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Stabilizing Employment: The Role of Short-Time Compensation

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Stabilizing Employment

The Role of Short-Time Compensation

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One response to the Great Recession of 2008–2009 in several economies of the Organisation of Economic Co-operation and Development (OECD) was increased reliance on short-time compensation (STC) and other work-sharing arrangements that temporarily reduce weekly hours to ease labor market dislocations and to avoid the personal and economic costs of elevated levels of long-term unemployment. Short-time compensation has been credited with helping to stabilize employment in the face of sharp reductions in real gross domestic product (GDP). The research conducted by Burda and Hunt (2011) and Boeri and Bruecker (2011) concludes that the STC program in Germany (*Kurzarbeit*) was a major contributor in stabilizing German employment in 2009 and 2010.

As labor markets in the United States recover from the Great Recession, it is appropriate to assess the performance of the economy during this period and consider ways of structuring labor market institutions to lessen the economic hardships of future recessions. Not only did U.S. product markets deteriorate, but labor markets also experienced sharp decreases in employment, steep increases in unemployment, and record high levels of long-term unemployment. Given the severity of labor market conditions since 2007, this chapter examines the recent performance of STC in states with such programs and assesses their impact on employment. The chapter begins with an introduction to STC and a description of some of the important features of the program, and then reviews the performance of STC in the United States for the

17 states that have operated programs for several years. The next section reviews foreign experience with STC, with particular attention to the performance of STC programs in Canada, Germany, and Belgium. The following section discusses ways to increase STC usage in the United States. While some suggestions are obvious, others would make changes in the way STC plans currently function within state unemployment insurance (UI) programs.

The chapter reaches three main conclusions. First, STC has the potential to prevent layoffs and stabilize employment in short-run cyclical fluctuations. While program usage increases sharply at the start of a recession, the increased utilization lasts for a comparatively short period. Second, the programs in the United States are small in scale and do not meaningfully affect labor market adjustments at the macro level. Third, if STC were to play a larger role during the economic recovery as well as a larger role in future recessions, the programs would need to be enlarged and the pace of adoptions expanded. In addition to presenting suggestions for increasing STC usage, the chapter assesses the February 2012 legislation: the Middle Class Tax Relief and Job Creation Act of 2012 (PL12-96).

AN OVERVIEW OF WORK SHARING

Short-time compensation work-sharing programs, now present in many economies, are intended to reduce the volume of layoffs during periods of slack labor demand.¹ Rather than reducing hours by laying off (nonprejudicial separations) some workers, a wider pool of workers at the workplace is retained but at reduced weekly hours of work. For example, to reduce hours by 20 percent in a work unit that employs 100 persons working 40-hour weeks, there would need to be 20 layoffs. Alternatively, all 100 in the work unit could be placed on 32-hour schedules. Both measures would reduce hours by 20 percent.

These employment retention programs provide partial unemployment compensation (UC) benefits to workers placed on shorter schedules. For example, if UC benefits replace half of previous weekly wages, then someone on a 32-hour schedule would receive 80 percent of their full weekly wages and partial UC benefits equal to 10 percent of weekly

wages. Thus, part of the reduction in income caused by the reduction in hours is offset by partial UC benefits. In this simple example, participants in STC would receive take-home pay equal to 90 percent of their full weekly wages.²

In the United States in 2011, 21 states had STC programs that were generally small in scale. While 4 states introduced STC programs during 2010 and 2011, the other 17 states have operated these programs for 20 years or longer. A program for STC is established through legislation as part of a state's UI law. Short-time compensation plans, administered as part of UI, are initiated when an employer files an application with the UI agency. To be eligible to participate in STC, the employer must be experience rated, not delinquent in paying UI taxes, and explain the reason(s) for needing to adjust work hours. Plans submitted to the UI agency are often approved within one or two weeks.

Short-time compensation plans need to conform to state requirements regarding a minimum percentage reduction in hours at the affected work unit, plan duration, the minimum and maximum reduction in hours for affected workers, and the maximum number of weeks STC benefits will be paid. Table 6A.1 in Appendix 6A displays important state-level requirements for 17 states with long-standing STC programs. Plans generally last 25 or 52 weeks and maximum payable weeks are usually 26 or 52. For affected workers, the reduction in hours is bounded between a minimum (10–20 percent in all states) and a maximum (40–50 percent in nearly all states). Plans also must specify the treatment of fringe benefits (usually either full maintenance or reduced by the proportionate reduction in hours worked). When workers are unionized, the plan must be approved by the collective bargaining unit.

Certain features of STC are linked to standard UI provisions. One is that the benefits paid to participants count against the experience-rated UI taxes paid by the employer. Since the employer initiates this reduction in hours, STC payments are experience rated in the same way as a layoff. When claimants start to collect STC, the payments count against their maximum potential payment for the benefit year (the 12-month period for which current UI eligibility applies). For example, someone otherwise eligible for 26 weeks of benefits under full unemployment would only be eligible for 24 weeks if they collected STC one day per week for 10 weeks earlier in the same benefit year. Most states make regular recipients serve a waiting week before collecting benefits. For

STC recipients, this requirement means they can start collecting in the second week of the STC claim. While regular UI recipients are required to search for work, this requirement is waived for STC recipients since they remain employed.

