DOCUMENT RESUME

ED 224 930 CE 034 685

AUTHOR Kerachsky, Stuart; And Others
TITLE Shared-Work Compensation: A Research Agenda. Project Report 81-01.
INSTITUTION Mathematica Policy Research, Princeton, N.J.
SPONS AGENCY Employment and Training Administration (DOL), Washington, D.C. Office of Research and Development.
PUB DATE 27 Feb 81
CONTRACT 20-34-80-23
NOTE 68p.
PUB TYPE Viewpoints (120) -- Reports - General (140)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Adults; Career Education; *Demonstration Programs; Employees; Employment; *Employment Practices; *Job Sharing; *Research Design; Research Methodology; *Unemployment; Unemployment Insurance

ABSTRACT

Shared-work compensation (SWC) can provide a method whereby layoffs and unemployment may be avoided by reducing all workers' time. As compensation, workers receive a comparable percentage of their unemployment insurance benefits. Although Western European countries have used work-sharing programs and Canada has implemented an experimental SWC program, the United States has had limited experience with SWC. Each of the groups--labor, business, and government (taxpayers)-- that could in some way be affected by SWC have an interest in and concerns about the program. Their unresolved questions are of two broad types: those relating to administrative and operational considerations and those relating to program impacts on the various interest groups. To learn about SWC in a real-world context, a demonstration should be planned as a comprehensive, voluntary, entitlement program replicated in several sites. A suggested demonstration design is based on a state model. Regulations would be required in three areas--employer eligibility, employee eligibility, and benefit calculation and payments procedures. A minimum of four sites would be chosen to provide variation. Evaluation should include an analysis of the process of implementation and operations and a quantitative participation and impact analysis for the respective groups. (YLB)

Contract No. 20-34-80-23

Authors: Stuart Kerachsky
Walter Corson
Walter Nicholson

PROJECT REPORT 81-01

SHARED-WORK COMPENSATION: A RESEARCH AGENDA

Prepared for:

Office of Research and Development
Employment and Training Administration
U.S. Department of Labor
Washington, D.C. 20213

Prepared by:

Mathematica Policy Research, Inc.
P.O. Box 2393
Princeton, New Jersey 08540

February 27, 1981

TABLE OF CONTENTS

This study was conducted and this report was prepared under a contract with the Office of Policy, Evaluation and Research of the Employment and Training Administration of the U.S. Department of Labor under the authority of The Comprehensive Employment and Training Act. Organizations undertaking such projects under Government sponsorship are encouraged to state their findings and express their judgments freely. Therefore, points of view or opinions stated in this document do not necessarily represent the official position of the Department of Labor.

INTRODUCTION

If a government policy can help employers stabilize their workforce over short economic downturns, it may avoid a situation that is more costly to most if not all interested parties. What has long been claimed in many European countries, but only recently in the United States, is that some unemployment can be prevented more efficiently and equitably than it can be treated. In particular, some unemployment is caused by conditions that are thought by employers to be only temporary. Such conditions might include a nationwide recession that is predicted to be steep but short, or industry-specific problems with materials or product demand. Associated with this unemployment are business responses that include short-term adjustments in the production process during the temporary downturn, followed by hiring and (re)training during the recovery period. Thus, the social costs of unemployment include the income losses for workers, the efficiency losses and hiring and training costs for business, and the social service costs for government (i.e., taxpayers).

The programs that are used widely in Europe to prevent this type of unemployment are generally referred to as "shared-work compensation" (SWC). These programs minimize layoffs by altering incentives in a manner whereby workers are often more willing to accept limited-duration hours reductions that are applied broadly rather than layoffs that affect only a few. The key change in incentives is that workers are compensated for their partial earnings losses with a share of their Unemployment Insurance (UI) benefits. In this sense, the program can be viewed as a modification of the existing UI programs. As additional benefits, workers most often retain fringe benefits and all other seniority privileges.

A commonly used example is that if a firm must lay off 20 percent of its workforce, it may instead reduce all workers' time by only 20 percent, or one day a week, in lieu of any layoffs. This worksharing scheme could be accommodated in the current UI system with one basic rule change: the dollar-for-dollar reduction in benefits that now results from earnings would be replaced with a percentage reduction. Thus, if a worker is "laid off" for 20 percent of the work week, he or she could receive 20 percent of his or her UI benefits (that is, the 80 percent of regular full time worked would reduce benefits by 80 percent). Of course, this example is somewhat over-simplified since the conversion of layoffs to more general hours reductions will involve workers with different skill levels and wage rates.

As we discuss in this report, SWC may be expected to provide significant financial and other benefits to business and workers. These include the following:

1. Firms may be less likely to lose workers during economic downturns because no one is actually laid off and all remain employed by the firm; this would avoid the disruptions and costs of hiring and training new workers if those on temporary layoffs find new employment.

2. The management and productivity costs of the general disruption caused by layoffs (e.g., reorganization of the production process) would be minimized, and long-term productivity gains may be realized.[1/]

[1/] This point is reenforced in a recent study of productivity conducted by the Congressional Budget Office (1981, p. 63).

3. Affected workers would lose only part of their weekly earnings, and their losses would be significantly reimbursed by partial UI payments; thus, economic disruptions to individual households would be minimized.

4. Spreading the effects of the downturn over a larger group of workers would avoid placing a disproportionate share of burden on recently hired workers and may promote the broader goals of equal employoment opportunity.

5. The fact that workers may not feel the economic necessity to seek new employment during a downturn would allow them to continue to develop skills in their chosen careers and to avoid reliance on social service programs.

6. Firms would have considerably greater flexibility in responding quickly to both adverse economic conditions and economic recovery.

There may also be some costs associated with SWC, and these would offset some part of the benefits. While many of the costs are financial, some are not. These costs include the following:

1. Because, under the program, firms will probably maintain most fringe benefits for the employees who must work the short weeks, total fringe costs to the firms could rise, in that such benefits would not have been maintained during short-term layoffs.

2. Because more workers are directly affected by the downturn, some of the more senior workers who would not have been affected by layoffs would share in some of the income loss under the program.

3. There may be some internal administrative costs to firms in applying for and participating in a new program.

4. Because of the increased number of individual applicants, there may be increased UI administrative costs.

A fair assessment of SWC must consider these benefits and costs in some detail, and must determine how they will be affected by alternative program rules and administrative procedures. While such an assessment is not possible with currently available information, it is useful to review what is currently known about SWC and to define further how the program can be expected to affect various groups. Ultimately, our concerns are with how society as a whole might benefit when the broad range of efficiency and equity issues are considered. However, we must also consider program impacts from the perspectives of labor, business, and taxpayers. These are the issues that are considered in the next two chapters.

The final assessment of the benefits of SWC operating in our own social and economic environment requires actual program experience, experience that will permit the examination of alternative administrative procedures as well as the direct measurement of program impacts. An approach that has been used widely in the past to gain such experience and to guide subsequent policy deliberation is the implementation of a limited scope demonstration. A demonstration would permit (1) examination of different modes of implementation and administration, (2) assessment of what should be regulated and the best form of regulation, and (3) evaluation of all short-run program impacts. The particular advantage of a demonstration prior to full implementation is that it permits evaluation of program alternatives on a scale that can be controlled, closely monitored, and ultimately terminated. A demonstration design is described in the fourth chapter of this report.

II. BACKGROUND AND REVIEW

There is general agreement that the U.S. unemployment rate is relatively high even during periods of strong economic activity. For example, some analysts suggest that the "full employment" unemployment rate may be as high as 5.5 percent.[1/] Even when adjusted to U.S. definitions, Western European and Japanese unemployment rates are usually well below that level. Potential explanations for this difference cover a broad range of sociological, historical, and economic literature, but there is no basic agreement as to a single underlying cause. There is agreement, however, that U.S. workers seem more likely than workers in other developed countries to suffer layoffs in response to cyclical downturns, and that, even during periods of high unemployment, layoffs are more frequent in the United States than elsewhere.

