalopoulos, and Kelly Foley. 2008. "Are Two Carrots Better Than One? The Effects of Adding Employment Services to Financial Incentive Programs for Welfare Recipients." *Industrial and Labor Relations Review* 61(3): 410–423.
- Rosen, Howard F. 2008. Interview with author (August 19).
- Rosen, Howard F., and Lori G. Kletzer. 2006. "Reforming Unemployment Insurance for the Twenty-First Century Workforce." Hamilton Project Discussion Paper No. 2006-06. Washington, DC: Brookings Institution.
- Social Policy Research Associates. 2007. Preliminary Analysis for the Trade Adjustment Assistance Evaluation. Oakland, CA: Social Policy Research Associates.
- U.S. Department of Labor. 2007. "Division of Trade Adjustment Assistance: Review of Alternative Trade Adjustment Assistance (ATAA) Usage and Expense CY 2006."

Washington, DC: Division of Trade Adjustment Assistance, Employment and Training Administration, U.S. Department of Labor.

Vroman, Wayne. 2007. "Strengthening Unemployment Insurance: A Critique of Individual Accounts and Wage Loss Insurance." EPI Briefing Paper No. 202. Washington, DC: Economic Policy Institute. www.epi.org/content.cfm/bp202 (accessed January 14, 2016).

Wandner, Stephen A. 2002. "TAA Wage Insurance Demonstration: Cost Estimate." (April 30). White House Press Release. 2016. "Improving Economic Security by Strengthening and Modernizing the Unemployment Insurance System" (January 16). <https://www.whitehouse.gov/the-press-office/2016/01/16/fact-sheet-improving-economic-security-strengthening-and-modernizing> (accessed January 17, 2016).

Woodbury, Stephen A., and Robert G. Spiegelman. 1987. "Bonuses to Workers and Employers to Reduce Unemployment: Randomized Trials in Illinois." *American Economic Review* 77(4): 513–530.