EMPIRICAL ANALYSIS OF STC IN THE UNITED STATES

The STC reporting system generates monthly data that can be compared with regular state UI data. Initial claims, first payments, weeks claimed, weeks compensated, exhaustions and total benefit payments are routinely reported, along with equivalent initial claims and equivalent weeks claimed. In the latter two series, claims are converted to equivalent full weeks; that is, a week claimed by five persons working under a 20 percent reduction in weekly hours represents one equivalent week claimed. Under certain assumptions, the equivalent weeks claimed show the number of layoffs and weeks of full unemployment avoided by the use of STC.

The empirical analysis focuses on STC equivalent weeks claimed measured as a percentage of regular UI weeks claimed in annual data for the past three business cycles. For 13 of 17 states, the data extend from 1989 to 2010; there are fewer years in four states.³ All regression equations use the same specification: the equivalent-weeks-claimed percentage is explained by the total unemployment rate (TUR) in the state and a linear trend. The TUR is entered for both the current year and the previous year. Both the current TUR and the lagged TUR coefficients show how equivalent weeks claimed behave relative to regular weeks claimed. A positive coefficient for the TUR indicates that STC equivalent weeks increase more rapidly than regular weeks in a recession when the TUR increases.

Table 6.1 summarizes the 17 regression equations by showing the distribution of the signs and statistical significance of the coefficients. Table 6B.1 in Appendix 6B displays the full regression results. All 17 coefficients for the current TUR are positive and statistically significant. A remarkably consistent pattern is present in all 17 states: when unemployment increases, STC equivalent weeks increase more rapidly than regular UI weeks claimed.

Table 6.1 Coefficients from STC Regressions, 1989–2010

	Positive, significant	Positive, not significant	Negative, not significant	Negative, significant	Total
Constant	1	4	4	8	17
State unemp. rate—TUR%	17	0	0	0	17
State TUR% lagged	0	0	4	13	17
Linear trend	9	5	1	2	17

SOURCE: Regression equations displayed in Table 6B.1 of Appendix 6B.

The effect of the lagged TUR is also consistent. All 17 slope coefficients are negative and 13 are statistically significant: equivalent weeks of STC decline relative to regular weeks in the second year of a recessionary period. As the economy travels further through a recession, the volume of STC claims decreases even though unemployment may remain high or even increase. Comparing the absolute size of the two sets of coefficients, those for the lagged TUR are generally from half to fully equal to the current TUR coefficients. Not only is there a falloff, but the falloff is also large relative to the increase in the first year of the recession.

The linear trend coefficients in Table 6.1 present a more mixed picture.⁴ For 14 of the 17 states there is an upward (positive) trend in STC usage with nine trends statistically significant. Three states exhibit a negative trend, and in two of them the trend is statistically significant (Florida and Maryland). Despite the predominance of positive trends, STC programs are, and remain, small in all states. Note in Table 6B.1 of Appendix 6B that the STC equivalent-weeks percentage exceeds 1.0 percent in just one state (Rhode Island) for the full data period; the percentage exceeds 0.4 in just four other states for the same period (California, Kansas, Missouri, and Vermont).

The underlying data illustrate not only the unusual severity of the Great Recession but also its effect on the scale of STC usage. Over the 22 years from 1989 to 2010, the highest equivalent-weeks-claimed percentage occurred in 2009 for 16 of the 17 states (all but Kansas).

Even though the TUR was higher in 2010 than in 2009 in most of the 17 states, the equivalent-weeks-claimed percentage in 2010 fell below the 2009 percentage in all but one state (Washington).

The regression results shown in Table 6B.1 and summarized in Table 6.1 portray a remarkably consistent pattern. When the economy enters a recession, STC usage increases sharply and much more rapidly than regular UI claims. Usage then falls, however, even in the face of continued high unemployment. The interpretation of the regression results seems obvious. Going into a recession, employers establish STC plans and place workers on reduced weekly schedules. These workers, however, do not remain on short schedules for very long. As the recession lengthens they exit through two outflows. While some workers return to full weekly work schedules, others experience full layoffs. For the latter group, STC delays the onset of full unemployment. For participating employers, STC provides more time to observe the depth and duration of the downturn and yields improved information upon which to make better informed adjustments in staffing.