The costs of unemployment can be seen in the reduced well-being of workers and their families, in disruptions of the production process at firms, and in decreased demand for the goods and services produced in the economy. Proposals for reducing unemployment and thereby mitigating its costs have ranged from public service employment to expanding or changing the existing Unemployment Insurance (UI) system, to vast education and training programs. One promising tool that has functioned effectively for years in Europe is "shared-work compensation."[2/]

[1/] See, for example, Hall (1970) and Feldstein (1973).

[2/] This is one of several names used for the concept. Others include worksharing and short-time compensation.

Shared-work compensation, or SWC, is intended to offer incentives to both employers and employees in order to stabilize employment. Essentially, it provides a method whereby a firm can, in some instances, avoid layoffs completely by placing a larger group of its workers on a short work week during the course of the downturn. UI benefits would have a significant effect on workers' partial loss of income resulting from the short work weeks. Such a program can be expected to reduce the incidence of layoffs and consequently have a favorable impact on both the level of unemployment and its volatility over a business cycle. Such a program should also improve the overall efficiency of the economy by prompting employers to retain skilled workers and thereby add to accumulated human capital.

A. DEFINITION OF SWC

Shared-work compensation is a unique employment policy in that its goal is to keep workers in the jobs they have when threatened by a short-term interruption. In contrast, the focus of the current state UI programs is on restoring some level of lost income for those who lose their jobs. Thus, workers generally are better off financially (at least in the short-run) if they accept layoffs and collect UI benefits than if they work part time. These programs contribute to job maintenance only insofar as employers must bear some program costs of any layoffs through experience rating.

In fact, all states do have some type of partial-benefit schedule, but these schedules are usually characterized by a dollar-for-dollar reduction in benefits for wages in excess of a modest weekly earnings disregard. For a typical worker in manufacturing, these schedules

usually mean that no benefits are paid if an individual works two or more days per week. This means that few individuals can receive partial benefits; consequently, partial employment during business downturns is not encouraged by the current UI system.

The idea behind SWC is that, when a downturn is expected to be short-lived and the previous level of employment will subsequently be restored, it may often be desirable to avoid layoffs completely by spreading the available work over all workers. One commonly used example is that if a firm must lay off 20 percent of its workforce, it may instead reduce all workers' time by only 20 percent, or one day a week, in lieu of any layoffs. This worksharing scheme could be accommodated in the current UI system with one basic rule change: the dollar-for-dollar reduction in benefits that now results from earnings would be replaced with a percentage reduction. Thus, if a worker is "laid off" for 20 percent of the work week, he or she could receive 20 percent of his or her UI benefits (that is, the 80 percent of regular full time worked would reduce benefits by 80 percent).

This description of SWC is, of course, oversimplified: the tradeoff of full layoffs for partial layoffs would be complicated by relative labor productivity, wage rates, and other considerations that could make the tradeoff greater or less than hour-for-hour. Workers are not equally skillful or productive; while those currently laid off are generally the most junior workers, who tend to be the least productive, those partially laid off under SWC would include all workers in a defined work unit (e.g., a firm or shop). Further, wage rates are closely tied to productivity. Therefore, for firms to meet the same cost or output reduction goals under SWC as they would under the current program, a different level of reduction

might be required, depending on the skill and wage rate composition of the work-force. While the direction of the difference between the two programs is theoretically ambiguous, the weight of the argument suggests a smaller percent reduction in the workforce under SWC.

B. SWC EXPERIENCES TO DATE AND WHAT THEY TELL US

In many Western European countries there appears to be a feeling by all interested parties that sharing the existing work is preferable to layoffs during slack periods.[1/] Worksharing legislation, which provided at least some compensation from the government, was enacted in several countries in the immediate post-World War II period. Although the programs spread to other countries and continued to develop, the current programs have been shaped by the economic crises that began in the mid-1970s. The common feature of these programs is that for workers on shortened work schedules the respective governments reimburse some percent of their foregone earnings. However, the programs vary by such features as the percent of compensation, compensation ceilings, the length of the waiting period between the start of the shortened schedules and the initiation of payments, the length of the eligibility period, and the method of financing the program.

The major experiences with these programs cover fewer than six years, but their widespread use during the recent recession indicates their importance as a countercyclical tool. However, these experiences tell us little about how SWC can be directly implemented in the United States,

---

1/ Reubens (1970), Henle (1976), Levitan and Belous (1977), and Henle et al. (1979).

because there are two major differences between the European experiences and any U.S. application. The first is the role of organized labor. In European countries, labor seems much more involved in governmental and employer decisionmaking, particularly as it affects the worker. Furthermore, labor was usually enthusiastic about the SWC concept from the start. To date, U.S. labor organizations have not shown this degree of interest in the concept.[1/] In fact, their public statements have exhibited caution or even pessimism about SWC.[2/] The other major difference between the European experiences and any U.S. application is in the rules of operation. Although no specific U.S. plan is under consideration, plans that have been discussed differ from the current European plans. For example, concern over the permanent subsidization of part-time employment is likely to cause a somewhat short period for the length of eligibility (discussions here have focused on worker eligibility for SWC of between 3 and 6 months per year, in contrast to a period up to twenty-four months for the West German plan, which is often cited as a model for other plans.)[3/]

Closer to home is the Canadian experimental SWC program, implemented in 1977. Modeled after the West German program, the program is designed to test the SWC concept in Canada's own economic and social environment. Although many of the objectives and regulations parallel some

---

[1/] This point is particularly stressed by Reubens (1970).

[2/] See, for example, Seidman (1980a and b).

[3/] There are also a great many differences among the European plans, such that a comparative analysis of them would not isolate the effects of specific program features.

European plans, there at least two notable differences surrounding its implementation: (1) the emphasis on ensuring the economic viability of firms and (2) the lack of enthusiasm on the part of organized labor.[1/] Actual implementation was in the form of twenty-four pilot programs (independent agreements between employers and employees under the flexible regulations of Employment and Immigration Canada).

Although this is an experimental program, its design seriously constrains the research. The primary design problem is that, while individual programs are too small to generate reliable evaluation results, the programs are also too different to evaluate together. Further, there are no control sites with which to compare the experiences of the treatment sites. The evaluation results that are available are based on individual analyses of nineteen of the twenty-four programs, each conducted by independent consultants. While the reliability of specific research results may be low, some general patterns of results do emerge.[2/] First, workers who participated in the program had modest income losses relative to their hours losses, and they generally liked the program. Local union representatives also reported favorable impressions of the program, although regional union officials have raised some reservations. Second, employers reported a range of positive to negative financial experiences with SWC relative to regular UI, and they also reported a range of reasons for their experiences. There appears to be no consistent pattern to these experiences. Finally, program costs were calculated to be

---

[1/] A discussion of the Canadian program's background is presented in Sadlier-Brown (1978).

[2/] The evaluation results reported here are based on Canada Employment and Immigration Commission (1979).

higher than those of regular UI; however, because there were no control sites, any such calculation must be somewhat judgmental.

The United States has had very limited experience with either SWC or other forms of worksharing. As in Canada, organized labor in the United States has not been enthusiastic about the idea. Further, with the exception of the recently enacted law in California, state UI rules do not permit compensation for partial layoffs beyond the limitations described earlier. Instead, most of the experience has been limited to a relatively small number of voluntary agreements between labor organizations and employers, often negotiated in response to an economic crisis. These programs are rarely implemented and involve no governmental compensation. The United States has somewhat more experience with permanent part-time worker schedules, implemented for the convenience of employees and employers rather than in response to economic conditions.[1/] Because of the permanent nature of the work-time adjustment and because the programs are often targeted to specific populations (e.g., secondary and older workers), these programs are not really comparable to SWC. However, they do indicate that many workers in the United States would prefer to trade some of their work time and income for additional time that can be spent in home activities or leisure.

The one instance in which the United States is gaining some experience with SWC is through California's Work Sharing Unemployment Insurance program. This is an experimental statewide program that was established in 1978 to mitigate the employment problems that were expected to arise as a result of the Proposition 13 revenue declines. This program

---

[1/] For a discussion of the growth of the part-time work concept, see Deutermann and Brown (1978). Part-time alternatives as well as other alternate work schedules are described in Miller (1978).

which is integrated into the regular UI program, has the following features:

1. The group placed on reduced hours may comprise an employer's entire workforce or just specific units; however, it must comprise at least 10 percent of the regular workforce.

2. Each employee participating in the program must be eligible for regular UI benefits.

3. Weekly benefits are calculated as the regular UI benefits reduced by the proportion of regular full time the employee works.

4. Each employee is entitled to 20 weeks of partial benefits in a 52-week period, after which he/she is still entitled to regular UI benefits (less the amount used under the program).

5. Work-search requirements are generally suspended for program participants.

6. Where a collective bargaining agreement is in effect, the union must agree to program implementation.

An additional feature of this program is that it is more completely experience-rated than the regular UI program: a special tax is levied against employers with negative reserve accounts at the time they make use of the program.[1/]

The California legislation that authorized the program (and the legislation that authorized its two-year extension) includes a mandate for a report to the State Legislature on its "use and operation." The research for that report is currently underway; however, it is likely to provide

---

[1/] For a full description of program rules, see State of California (1978). For regular UI, employers with negative reserve accounts do not increase their tax rate by laying off employees, since they are already paying the maximum tax rate. The length of time for which they will pay the maximum tax rate would, however, be affected by layoffs.

only limited information relevant to a wide-scale implementation of SWC in the United States.[1/] This assessment is based on several considerations, the most important of which is that this research will assess only a single state's experiences. Although California is a large and diverse state, as with any single state it cannot claim to adequately represent the social, economic, or political conditions in other regions of the country. This is a particular problem for a program that, like SWC, is based on the state UI system: UI regulations and procedures vary greatly from state to state, and an adequate assessment of SWC, will require its operation in several UI settings. Another consideration is that the research effort is a relatively modest one conducted by the administering agency--the Employment Development Department within California's Health and Welfare agency--to address the legislative mandate. Therefore, it may lack the appearance of objectivity and completeness that is necessary to attract serious review by potentially interested outsiders.

C. OBJECTIVES OF THIS REPORT

The limited experience with SWC in this country is not a good indicator of the level of interest in such a program. Several states--among them, New York, Michigan, Arizona, and Texas--have seriously considered adopting such a program. Further, Patricia Schroeder, a Congresswoman from Colorado, introduced a bill into the 96th Session of Congress (H.R. 7529), which, if passed, would have authorized the secretary of Labor to conduct a demonstration and to assist states in developing and implementing SWC. The Department of Labor itself has had a longstanding

---

[1/] For a discussion of the early research experiences in California, see Best and Mattesich (1980).

interest in the concept, and this interest culminated in a design for a SWC demonstration. However, the demonstration has not been implemented.

The steady but slow progress that the SWC concept has made in gaining support in this country reflects an ambivalence on the part of all interested parties. Labor, business, and government officials have found some elements of SWC beneficial to their respective constituents. Accordingly, some representatives of each group have actively supported proposed implementation, at least in a demonstration mode. However, others have raised concerns about how SWC would be implemented and how it would affect their group. Many of these concerns are real, while others seem to be caused by misconceptions about the program. In fact, a common concern expressed by some labor and business representatives is that SWC would be relatively more beneficial to the other group. The next chapter attempts to increase the level of understanding about SWC so that all groups can fairly assess how SWC is likely to affect them. This discussion does not resolve many of the concerns, but they are documented for future study.

III. IMPLICATIONS FOR PARTICIPATING GROUPS

Each of the various groups that could in some way be affected by shared-work compensation have their own interest in and concerns about the program. The following discussions begin with the broad societal perspective, and then focus on three main groups--labor, business, and government (or taxpayers). We consider how the respective groups might react to SWC and why, and we conclude with the major unresolved questions.

A. SOCIETY

Public programs of the type under consideration affect many groups--those for whom they are targeted as well as others--and an assessment of their value or effectiveness must consider all related impacts. Thus, a complete assessment must compare the benefits with the costs for each of these groups, but it must ultimately aggregate their impacts into a comparison of the overall, or social, benefits and costs. Most of the theoretical development and any future measurement of program impacts must begin with the individual groups, and we turn to detailed discussions of them in the following sections. However, it is useful to preface these discussions with an overview of the main social considerations.

The first consideration for implementing SWC is economic efficiency, which concerns the production of goods and services from the available resources (including labor) and their availability to society. Employees have two distinct perspectives on efficiency. Those with limited seniority will receive higher current income through SWC, and they may receive benefits from job protection in the form of increased job skills and experience, which ultimately increase their value to the employer and,

consequently, their earnings. However, if worksharing merely delays an inevitable layoff, an employee's own delay in moving to an industry, occupation, or firm with more long-run promise may be disadvantageous. Employees with more seniority would receive somewhat lower current income while participating in SWC, but they might benefit both by being able to buy more leisure during periods of worksharing (this is a benefit only if institutional constraints dictate a longer work schedule than workers would ideally like) and by receiving higher earnings in the long-run as the result of firms operating more efficiently under the flexibility of the SWC option.

From the employers' perspective, SWC would provide more flexibility for adjusting the amount of production during temporary downturns, reduce the costs (including productivity losses) of hiring and training new workers during subsequent upturns, and reduce the need for labor "hoarding." However, it is also likely to increase labor costs due to the necessity of maintaining contributions for fringe benefits as shortened work schedules are substituted for layoffs; it may also increase labor costs in the long-run to compensate senior employees for participating in SWC, and may affect the long-run use of capital and labor.

The effects of SWC on incentives and efficiency are quite complex from the perspective of the government and the rest of society. On the financial side, we can only speculate about how SWC would affect UI program costs, tax receipts, and the costs of other affected programs. Similarly, its effect on job matching and the availability of jobs is unknown. Further, it is uncertain how well SWC will serve the economy as a countercyclical tool (e.g., by maintaining the income of low-wage

people, thereby maintaining spending during downturns). To this must be added the possible long-run benefit of increasing the skills and productivity of a broader base of workers.

While the possible efficiency outcomes are generally understood, there remains a great deal of uncertainty about the degree to which each group benefits. As with any issue involving labor, business, and government, there is controversy over who might gain at another's expense. Resolving this to each group's satisfaction is a matter for empirical investigation and education.

The second consideration for implementing SWC is equity, which concerns the well-being of the citizenry. Many who advocate SWC cite equity as a primary goal of the program. Their basic concern is that the main burden of downturns in economic activity is borne disproportionately by certain groups of workers. These are generally new workers--workers who do not have the job protection of seniority. Traditionally, this has meant the young. However, in recent years, this has also meant women and racial minorities, since these groups have begun to enter occupations in which previously they had not participated in great numbers.

To senior workers, on the other hand, equity often means being allowed to realize the benefits and privileges that have already been earned. Job protection is one such benefit. For this group, it seems inequitable to dismiss a benefit they have worked fifteen, twenty, or more years for and to treat them in the same manner as a relatively new worker. One challenge for the SWC concept, therefore, must be to strike a balance between these two views.