For firms that retain long-run viability, there are two important advantages in utilizing STC programs: 1) the increased level of worker retention, and 2) reduced training costs since fewer new hires are needed in the ensuing upturn. For workers, there are fewer layoffs early in the recession and a different pattern of burden sharing (wider but smaller per-person losses for affected workers) due to reduced layoffs. One disadvantage for workers who eventually do lose their jobs is that STC only delays the layoffs—it is not avoided. For them STC has simply delayed the timing of the job loss.⁵

Some other aspects of worker experiences with STC can be inferred from state reports. Because the states report both weeks claimed and equivalent weeks claimed, the size of the reductions in weekly schedules can be ascertained. The higher the ratio of equivalent weeks to total weeks, the larger the reduction in work schedules; for example, a ratio of 0.20 suggests a reduction of one day from a five-day week. Overall, the reductions in work schedules have generally been modest. For 14 states, the equivalent weeks to weeks ratio between 2000 and 2010 averaged between 0.176 and 0.265. Ratios in this range suggest that reductions for STC participants usually averaged one to one-and-one-half days per week. These ratios also indicate that the number of

individuals participating in STC is 3–5 times larger than suggested by the equivalent weeks ratios examined in the regressions.

As with temporary layoff unemployment, participation in STC is generally short term. Between 2000 and 2010, the mean duration of STC was shorter than for regular UI benefits in 13 of the 14 states with reliable STC duration data.⁶ The ratio of the two averages was below 0.80 in 10 states, and only in Rhode Island and Vermont were they similar in size. Moreover, exhaustion of benefits while on STC is rare because duration is short and a compensated week usually involves only one or two days in benefit status. Exhaustion rates between 2000 and 2010 were significantly lower for persons receiving first payments under STC compared to the regular UI program in 15 of the 17 states with STC programs. The average exhaustion rate for these 11 years was almost always less than 5 percent for STC recipients compared to 30 percent or higher for regular UI program recipients.

One would expect STC recipients to have higher wages and, hence, higher weekly benefits than those on layoff and other job losers because a layoff typically affects less senior workers. The STC data support this expectation. In the 13 states where full weekly benefits for STC recipients can be calculated, their average STC benefits consistently exceeded average weekly benefits in the regular UI program. The ratio of the STC average to the regular program average during the 2000–2010 period ranged between 1.00 and 1.15 for 10 of the 13 states. Since the reported data do not identify the occupations of STC participants, we cannot compare the skill levels of participants to regular UI recipients.

Three concluding comments are appropriate as a summary of the empirical work in this section of the chapter. First, utilization of STC was very sensitive to the business cycle over the last three recessions for which reported data are available. Second, the utilization of STC was highest during the early stages of the Great Recession. Third, the scale of STC utilization has been consistently small in all 17 states. This last comment provides a logical connection to the next section of the chapter, which examines international experience with STC and provides a brief description of STC programs in three other advanced countries.

COMPARISONS OF STC IN FOUR COUNTRIES

Short-time compensation work-sharing programs are present in the majority of advanced economies with new adoptions occurring in several after the onset of the Great Recession. Hijzen and Venn (2011) note that 22 OECD economies reported either introducing new measures or making adjustments to existing programs in response to the most recent downturn. Program details vary widely across countries. Here we briefly examine three foreign programs: 1) Canada, 2) Germany, and 3) Belgium. The choice of these countries is based on past experiences of the authors and knowledge of their differing scales. While all three foreign programs are larger than STC in the United States, the Canadian program can be described as similar in size. The programs in Germany and Belgium have a much larger presence in their respective labor markets. We recently reviewed the Canadian program, while the German and Belgian programs were the subject of comparative analysis in the early 1990s (Vroman 1992).

Cyclical adjustments in hours worked occur at two margins, the extensive and intensive margins, or as changes in employment and changes in hours per employed person. Germany and Belgium have extensive safety nets for employed workers that include other measures besides STC, which also facilitate adjustments in hours per employee. Prominent among these other features are working-time accounts (present in both Germany and Belgium), working-time corridors (Germany), and career interruption benefits (Belgium). Burda and Hunt (2011) and Boeri and Bruecker (2011) conclude that working-time accounts, along with STC, have played an important part in stabilizing German employment in 2009–2010. While we focus on STC, readers are reminded that other factors can influence adjustments on the intensive margin. These other factors are part of a broad framework of labor market “flexicurity” present in many OECD economies (see Chapter 2 in this volume). Because flexicurity provisions are generally not present in the United States, we merely note their relevance to the analysis of STC in other countries.

Canada

Canada has supported an STC program since the early 1980s. While it has been comparatively small in scale, it operates in all provinces of the country and exhibits strong cyclical sensitivity. Interested employers file STC plans with the Employment Insurance (EI) agency, and claimants receive partial EI benefits under approved plans.⁷ Claimants must be monetarily eligible under the same requirements as regular EI claimants. Unlike claimants for regular EI benefits, who are subject to a two-week waiting period, STC recipients are paid during the first week of eligibility. The STC payments received do not reduce future EI entitlement if the claimant subsequently becomes fully unemployed through a layoff.