While this discussion has provided an overview of the main social

considerations, it has provided little new insight or detail. For this we turn to specific discussions for the three main interest groups--labor, business, and government.

B. LABOR

In this section we describe the way in which individual workers or employees might be expected to react to the introduction of SWC. The reactions are in turn divided into what may be categorized as "short- and long-term" effects. Thus, the discussion is divided into several subsections. The first describes a general model of job preference through which the introduction of SWC can be evaluated; the second describes expected short-run effects; and the third describes expected long-run effects. In the final subsection we digress slightly to consider issues that may be of particular interest to labor organizations.

1. General Theory

Workers' employment decisions and the levels of labor services they offer are usually evaluated in the context of consumer-choice theory, which is based on the notion that workers maximize their overall utility or well-being subject to constraints on the availability of time and income. Thus, employment decisions can be shown to be based on wage and other benefit offers, nonwork sources of income, alternate uses of time, and other job and personal characteristics. However, this decision process is not the area in which SWC is relevant. Instead, SWC is relevant to situations in which workers have accepted job offers and are working in those jobs, but are now facing some possibility of layoff. At issue is whether they would be better served by SWC or by the current UI program.

Consider a worker's employment situation in a firm (or work unit) that is faced with short-term workforce reductions.[1/] Under the current UI program the situation can be represented by the utility that the worker attaches to the job (V_{UI}) and the probability that he or she will not be affected directly by the reduction (P_{UI}). (The utility associated with the job also reflects the leisure time it affords.) That worker faces a different level of utility if he or she is affected by the workforce reduction (i.e., laid off) and is forced into either the next best employment opportunity or unemployment (W_{UI}). Thus, the expected utility of the job with the current UI program (U_{UI}) can be represented as :

$$U_{UI} = P_{UI} V_{UI} + (1 - P_{UI}) W_{UI}. \qquad (1)$$

If, instead, the workforce reductions were to be implemented under SWC, there are analogous concepts of the utility attached to the job if the worker remains unaffected by the reduction (V_{SWC}), of the probability that the worker will be unaffected (P_{SWC}), and of the utility attached to the job if the worker is affected (W_{SWC}). The concept of being affected by the workforce reduction is somewhat different under SWC, however, since the worker continues in the same job, although at a reduced level. The expected utility of the job under SWC (U_{SWC}) can be represented as:

$$U_{SWC} = P_{SWC} V_{SWC} + (1 - P_{SWC}) W_{SWC}. \qquad (2)$$

[1/] This analysis is adopted from the union-voting analysis of Farber and Saks (1980).

The worker would prefer SWC to the current UI program if it produced a higher expected utility--$U_{SWC} > U_{UI}$. Otherwise, he or she would prefer to remain with the current program.

The evaluation of worker preference is based on the factors that underlie the P, V, and W variables and which thus influence the worker's expected utility under the two programs. P_{UI} and P_{SWC} can take any value between one (which signifies that the worker is unaffected by the reduction) and zero (which signifies that the worker is affected). Prior to an actual workforce adjustment, each worker's values would fall between the two extremes. (Of course, in most cases, P_{UI} would not equal P_{SWC}.) However, when the firm actually adjusts its workforce, P_{UI} and P_{SWC} will assume values of either zero or one. Most of our discussion will assume this simpler latter case.

Other characteristics of the employment situation (including any unemployment) are subsumed within the utility variables. These characteristics include the direct monetary return to work, fringe benefits (e.g., insurance, vacation and sick leave, pensions, and disability benefits), other monetary entitlements (e.g., UI and Social Security), the nature of the workday (e.g., usual hours, possibilities for overtime, and flexibility), the nature of the workplace (e.g., supervision, colleagues, physical environment, and task structures), and the value of any nonwork time (e.g., home production, leisure, and job search).

V_{UI} and V_{SWC} represent a worker's utilities associated with the normal or usual characteristics of the job under the respective programs if the worker is not affected directly by the workforce reductions. While the values of these variables are often thought of as equal, they may well differ if the workforce reductions that involve other

workers affect our worker indirectly through changes in the nature of the workday or workplace. One common example of this under the current UI program is that a worker may be "bumped" into a less desirable job as a result of layoffs that involve others. Examples under SWC might include the loss of hours flexibility or the loss of valued colleagues.

The two remaining utility variables, W_{UI} and W_{SWC}, are quite different. A worker affected by a workforce reduction under the current program faces the next-best job situation that was always available to him or her. If no job is immediately available, he or she generally could receive UI benefits and other social services. Since this option is always available, we can assume that each worker derives greater utility from his or her basic, unaffected job situation than from the next-best alternative--$V_{UI} > W_{UI}$. On the other hand, a worker placed temporarily on a worksharing schedule would receive lower earnings, which would be offset partially by a portion of the UI entitlement; the worker would also work fewer hours and thus have more leisure time, and would retain fringe benefits either fully or in proportion to time worked. We will assume that a worker would prefer temporary hours cutbacks to layoffs--$W_{SWC} > W_{UI}$.

2. Short-Run Effects of SWC

The difference between short-run and long-run behavior from the perspective of labor is not well defined. For this discussion we assume that the short-run is the period prior to (1) major contract revisions where a negotiated contract is in effect (contract modifications to accommodate SWC are not defined as major revisions) and (2) major labor-market responses to SWC.

Workers with lower seniority who would be affected by a workforce reduction under either program ($P_{UI} = P_{SWC} = 0$) would base their program assessments on simply the comparison of W_{UI} and W_{SWC}. As described above, workers would always prefer temporary hours cutbacks to layoffs ($W_{SWC} > W_{UI}$) and thus would prefer SWC to the current program ($U_{SWC} > U_{UI}$.)

The story is quite different for higher seniority workers. None of these workers would currently be affected by the reduction ($P_{UI} = 1$), but they would be under SWC ($P_{SWC} = 0$). Therefore, they would base their program assessments on the comparison of V_{UI} and W_{SWC}, and which value is greater cannot be established by theory alone. Higher earnings, for example, would favor the status quo, as would partial losses of fringe benefits and threats to the seniority system under SWC. On the other hand, the increased leisure under SWC, along with the preservation of the nature of the workplace, would tend to favor SWC. While little evidence on the outcome currently exists, it is commonly believed that higher senior workers would prefer the status quo ($V_{UI} > W_{SWC}$) and, therefore, $U_{UI} > U_{SWC}$.

If we consider worker preference at a time prior to the actual institution of a workforce reduction, the analysis is more complicated. In this situation, P_{UI} and P_{SWC} would take values between zero and one for each worker. Thus, the full equations for U_{UI} and U_{SWC}, as shown in equations (1) and (2), would have to be evaluated, and the outcome would be indeterminate except for workers with very high or very low seniority (i.e., as P_{UI} and P_{SWC} go to the extreme values).

With this background we can describe our expectations about

(1) who would prefer SWC over the current UI program, and who would thus voluntarily participate in such a program, and (2) how workers would respond to SWC.[1/] Our expectations for participation depend on workers' characteristics; they include the following:[2/]

1. Employees who are most likely to participate voluntarily in SWC include females (who might place a relatively high value of time spent on housework), racial and ethnic minorities (who might view SWC as a mechanism to promote equal opportunity), workers with little seniority (who might have a relatively high probability of full layoffs at some point in the absence of SWC), workers in small firms or shops who might have more familiarity with and concern for those who would be laid off in the absence of SWC), and workers in nonurban areas (again, who might have more familiarity with and concern for those who would be laid off in the absence of SWC). Others in these categories are less likely to participate voluntarily.

2. Ambiguous effects on participation are associated with income (higher income workers have a higher opportunity cost, which is likely to be disportionately uncompensated for by SWC, but they can better afford to consume leisure), age (no necessary effect), and union membership (unions can facilitate the negotiating process of voluntary participation, but SWC might be viewed as violating previously agreed-upon rights of seniority, work schedules, etc.).