With the onset of the Great Recession, Canada modified STC to broaden the scope of the program. Potential benefit duration was increased in early 2009 from 38 to 52 weeks and then to 78 weeks. Employer participation was encouraged through advertisements in the media and revised program requirements that broadened coverage and eased the application process. One change was the temporary waiver of a detailed plan to return to full work schedules. During 2009 participation in STC was the highest in the history of the Canadian program.

Germany

Short-time compensation has been present in Germany since the end of the nineteenth century and widely used since the late 1920s. During the Great Recession the STC program, termed *Kurzarbeit*, expanded dramatically from 50,000 participants in September 2008 to 1.46 million in May 2009. Over the same period the number of participating employers increased from 1,491 to 14,936. The large increase in participation reflects the increased usage of the program by large establishments.

The STC program in Germany has a number of key features. Plans can be established if there is a “significant loss of work,” the definition of which was eased in February 2009 to broaden the scope of potential STC use. The initiative to establish an STC plan can originate from the employer or from worker representatives, and both must agree on the details of the plan if workers are unionized. In nonrecessionary periods,

STC plans usually last six months, but extensions to 12 months are common. During the Great Recession, the maximum duration increased to 18 months in January 2009 and to 24 months in June. Maximum duration throughout 2010 was 18 months.

After the establishment of an STC plan, payments are administered by the employer through the company's payroll system with reimbursement to the employer from the German administrative agency, *Bundesanstalt für Arbeit* (BA). Employers are required to maintain fringe benefit contributions (for health insurance and retirement) so that employer fringe benefit costs increase for their STC workers.

Utilization of STC during the Great Recession was high, and several researchers have credited STC with the maintenance of employment during 2009 and 2010 (Boeri and Bruecker 2011; Burda and Hunt 2011; Crimmann, Wießner, and Bellmann 2010). The authors conclude that absent STC, the level of unemployment in 2009 would have been 250,000–400,000 higher in Germany.

Other factors have also contributed to the so-called German employment miracle of 2009–2010. Working-time accounts were widely used. These accounts accumulate balances when workers log overtime and, rather than receiving take-home pay immediately, the overtime pay is deposited into the accounts. Workers can then withdraw from these accounts at a later time when weekly hours are reduced. While these accounts have existed for more than 20 years and accumulated substantial balances, they were reduced by large withdrawals during 2009 and 2010. Both Boeri and Bruecker (2011) and Burda and Hunt (2011) attribute the large employment-stabilizing effects in Germany during the Great Recession to the utilization of these accounts.

The list of other factors operative in Germany also includes deliberate employer decisions to forgo overtime hours in favor of employment-stabilizing adjustments to total hours. Of some importance are working-time “corridors,” which employers can use to shorten the weekly hours of less senior workers. In sum, several factors contributed to the stabilization of employment and unemployment in the face of large reductions in real output in Germany. While STC was important, other factors also played a major role in stabilizing employment and unemployment (see Chapter 2 in this volume).

Belgium

Belgium operates an STC program of substantial size. Between 2007 and 2009 the number of beneficiaries of *chomeurs temporaires* (temporary unemployment schemes) doubled, restraining the increase in open unemployment. The program was expanded during 2009 and 2010 by increasing potential benefit duration and expanding the occupational coverage to white-collar workers.

Two other programs in Belgium pay benefits to part-time workers. Career interruption benefits are paid to those who reduce hours to pursue non-labor market activities, such as child rearing. Interruptions are temporary and may be either total or partial. Credit time accounts, first initiated in 2002, is a much smaller program than the working-time accounts in Germany, and participation did not expand much in 2009–2010. Thus in Belgium, the stabilization of employment and unemployment was attributable mainly to the program of *chomeurs temporaires*.

Table 6.2 displays comparative data on STC for the United States, Canada, Germany, and Belgium. The table has annual data for the four years from 2007 to 2010. For the United States, the data pertain to the 17 states with STC at the end of 2009. This total includes the four largest states, and the 17 states combined represent about half of the labor force and unemployment.⁸ Note that for Canada and Germany certain data have been inferred. Total unemployment for all four countries is based on own-country labor force surveys.

Four aspects of Table 6.2 warrant comments. First, the table reinforces the point made in the previous section that the scale of STC in the United States is small. Even restricting the data to the 17 states with long-standing STC programs, the size in 2009, the year of highest utilization, is only 1.1 percent of regular UI recipients. Second, the strong cyclicity of STC utilization in all four economies is evident. The fall-off in utilization during 2010 relative to 2009 is obvious, with the German STC percentage (column [6]) falling to half of the 2009 percentage. As stated previously, STC is utilized most intensively in the early stages of a recession. If the program is to perform a useful stabilization function, it has to be established prior to the recession, not after it has begun. Furthermore, in this slow recovery from the recession, reducing layoffs can make an important contribution to improving the labor market. Data collected by the Bureau of Labor Statistics through its Job