[1/] The issue of voluntary participation is discussed in Chapter IV.

[2/] Our expectation for each characteristic assumes that all other effects are netted out. For example, while seniority is generally associated with income and a number of other elements, the hypothesis for seniority considers only that characteristic abstracted from all related ones.

The remainder of our expectations relate to responses of employees to SWC:

3. Participation in SWC will have an ambiguous effect on other labor-market activities. Second-job holding or moonlighting may increase for workers on reduced work schedules, although this increase should be modest due to the limited duration of SWC eligibility. Moves to new primary jobs should fall, as job-search activity will be reduced due to fewer layoffs. (However, some workers on worksharing may search for jobs with lower probabilities of implementing SWC.)

4. The uses of time away from the job for human capital development should be unaffected by SWC. Periods of reduced work schedules are expected to be too brief and uncertain to alter patterns of participation in education or training programs, etc.

5. Psychological reactions to SWC are unpredictable, since the effects on both those who would and those who would not have been laid off in the absence of SWC are ambiguous.

6. On average, employees will be better off financially with SWC than with the current UI system. However, there will be obvious distributional effects between those who would not and those who would have been laid off under the current system.

3. Long-Run Effects of SWC

In the long-run, workers can be viewed as fully adjusting to SWC through both negotiated work agreements and job changes. Based on initial employee and employer experience with SWC, new work agreements should establish rules and regulations tailored for using SWC within particular firms or shops, and they should also set compensating benefits for the affected parties. If there are substantial job changes or sorting in response to SWC, this should also be accomplished. We do not anticipate major job changes, as we indicate in the short-run hypotheses for both employees and employers. However, such a result is theoretically possible; should it occur, it will be observed as a short-run sorting phenomenon.

The direction and magnitude of long-run effects are difficult to predict with certainty because of the convergence of short-run factors. However, we would expect these effects to be reflected in employee benefits (as compensation for the redistributional character of SWC), work schedules (including both overtime and the implementation of worksharing schedules), seniority rules, and the definition of the firm, shop, or skill unit over which the worksharing schedule is applied. The final long-run outcome will be influenced by such factors as:

- Workers' demands for leisure and the (presumably negative) impact of SWC on labor supply
- Workers' attitudes toward risk and the (presumably negative) effect of SWC on the equilibrium probability of short-term layoffs
- Interaction of SWC with workers' demands for various fringe benefits, the final result of which depending on the substitutability or complementarity of SWC with those benefits
- The relative bargaining power of employees and employers

4. Labor Organizations

Labor organizations have raised particular questions about the operation of SWC and its impact on labor.[1/] Perhaps the only certain consequence of SWC for such organizations is that, where they exist to represent workers, they will have a greater role in formulating policies for layoffs. This would happen in the short-run because all proposals to date for implementing SWC require consent by labor organizations when there is a negotiated contract; it would happen in the long-run because future

---

1/ See, for example, Seidman (1980a and b).

contracts could include specific provisions for using SWC and, perhaps, compensating benefits.

Most of the questions raised by labor organizations about SWC, however, concern perceived costs for workers. These involve work "speed-ups," ease of layoffs, threats to the seniority system, and the masking of the unemployment problem.

The speed-up issue is difficult to assess because a distinction must be made between "normal" productivity changes and those that are somehow newly imposed. Naturally, if the length of the workweek changes, there may well be corresponding changes in productivity. The direction of such changes is theoretically ambiguous--workers may be more productive because there is less fatigue, or they may be less productive because a larger fraction of the workweek will be devoted to start-up and wind-down activities. Beyond this, however, is the fear that employers will demand a full week's output from the short-week schedule, particularly where strong unions do not exist to protect the interests of workers. While this concern may not be totally without foundation, it is difficult to imagine that if these latter productivity gains were possible they would not be realized in the present competitive environment--they do not seem more achievable under SWC.

The ease with which layoffs (or partial layoffs) can be made under SWC versus the current UI program cannot be assessed with the available information. The concern of labor organizations is that it will be easier to cut everyone's hours back instead of laying off a few workers completely. The counterargument is that the workers who would currently be laid off have been with the employer only a relatively brief time, and

there is little mutual attachment between employee and the employer. Consequently, in most cases, employers would rather lose those employees than jeopardize their relationship with long-term, experienced workers by tampering with their work schedules (assuming SWC was not favored by the more experienced workers).

A related ease-of-layoff concern is that employers may find it easier to adjust labor services downward through marginal hours adjustments rather than through more discrete employment adjustments. This, it is felt, would lead to a larger labor-service adjustment. There is some merit to this argument; however, positive labor-service adjustments will also prove easier. Thus, employment would rebound faster at the end of a downturn. Further, employers may be able actually to increase their "normal" level of employment if they have greater flexibility for hours and adjustments. (This is discussed further in Section C of this chapter.)

The use of SWC would imply a change in seniority rights, but it would not challenge the basic seniority system. The change, of course, is that workers who have enough seniority to be protected against layoffs would be eligible for temporary hours reductions. (As described above, all proposals for implementing SWC require approval of such changes by labor organizations when there is a negotiated contract.) However, no other part of the seniority system, including the accrual of seniority and its privileges during a period of worksharing, need be effected by SWC.

With the way in which unemployment statistics are currently reported, widespread use of SWC would tend to mask the severity of the unemployment problem. However, this is a problem with the statistics rather than with the program. In fact, "part-time for economic reasons"

data are collected, and workers on SWC would be reflected in these data. However, workers in this category are not considered "unemployed" in the widely reported statistics.

C. BUSINESS

This section analyzes the way in which employers might be expected to respond to the introduction of SWC. As with the previous discussion, this one is divided into subsections on general theory, short-run effects, and long-run effects.

1. General Theory

Employers' demand for labor services are derived from the demands for the products those employers produce and from the assumption that employers wish to minimize the overall costs of that production.[1/] Labor services (LS) are measured in hours actually employed in production and can be disaggregated into three components: (1) employment (E--measured in number of workers), (2) hours compensated per worker (H), and (3) the proportion of compensated hours actually used for production (Θ--hence, $(1-\Theta)$ represents the proportion of idle hours). These components are related to each other by the equation:

$$LS = (E)(\Theta H). \qquad (3)$$

The importance of this formulation is to indicate that not only must employers choose the level of labor services they wish to have during

---

[1/] Use of the cost minimization assumption permits the theory to be applied to non-profit institutions and governmental employers, as well as to profit-maximizing firms.

a period, but they must also decide what combination of employment, hours, and labor utilization to use in providing those services. In general, that choice will depend on the level of output to be produced, on the nature of an employer's capital stock, and on the relative costs of the three components of labor services.[1/]

In addition to specifying the cost-minimizing choices for E, H, and Θ, a complete theory of employers' demands for labor also requires a definition of the process by which these components are adjusted to their desired levels, since such adjustments might be quite costly to make. Speeds of adjustments would be expected to be slower for those components that have high adjustment costs, and faster for those with low costs. Data on an employer's use of labor services at any one point in time would not be expected to reflect long-run equilibrium choices but, rather, to reflect the various components of labor services in various stages of adjustment.

Because of the definitional relationship embodied in equation (3), it is clear that employers cannot adjust LS, E, H, and Θ independently. Rather, specification of any three components dictates what the value of the fourth must be. One way to treat the adjustment process implied by this identity is to assume that employers choose LS to be able to produce what is demanded during a period, change E and H slowly over time to

---

[1/] The choice between employment and hours has been intensively analyzed (see, for example, Brechling, 1965). The utilization coefficient, Θ, was first introduced by Fair (1969) to explain movements in labor productivity over the business cycle. Implicitly, Fair assumes that $\Theta = 1$ in equilibrium (that is, all hours compensated are fully utilized in production) and that variations in Θ are a result of lags in adjusting E and H. For simplicity, we will also adopt that approach, although there are reasons why Θ might be less than 1 even when the employer is in long-run equilibriums.

minimize adjustment costs, and permit the utilization rate ( ) to act as a buffer. Hence, short-run changes in LS are accomplished first by changing ; over time, however, returns to its equilibrium value (say, 1) as employment and hours are adjusted.

Further, it can be argued (see, for example, Baily, 1977) that employers prefer to adjust hours rather than employment, and they will adjust H to the extent possible. However, when LS must decline during an economic downturn, the adjustment mechanism is constrained by workers' income options: as hours and the associated earnings fall below some threshold, workers will leave their jobs for other jobs or even for unemployment. With the current UI rules favoring full layoffs to hours adjustments, employers are effectively constrained in how much they can adjust H before adjustments are made (involuntarily) in E. Employers can control this process only by adjusting E themselves. Because these are the adjustments that are expected to be the most affected by SWC, we will assume that employers do indeed operate in this way.

2. Short-Run Effects of SWC

Availability of SWC benefits would be expected to affect the behavior of employers in both the short- and long-run. For short-run analysis it is convenient to treat as fixed the employer's capital stock and the relative costs of each of the components of labor services.[1/] Hence, in the short-run, SWC affects only the speed with which employers adjust E and H, not the long-run equilibrium values for those variables.

[1/] For example, the costs of the labor may be fixed under long-term labor contracts.

Since SWC would be expected to decrease the cost of employers' adjusting the hours of work and, possibly, increase the cost of adjusting employment[1/] our theory leads to several expectations about short-run behavior:

1. Availability of SWC will increase the speed with which hours of work respond to changes in the demand for labor services (i.e., to changes in the employer's output) and decrease the speed with which employment responds to such changes.

2. Because the increase in adjustment speed for hours will be greater than the decrease in adjustment speed for employment, labor utilization is expected to become higher and more uniform over typical cyclical movements in demands. Hence, observed hours employed may become less stable and follow output fluctuations more closely.[2/]

3. SWC availability will have a different impact on employers, depending on the extent to which adjustment costs are actually affected. In particular, employers with flexibility in the ways in which their capital stock can be utilized will be more significantly affected than those without such flexibility.

4. Using SWC rather than the current UI program will have labor-cost implications for employers, but the direction of the cost changes will vary by employer. For downward adjustments in labor services, SWC, relative to the current program, helps employers retain skilled workers, thereby reducing subsequent

---

[1/] Reasons for expecting hours-adjustment costs to fall include less worker opposition to reduced hours, greater awareness by employers of the reduced hours option, and possible administrative services provided by the government to firms contemplating hours reductions. These changes would be expected to have an opposite (and probably smaller) effect on the costs of adjusting employment levels.

[2/] Various restrictions on the SWC program may substantially moderate this effect. We discuss such administrative procedures in Chapter IV.

hiring and training costs; it may also lower direct salary costs because of the reduced work time of more highly paid workers (depending upon how layoffs of lower seniority workers convert to general time reductions). On the other hand, use of SWC will generally require higher fringe-benefit costs per full-time equivalent employee, and it may lead to increased UI costs.

5. Using SWC rather than the current UI program will have an indeterminate effect on productivity. It may increase due to both the increased flexibility in adjusting labor services and the lower incidence of worker turnover. It may decrease due to the cutback in the hours of more skilled workers.

6. SWC availability may have a different impact on the hours of workers, depending on their skill levels. The direction of this effect is not predictable on a priori grounds, however.[1/]

3. Long-Run Effects of SWC

In the long-run, labor utilization can be treated as fixed at its equilibrium value (say, 1), and the impact of SWC will occur primarily through the program's influence on the relative marginal costs of employment and hours.[2/] Changes in these relative costs would be expected to influence both employers' choices about what mix of workers and

---

[1/] It is generally believed that skilled workers' hours are more likely to be adjusted and their employment less likely to be adjusted than are low-skilled workers' hours and employment (see Greer and Rhoades, 1977). However, the impact of SWC on these adjustment methods is not clear. On the one hand, SWC may make it even more attractive to retain skilled workers during downturns by utilizing reduced hours than would be done in the absence of the program. On the other hand, SWC may, for the first time, open the possibility of adjusting hours for low-skilled workers; hence the relative impact on that group will be greater.

use to achieve a given level of labor services and employers' choices about the amount and types of capital equipment to use. For example, an increase in the marginal cost of hours relative to the cost of employment (as might occur if SWC causes workers to demand higher bonuses for "regular" overtime) would cause employers to increase hiring and reduce hours per worker relative to what would have prevailed in the absence of SWC. Employers will make changes in their capital stock to make better use of this changing mix of workers.

We expect SWC to affect relative labor costs through its long-run impact on labor contracts.[1/] While we are not able at the present time to predict the direction of that effect, we have identified a number of factors that will influence the final outcome. These include the same factors that we listed for the long-run effects of SWC on employees, as well as employers' technological probabilities for adapting their capital stocks to a changing mix of labor services.

D. GOVERNMENT

Labor and business are the two groups that will be most affected by SWC and that have the most interest in the program. However, some of the program impacts that were discussed for one or the other group (e.g., increased productivity and the improved economic status of women and minorities) are also likely to be of interest to others in society who are not directly involved with SWC. There is another set of issues of broad interest that we have not yet discussed--the administrative or governmental

---

[1/] For examples of the way in which this impact might be formally analyzed, see Azariadis (1975) or Feldstein (1976).

use to achieve a given level of labor services and employers' choices about the amount and types of capital equipment to use. For example, an increase in the marginal cost of hours relative to the cost of employment (as might occur if SWC causes workers to demand higher bonuses for "regular" overtime) would cause employers to increase hiring and reduce hours per worker relative to what would have prevailed in the absence of SWC. Employers will make changes in their capital stock to make better use of this changing mix of workers.

We expect SWC to affect relative labor costs through its long-run impact on labor contracts.[1/] While we are not able at the present time to predict the direction of that effect, we have identified a number of factors that will influence the final outcome. These include the same factors that we listed for the long-run effects of SWC on employees, as well as employers' technological probabilities for adapting their capital stocks to a changing mix of labor services.

D. GOVERNMENT

Labor and business are the two groups that will be most affected by SWC and that have the most interest in the program. However, some of the program impacts that were discussed for one or the other group (e.g., increased productivity and the improved economic status of women and minorities) are also likely to be of interest to others in society who are not directly involved with SWC. There is another set of issues of broad interest that we have not yet discussed--the administrative or governmental

---

[1/] For examples of the way in which this impact might be formally analyzed, see Azariadis (1975) or Feldstein (1976).

Two factors tend to offset possible cost savings. The first is that administrative costs might be higher under SWC than under the current program, because more individual claims would have to be processed for the same number of full-time equivalent layoffs. However, such an increase in costs may be able to be kept small through administrative streamlining made possible by the firm-clustering of applicants.[1/] The other offsetting factor is that UI benefits are a positive function of earnings in a defined base period. Thus, even if the use of SWC causes a smaller percent reduction in labor services, increased compensation for workers with higher base period earnings will at least partially offset any savings. However, unless program rules are liberalized with the introduction of SWC, the benefit ceiling imposed by states will limit the average increase in compensation.

There are a large number of costs associated with other government programs that might affect the relative costs of the two programs. The most obvious are those that relate to labor-market information and training. The purpose of SWC is to provide more attachment between employees and employers, at least during temporary business downturns. To the extent that this effort is successful and does not simply delay layoffs, the costs of providing new job information and of retraining workers (in both of which activities the government is heavily involved) would be saved. Other cost savings should result from the decreased use of transfer programs.