Table 6.2 Comparisons of STC Programs in Four Countries, 2007–2010

	Total unemploy- ment (1)	Regular UC recipients (2)	STC bene- ficiaries (3)	STC equivalent bene- ficiaries (4)	Equiv. ben./ STC ben. (4)/(3) (5)	Equiv. ben./ regular ben. (%) (4)/(2) (6)
United States ^a						
2007	3,495	1,060	12.0	3.2	0.267	0.303
2008	4,531	1,396	22.6	6.2	0.275	0.445
2009	7,123	2,454	104.0	27.7	0.266	1.127
2010	7,608	1,954	67.7	16.8	0.249	0.862
Canada						
2007	1,079	479	2.6	0.7	0.286 ^b	0.152
2008	1,117	486	4.8	1.4	0.286 ^b	0.280
2009	1,516	734	48.3	13.8	0.286 ^b	1.884
2010	1,484	683	30.9	8.9	0.286 ^b	1.296
Germany						
2007	3,601	1,080	68.0	36.0	0.528	3.337
2008	3,141	917	102.0	46.0	0.451	4.994
2009	3,227	1,141	1,139.0	372.0	0.326	32.603
2010	2,936	1,027	535.0 ^c	174.0 ^c	0.326 ^c	16.999
Belgium						
2007	353	429	115.0	30.1	0.261	6.983
2008	334	404	134.7	32.4	0.240	8.018
2009	380	434	210.9	60.6	0.287	13.951
2010	408	438	173.3	49.8	0.287	11.353

^a17 states with STC in 2009.

^bRatio assumed by the authors based on fiscal year data from 1991–2009.

^cBased on part-year data.

SOURCE: Data developed by the authors from national sources. Data in columns (1)–(4) are in thousands.

Openings and Labor Turnover Survey (JOLTS) indicate that even now, 22 months into the recovery, 1.8 million jobs are lost each month due to involuntary separations. Greater use of STC could further reduce these involuntary separations—resulting in a net increase of jobs—or apparent job growth.

Third, the most obvious feature of Table 6.2 is the much larger scale of the STC programs in Germany and Belgium. Column (6) shows equivalent beneficiaries as a percentage of regular UC beneficiaries: the

averages during 2009 and 2010 are about 25 percent in Germany and 12 percent in Belgium. The corresponding two-year averages in the United States and Canada were 1.0 and 1.6 percent. Fourth, note the extent of the reductions from full schedules suggested by column (5): the ratio of full equivalent STC beneficiaries to the weekly/monthly numbers of STC beneficiaries. For the United States and Belgium, the proportions consistently fall between 0.25 and 0.30, whereas for Germany they show a sharp decrease in 2009–2010. In Germany the reduction in weekly schedules was about half in 2007–2008 but about one-third in 2009–2010. The average number of recipients in STC grew much more rapidly than the number of full equivalent STC recipients in 2009–2010.

A final observation about the information in Table 6.2 is the scale of the increase in unemployment in the United States compared to the other three countries. Unemployment in 2010 was more than twice its level of 2007—7.608 million versus 3.495 million.⁹ The next largest increase was in Canada, roughly 50 percent. The increase in Belgium was less than 20 percent, while German unemployment did not increase in 2009–2010 despite a sharp falloff in real GDP, especially in 2009. These data merely reinforce the widely understood point that German workers fared comparatively well during the Great Recession.

OPTIONS FOR INCREASING STC UTILIZATION IN THE UNITED STATES

We believe STC needs to be more widely utilized in the United States on both equity and efficiency grounds. Equity is promoted by sharing the burden of adjustment more equally across the workforce, and efficiency is advanced by preventing temporary factors from destroying valuable job matches (OECD 2010).

We find two aspects of STC particularly attractive when compared to the adjustments in hours worked accomplished through layoffs. First, we think STC provides a better pattern of burden sharing among workers. A wider pool is affected under STC but the reduction in income among affected persons is smaller than under layoffs. Not only does STC reduce the volume of worker dislocation but also the adjustment problems of dislocated workers, such as long spells of unemployment,

reduced reemployment wage rates, and loss of health insurance and other fringe benefits. In the language of labor economics, STC shifts the locus of changes in hours worked from the extensive margin (lay-offs) to the intensive margin (hours per worker). Second, training costs are reduced because workers remain employed and many return to full-time schedules at their jobs when sales and production recover to pre-recession levels.

Based on this judgment, we suggest four specific actions to increase STC utilization:

- 1) Disseminate information about STC and its advantages to employers and workers. While dissemination of timely information can be accomplished by various means, the following are obvious: advertise in the media, especially during the earliest stages of a recession; include information in UI tax notices to employers; and provide information to employers and workers in mass-layoff situations. The latter can be activated by the advance notice requirements of WARN legislation that requires employers with 50 or more employees to give notice 60 days prior to a planned mass layoff. State labor departments then send rapid response teams to the worksite to help plan for the subsequent developments. Rapid response teams include UI specialists who can inform employers and workers about STC and potentially influence the type of adjustments to be made.

Rhode Island, the state with the largest STC program (relative to the state labor market), has experience with avoiding plant closings when employers and workers have been informed about the STC program. This experience at plant sites has helped save jobs that eventually returned to full schedules when company sales rebounded.

- 2) Because of the uncertainty surrounding employer staffing decisions at the early stages of a downturn, STC plans must be comparatively easy to implement. At present, the employer must submit the STC plan to the UI agency to start the process. An alternative approach would be to let the employer initiate the STC plan, commence it immediately and administer payments within their existing payroll system, but inform the UI agency at the same time. Partial UI benefits can be paid by the employer, who is then reimbursed by the agency.¹⁰ Under this arrangement workers would not need to apply for benefits as they are automatically enrolled and paid.¹¹ To ensure that plans adhere to statutory and administrative guidelines, the UI agency can audit some

plans and respond to complaints. This approach would resemble the one followed in Germany. The advantage is that it would have a rapid start-up and, more than likely, higher worker participation than at present where take-up is far from universal in STC work units.¹²

If a state deemed this approach inappropriate, an alternative would be to ease the application procedure and expedite the approval of STC applications during a recession. The UI agency would acknowledge the importance of STC by having internal administrative procedures making it of equal importance to timely payments for fully unemployed claimants.

3) A salient feature of UI in the United States is experience rating. Higher payments to laid-off employees cause future employer UI payroll taxes to increase. Experience rating is imperfect, and on average only about 60 percent of benefit payments are charged to the former employers. Situations that escape experience rating include payments that follow quits, benefits to workers when firms cease operations, and payments by employers taxed at the maximum tax rate. These payments are termed *noncharged* and *ineffectively charged* benefits. They are typically financed by a common tax, where all employers pay the same tax rate.

The payment of STC benefits could be treated as a category of non-charged benefits. In effect, the cost of STC benefits would be spread to all covered employers rather than assigned to STC employers. This procedure would provide an explicit reward for maintaining employment and reducing the volume of layoffs. In other words, STC employers would be rewarded for making adjustments at the intensive margin rather than the extensive margin. If some STC participants were subsequently severed, the later payments for full unemployment would be treated the same as other charged benefits.

4) A second aspect of STC benefit payments could also be treated differentially from regular UI benefits. When a claimant files for regular benefits and is deemed eligible, a benefit year is established. The benefit year is a 52-week period within which the claimant can collect a maximum total amount of UI benefits. For most claimants (roughly 80 percent) this amount (the maximum benefit amount [MBA]) is limited to 26 times their weekly benefit. Any payments within an established benefit year reduce the available balance from their MBA. When the remaining balance reaches zero the claimant is said to have exhausted

their claim for that year. Currently STC payments reduce the MBA remaining balance in the same way as full weekly benefits, just at a slower weekly rate that reflects the reduction from the full work schedule. Someone otherwise eligible for 26 weeks who collects STC for 10 days would only be eligible for 24 weeks of full UI benefits in the same benefit year.

This aspect of eligibility treats STC claimants like fully unemployed claimants even though they have remained employed. To the extent that STC-eligible persons are concerned about becoming fully unemployed, this treatment of their remaining MBA would inhibit their participation in STC. The United States is the only country where drawing STC benefits reduces potential benefits for full unemployment. In effect, we treat the STC participants as unemployed while other STC programs treat participants as employed. Worker participation in STC would be encouraged if STC payments did not reduce the remaining balance in the MBA.

Administration of this changed treatment would require states to separately record STC benefits and delay establishing a new benefit year when STC would otherwise be the first payment of a new benefit year. A simple way to accomplish this would be to have the federal partner fully finance STC benefit payments. This financial arrangement would involve reimbursing state UI agencies directly for STC payments. Employers in states with STC would avoid associated UI taxes altogether (including some socialized charges if STC benefits were treated as noncharged items).

Throughout its 30-year history in the United States, STC has been a small program, even in the states with STC. Implementing the four suggested changes would increase STC utilization, making it available to a wider set of workers than at present. In unionized situations there would need to be agreement by the union as to the plan's details.

Senator Jack Reed of Rhode Island has tried to foster increased use of STC and introduced STC legislation in 2010 and in 2011 with Senators Richard Durbin and Sherrod Brown (S.386.IS—Unemployment Insurance Solvency Act of 2011). Most provisions of their bill were included in the Middle Class Tax Relief and Job Creation Act of 2012 (PL12-96). The legislation includes three categories of provisions: 1) temporary federal financing of STC benefits, 2) grants to states

for STC-related purposes, and 3) increased federal responsibilities for promoting STC.

The first provision of the legislation relates to temporary federal financing of STC programs. This provision not only rewards states that have existing programs, but also encourages other states to adopt STC. For states with existing programs, 100 percent of the cost of STC benefits is paid by the federal partner for three full years. States that introduce STC programs will have 50 percent of the cost of benefits subsidized for three years.