[1/] Such streamlining procedures have been adopted in the California program. For details of their procedures, see State of California (1978). Such procedures are also described in Chapter IV.

E. KEY UNRESOLVED QUESTIONS

While the previous sections should help clarify the issues surrounding the implementation of SWC, they also suggest many questions that cannot be answered satisfactorily with the information currently available. A method for obtaining more information short of full implementation is discussed in the next chapter. As the motivation for this effort, we conclude this chapter with a list of the key unresolved questions.

1. What are the social-efficiency implications of SWC in the short-run? In the long-run?

2. What are the equity implications of SWC? In particular, what are its distributional consequences?

3. Which workers would prefer SWC to the current UI program? What are their personal characteristics? What are their job characteristics?

4. How will SWC participation affect income, nonwage benefits, and other aspects of workers' well-being?

5. What forms of compensation and/or special provisions will labor organizations bargain for in response to the possible use of SWC?

6. To what extent will hours adjustments be used instead of employment adjustments? Will SWC lead to greater or smaller labor-service adjustments?

7. How will the timing of labor-service adjustments--for both downturns and upturns--be affected by SWC?

8. What will the productivity consequences of SWC be in the short-run? In the long-run?

9. What are the costs of SWC and how do they compare to the current UI program? How are these costs distributed to business, labor, and others?

10. How will SWC integrate administratively into the current UI program? What rule changaes are necessary or desirable?

IV. PLAN FOR GENERATING MORE INFORMATION

The previous chapter concluded with a number of unresolved questions about shared-work compensation. They are actually of two broad types: (1) those relating to administrative and operational considerations and (2) those relating to program impacts on the various interest groups. These questions raise a common dilemma: they cannot now be answered because of the lack of actual program experience; yet, general program implementation which will generate this experience is not feasible without more information about program administration and impacts. An approach that has been used widely in the past to gain such experience and to guide subsequent policy deliberation is the implementation of a limited-scope demonstration. Such a demonstration would permit an examination of actual program operations without the risks associated with full implementation of an incompletely tested program. This chapter describes in general terms such a demonstration design.

A. THE NEED FOR A U.S. DEMONSTRATION

As we described in Chapter II, the only widespread use of SWC to date has been in several Western European countries. However, even if these countries' programs were fully evaluated (and this possibility is limited by a lack of data), they would tell us little that would be directly applicable to a U.S. program. The problems are, first, that the social environments into which they were introduced and operate are very different from our own, and, second, the program rules are very different from those under discussion for a U.S. program.

The Canadian experimental program offers more promise because the

social environment is similar to ours and because program rules are similar to those under discussion here. Unfortunately, the experimental design is badly flawed, so that research findings are not likely to be reliable--at least not beyond the specific program sites.

Of operating programs, this leaves only California's new experimental program--the Work Sharing Unemployment Insurance program. This program is very representative of what has generally been proposed for SWC in this country. It is essentially a limited-duration program incorporated into the state UI program. It will undoubtedly provide useful information about the implementation of SWC in this country, particularly about how SWC can operate smoothly as part of an existing state UI system. However, we have suggested two reasons why, for considerations of wide-scale implementation, this information will be limited. These include (1) the confinement of the program to a single state that, like most states, has many unique characteristics, including its UI rules, and (2) the lack of a comprehensive, external evaluation.

It is clear that we do not now have the information we need to judge adequately the benefits and costs of implementing SWC, nor are we likely to obtain this information from existing programs. An answer to the information dilemma, one that has worked well for assessments of related programs, is a demonstration. A carefully designed demonstration would be broad enough to provide a great deal of information on the issues, but limited enough to control, monitor, and ultimately terminate.

By their nature, such demonstrations differ from full program implementation in a number of ways. Common differences include duration, coverage or area saturation, and the care with which administration is

performed. These differences mean that extrapolations from the demonstration must be made very carefully, and that all issues of interest cannot be analyzed. For example, the limited duration of the demonstration precludes a full determination of the long-run impact of the program. The use of only a few sites prevents us from knowing fully how the program will operate and what its effects will be in all environments. Despite these limitations, a demonstration will show whether the program can be operated successfully, how it should be operated, and what its short-run impacts are for labor, business, and others. This will provide important information for future discussions on the general implementation of SWC.

B. PLAN OF A DEMONSTRATION

In order to learn as much as possible about SWC in a real-world context, the demonstration should be planned as a comprehensive, voluntary, entitlement program replicated in each of several sites. That is, any employer and its employees qualifying under the eligibility criteria used in the demonstration could then be certified to receive SWC benefits. The demonstration would thus be a large endeavor and would be of significant help in policymakers' assessments of administrative and operational issues and of program effects on labor, business, government (including the administering agency), and society at large.

The demonstration is discussed in five parts. These include administration, regulations, site selection, data collection strategies, and comparison-group methodologies. Of course, these discussions summarize only our ideas for a demonstration, and those would have to be modified if the underlying premises were changed. However, this design does reflect a great deal of intensive work on the topic by us during an earlier

demonstration design effort for the Department of Labor.

1. Administration

There are several approaches for administering SWC. The "state" model emphasizes close linkages between SWC and the current UI program. The current program is really a collection of fifty state programs, each of which is somewhat different from the others. This system recognizes differences in area needs and attitudes. There would be no problems in integrating the SWC concept into the individual state programs: the SWC regulations would conform closely to each state's UI regulations, except for the alterations necessary to accommodate SWC.

An alternative to this state model for implementation is the "federal" model. This model stresses the unique qualities of SWC and requires its own operational structure and regulations paralleling those in the current state systems. The objectives of the federal model are to standardize the program across states and to permit more direct, central control over regulations and procedures.

The model we suggest for a demonstration is based largely on the state model because we believe this is the most likely way in which SWC would be implemented.[1/] This approach makes use of the existing administrative structures, and builds on a system that already has widespread acceptance by workers and employers. It provides that program features such as the base period, certification processes, benefit

---

[1/] This is supported by the fact that most of the consideration of SWC in the United States has been at the states' initiative. Further, Representative Schroeder's bill (H.R. 7529), the only tangible federal effort in this area, was really an attempt to assist state implementation.

computation and payment procedures, enforcement and compliance, and other administrative details all have a local basis from which they can be modified as necessary to meet the needs of SWC. Further, SWC can actually be operated through local UI offices.

However, there must be some deviations from a purely state model, for the sake of simulating an on-going program rather than one in a start-up mode. In particular, there must be a carefully constructed public-relations effort along with technical assistance for employers and labor groups. These components would serve to increase awareness in a short time period about a concept that most potential users have not given serious thought to. Further, the technical assistance would be necessary to assist interested parties in adopting the program. It is important to recognize that these procedures should not be used to advocate using SWC. They are simply necessary in a limited-term demonstration to reduce the start-up time and maximize the period of steady-state operations.

2. Regulations

The success of a demonstration depends largely on the care with which regulations are drafted. It must be designed to maximize what is learned about programs that might subsequently be implemented. This suggests that those characteristics of a program that are firmly established as part of any implementation of that program should be simulated in the demonstration. On the other hand, where there is uncertainty about program characteristics, demonstration regulations should be sufficiently drawn when possible to permit an assessment of the areas of uncertainty. In many instances, this assessment will reveal that what was thought to be a potential problem in need of specific regulation is not a

serious one at all. Such investigation can thereby mitigate the incorporation of unnecessary and burdensome rules and regulations into any subsequent programs.