The second provision authorizes \$100 million in grants to states for STC-related purposes. Grants will be disbursed for two types of activities: 1) implementing newly enacted STC programs and improving administration, and 2) promoting and enrolling employers in STC programs. The allocation formula for disbursing these grants to the states is one-third for the first activity and two-thirds for the second.

The third provision relates to increased federal and state responsibilities for promoting STC. Three new areas of responsibilities are added to the authority of the U.S. Department of Labor. First, new model language for STC legislation in the states will be prepared, updating legislative language drafted some 25 years ago. Second, technical assistance and guidance will be provided to the states in establishing and administering STC. The third establishes the requirements for reporting STC activities, a small extension to the existing reporting requirements.

Compared to the suggestions we have proposed above, the 2012 legislation includes substantial direct financial support both for STC benefit payments and for STC benefits administration. It also provides financial rewards for effective outreach to employers, whereas we rely more on information dissemination through various channels to reach employers and increase utilization. The legislation does not speak to the treatment of STC benefit charges in affecting employer UI tax rates or the treatment of the STC usage in reducing the claimant's remaining MBA. To the extent that money talks, the financial carrots of the legislation could encourage adoptions by states. While we have emphasized the role of STC at the start of a recession, it could also provide a useful role during the recovery phase of the business cycle. During the recovery phase, however, STC would play a smaller role because the volume of layoffs is much lower.

Notes

1. The term *work sharing* as used here means reducing hours for the purpose of preserving overall employment. It does not refer to, say, two people sharing a single full-time job with each working part time.
2. Personal taxes are not considered in this example.
3. For Connecticut, Iowa, Minnesota, and Rhode Island the first year is either 1991 or 1992.
4. The linear trend variable is equal to 1 in 1989 and increases by increments of 1 in subsequent years. This variable is needed to control for slowly evolving trends. An upward trend could reflect slowly increasing awareness of STC by employers and/or workers.
5. With an STC program in place, one can expect fewer layoffs and a reduction in the economic costs associated with a job separation. It is also possible that receipt of STC acts as a signal to modify behavior and adapt to changed economic circumstances; for example, increase the rate of saving.
6. Duration for regular UI benefits and for STC is measured as the ratio of weeks compensated to first payments.
7. The UI program in Canada is called *Employment Insurance*. Monetary eligibility is based on hours of work in the past year. The minimum hours requirement varies from 420 to 700 depending upon the provincial unemployment rate.
8. The total unemployment of 7.608 million in 2010 was 51 percent of the national total of 14.825 million.
9. The national numbers for the two periods were 14.815 million versus 7.078 million, an increase of 109 percent.
10. In unionized situations there would have to be agreement by the union as to the plan's details.
11. Certain states in the Southeast, for example, the Carolinas and Georgia, already have employer-filed UI claims.
12. This aspect of STC is one finding of the Berkeley Planning Associates 1997 study of STC programs.

Appendix 6A

State STC Provisions in 2010

Table 6A.1 displays four key requirements that STC plans must satisfy to be approved by the UI agency. The table covers the 17 states where STC plans were operative at the end of 2009. As noted in the text, three more states created STC programs in 2010 and one in 2011.

Table 6A.1 State STC Plan Requirements in 2010

	Plan approval period (weeks)	Maximum STC weeks payable	Minimum reduction in hours (%)	Maximum reduction in hours (%)
Arizona	52	26 ^a	10	40
Arkansas	52	26	10	40
California	26	^b	10	
Connecticut	26	26 ^c	20	40
Florida	52	25	10	40
Iowa	104	52	20	50
Kansas	52	26	20	40
Maryland	26	26	10	50
Massachusetts	25	26	10	60
Minnesota	52	52	20	40
Missouri	52	26	20	40
New York		20	20	60
Oregon	52	52	20	40
Rhode Island	52	52	10	50
Texas	52	52	10	40
Vermont	26	26	20	50
Washington	52	52	10	50

^aLonger limit if the state-insured unemployment rate exceeds 4.0 percent of covered employment.

^bNo limit on weeks but payments cannot exceed 26 times the weekly benefit amount (WBA).

^c26-week extension possible.

SOURCE: USDOL (2010).

Appendix 6B

Regression Analysis of STC Utilization in 17 States

Table 6B.1 displays results for 17 state-level regression equations typically spanning the years 1989–2010. The dependent variable is annual STC equivalent weeks claimed measured as a percentage of annual weeks in the regular UI program of each state. Each regression equation has three explanatory variables: 1) the current year's state total unemployment rate (TUR), 2) the TUR lagged one year, and 3) a linear time trend that starts in 1989. Adjacent to each estimated slope coefficient is the absolute value of its *t*-ratio. The summary measures on the right-hand side of Table 6B.1 are the adjusted R²s, the standard error of estimate, and the Durbin-Watson statistic (DW). The final columns display the mean of the dependent variable and the maximum percentage. The table also identifies four states where STC data were not available from 1989 due to later start dates for the programs (1991 for Iowa and Rhode Island; 1992 for Connecticut and Minnesota).

For most states the fits are quite satisfactory, with adjusted R²s of at least 0.50 for 13 states and standard errors below 0.30 for 15 states. The generally small scale of STC is vividly illustrated by the small means in the right-hand column of Table 6B.1. Rhode Island is the only state where the mean over the full period exceeds 1.0 percent of regular UI claims. Only four other states have means that exceed 0.40 (California, Kansas, Missouri, and Vermont). The small scale of STC is also illustrated by the maximum annual percentages during the estimation period. While most exceed 1.0 percent, only two maxima exceed 2.0 percent, Kansas and Rhode Island at 3.24 and 4.17 percent, respectively.

While the summary measures in Table 6B.1 show the small scale of STC, the regression results point to a pattern of strong cyclical sensitivity. All 17 slope coefficients on the current year TUR are positive and their *t*-ratios all exceed 2.0, the threshold for statistical significance. The *t*-ratios in eight states even exceed 5.0; the slopes are highly significant. When unemployment increases, utilization of STC increases relative to utilization of regular UI claims.

The patterns for the lagged TUR coefficients are nearly as consistent. All 17 are negative and 13 have *t*-ratios of 2.0 or larger. In the year after the TUR increases there is a sharp falloff in STC usage. Short-time compensation usage decreases noticeably in the second year of a recessionary period. This falloff

occurs even if the TUR is higher in the second year of a recession as in 2010 relative to 2009. For 16 of 17 states the percentage was higher in 2009 than in 2010. Finally, the underlying data also illustrate the severe nature of the recent recession. The highest usage of STC over the full period occurred in 2009 for 14 of 17 states.

Table 6B.1 Regressions Explaining STC Equivalent Weeks as a Percentage of Regular Weeks, 1989–2010

State	Constant	TUR	TUR Lag	Trend	Adj. R ²	Std. error	DW	Mean (%)	Maximum (%)
Arizona	0.289 (2.3)	0.064 (2.6)	-0.051 (1.7)	-0.0062 (1.4)	0.161	0.121	2.62	0.297	0.629
Arkansas	-0.149 (1.3)	0.102 (3.6)	-0.072 (2.3)	0.0020 (0.6)	0.441	0.074	1.33	0.048	0.407
California	-0.185 (2.3)	0.162 (10.8)	-0.085 (4.8)	0.0021 (0.7)	0.890	0.083	1.82	0.414	1.053
Connecticut 1992	-0.172 (0.6)	0.232 (3.3)	-0.170 (2.1)	0.0106 (0.8)	0.495	0.258	2.04	0.308	1.622
Florida	0.036 (1.1)	0.031 (4.8)	-0.020 (2.5)	-0.0027 (2.2)	0.584	0.033	1.50	0.073	0.183
Iowa 1991	-0.397 (1.8)	0.339 (3.5)	-0.224 (2.1)	0.0023 (0.3)	0.523	0.168	2.15	0.110	1.006
Kansas	0.648 (0.8)	0.501 (2.4)	-0.610 (2.7)	0.0459 (2.0)	0.377	0.598	1.86	0.723	3.237
Maryland	-0.116 (3.2)	0.063 (7.6)	-0.026 (2.6)	-0.0019 (1.9)	0.783	0.030	1.96	0.048	0.213
Massachusetts	-0.209 (2.6)	0.107 (6.0)	-0.076 (4.1)	0.0132 (4.2)	0.714	0.094	1.96	0.132	0.765
Minnesota 1992	-0.216 (2.4)	0.175 (5.3)	-0.120 (3.6)	0.0094 (1.9)	0.770	0.098	1.50	0.166	0.790
Missouri	0.003 (0.0)	0.162 (5.5)	-0.138 (4.0)	0.0275 (6.7)	0.858	0.111	2.01	0.476	1.354
New York	-0.436 (2.6)	0.172 (5.6)	-0.101 (3.1)	0.0201 (4.4)	0.698	0.135	1.84	0.257	1.141
Oregon	-0.524 (4.6)	0.135 (6.5)	-0.050 (2.1)	0.0103 (2.4)	0.803	0.110	1.31	0.163	1.010
Rhode Island 1991	-1.410 (3.0)	0.302 (2.9)	-0.109 (0.9)	0.1021 (5.2)	0.773	0.456	1.67	1.122	4.173
Texas	-0.581 (1.7)	0.178 (3.1)	-0.119 (1.8)	0.0496 (6.4)	0.776	0.192	0.92	0.345	1.501
Vermont	0.090 (0.4)	0.208 (3.6)	-0.227 (4.0)	0.0462 (6.6)	0.744	0.208	1.75	0.540	1.511
Washington	-1.128 (4.9)	0.227 (5.7)	-0.053 (1.1)	0.0259 (3.9)	0.781	0.188	0.64	0.256	1.562

SOURCE: Regressions based on data from U.S. Department of Labor, Bureau of Labor Statistics, and OUI. Absolute values of *t*-ratios adjacent to coefficients.

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