SWC presents some uncertainties about the best form of regulations and what must be regulated. Accordingly, the general approach in drafting demonstration regulations is to be reasonably unrestrictive. This approach will produce valid information about what would really happen during the operation of SWC and, thus, about what types of additional regulations should be devised (i.e., are necessary to prevent some types of behavior and/or are cost-effective) if SWC were to be implemented nationally. Naturally, this unrestrictive approach must be balanced against the need to protect the rights and interests of all affected groups.

Regulations are required in three broad areas--employer eligibility, employee eligibility, and benefit calculation and payments procedures. Possible regulations for each area are discussed in turn.

Employer Eligibility. Many of the existing UI regulations would also serve SWC. Thus, the definition of a covered employer would generally follow that of the regular UI system. Also, reduced work schedules leading to SWC claims (as measured in full-time equivalent units) would be experience rated in the same manner as layoffs resulting in regular UI claims. Finally, employers would have all the reporting obligations for SWC that they have for the current program.

New regulations are necessary in several areas. First, the amount of work-schedule reduction that would qualify for SWC must be determined. Compensation for very small work-schedule reductions, for example, might encourage too frequent a use of the system when minor changes in output

seem desirable, thus burdening both labor and the administrative system. Very large work-schedule reductions are already covered in most states by existing partial-benefits schedules. SWC could reasonably apply to situations in which work schedules are reduced by a minimum of 10 percent of the regular working hours (20 percent is an alternative) and a maximum of 60 percent.

A second area in need of regulation is the definition of the work unit that could be declared eligible for SWC. This is necessary primarily for program administration--determining benefits and monitoring program use. Consequently, employers should be able to define the units in a way that serves their interests (with the agreement of any labor organizations) and should be able to enroll any or all of them in SWC.

The third area in need of regulation is the length of the eligibility period for a work unit. A restriction is needed to ensure that the program serves its intended objective of easing the burden of temporary downturns. Without such a restriction, the program could be misused by subsidizing declining industries to delay desirable (at least from the social perspective) labor-force adjustments. The eligibility period for a work unit should be at least three months and not more than six months, and there should be only one eligibility period per year. The work-schedule reduction need not be constant throughout the period, and, in fact, there could be weeks of no reduction within the period.

There are several other areas in which regulations might be desirable. These require some judgment because they may be areas in which there should be no restrictions during the demonstration so that analysts can assess the need for them in the future relative to the administrative

costs. One such area is firm hiring. It seems logical that, with limited exceptions, employers should not be allowed to increase their workforce in a work unit participating in SWC. Other areas include employer certifications that there would have been layoffs in the absence of SWC, and that they will not revise productivity standards during the SWC implementation. All of these areas represent potential problems with SWC, but their severity and specific nature, as well as the least costly way to minimize them, need further investigation.

Employee Eligibility. The main employee eligibility rules for SWC can follow quite closely the eligibility rules for the regular UI program. First, they must work for covered employers. Further, they must meet the usual base-period requirements of the state UI system, and they must be eligible to receive regular UI benefits.

Several new, supplementary rules are also required. For example, SWC benefits received by employees during the demonstration should not affect their continued eligibility for regular UI benefits, but SWC benefits should be deducted from the total amount of UI benefits to which the employees are entitled. Of course, employees may not collect SWC and regular UI benefits simultaneously. Finally, participating employees should not be expected to meet availability-for-work or work-search requirements.

Other regulations could be patterned after related employer eligibility regulations. These include the amount of the work-schedule reductions that would qualify for SWC benefits and the length of the eligibility period (of course, employees may actually be on SWC and receive benefits for shorter periods than the eligibility period).

Benefit Calculation and Payments Procedures. SWC benefits would be based on the actual, reduced hours worked during the week by an employee under SWC (SWH), the average normal weekly hours of the employee (AWH), and the weekly benefit amount due the employee if he or she were laid off (WBA). Then, the SWC calculation would be as follows:

$$SWC = WBA \left(1 - \frac{SWH}{AWH}\right). \quad (4)$$

This calculation makes no adjustment for hours in or income from second job. However, new second-job holding in response to the shortened work schedules should be monitored for determining the necessity of regulation in the future.

Employers who apply for SWC coverage in anticipation of a workforce reduction and the employees who are designated as members of the potentially affected work units could be checked immediately by the local UI office for actual eligibility pending a qualifying workforce reduction. This would reduce the start-up time for payments once a reduction is actually made (a noncompensable waiting period is not warranted for SWC). Once an employer actually implements SWC and wishes to begin payments for the affected employees (i.e., to begin the eligibility period), the employer need only verify who is actually affected and what the hours reductions are for that week. To minimize administrative costs and employee inconvenience, any required employee validation could be done through the workplace, and SWC benefit checks could be mailed to the homes.

After the first payments are produced, subsequent weeks of payment can follow the same pattern. Employers would submit weekly verification forms listing who is affected and by how much. This information would be

reviewed for eligibility, and checks would be mailed to eligible employees.

3. Site Selection

If a demonstration is to be conducted on a modest scale, it will be operated in a few well-chosen sites, rather than in a large number of them.[1/] (Since the research interest focuses both on who participates and on the effects of participation, the programs in the sites should be entitlement programs--participation should not be restricted to an arbitrarily chosen group.) A minimum of four sites chosen carefully to provide variation in the characteristics described below seems appropriate for reasonable national representations. The discussion is presented in terms of SMSAs (Standard Metropolitan Statistical Areas), but that is only for convenience. The emphasis for actual site selection should be on areas that reflect reasonably well-defined labor markets.

Size. Sites must be large enough to provide an adequate sample of employers and employees, but not so large that a greater-than-expected rate of utilization would prematurely exhaust the demonstration budget. This suggests a focus on moderately large SMSAs--those with populations between 750,000 and 1,500,000. Although this would seem to exclude certain types of areas, areas of this size, in fact, often contain a great deal of diversity (e.g., rural and urban areas) within them while at the same ensuring a sufficiently concentrated population to facilitate program administration.

[1/] The optimal number of sites should be a function of the across- and within-site variances in program outcomes and costs. However, very little information is currently available about these factors, so site selection must be somewhat judgmental.

Containment Within a Single State. To ensure that the demonstration is not complicated by the existence of different UI programs in the same labor market, SMSAs strongly influenced by two or more states should be avoided. Thus, SMSAs that cross state borders should be excluded from consideration, as should SMSAs whose central city is close to a state border.

Employment/Industrial Diversification. SMSAs in which the proportion of workers in any of the key industrial sectors differs substantially from the national average should be avoided. For example, an acceptance bound for a site of two standard deviations from the national average for all key sectors could be used. Such a definition would permit some diversity, but would ensure that sites with unique industrial and employment characteristics are not included.

Employment Stability. SWC is intended to provide a means for coping with changes in the business cycle, not with chronic unemployment or seasonality. Hence, any sites subject to one or both of these conditions should not be included in the demonstration. As with the previous criterion, a judgmental rule is necessary to eliminate such sites from further consideration. This could be based on a comparison of the mean squared deviation of the unadjusted unemployment rate for the site over time with that for the nation.

Ethnic Diversity. SWC spreads the burden of temporary downturns and, as such, affects the social, as well as the economic, fabric of the community. Thus, it has been suggested that the concept will be accepted more readily in small towns where social interaction and cohesion are high. Since a demonstration will attempt to show whether the concept is

useful general public policy, selected communities must be typical of the nation not only in economic terms, but in social terms as well. This suggests that a small ethnically homogenous community would be "too easy" and would reveal little about more diverse locations. In addition, it is likely that the seniority system and the special burdens placed upon the "last hired" will come into greatest potential conflict in locations with a significant representation of minorities. Therefore, selected SMSAs should have ethnically and racially diverse populations.

Variation in Size of Firm. The employment/industrial diversity criterion will eliminate locations dominated by particular industries and, consequently, will probably eliminate locations dominated by very few large firms. However, locations with much-larger-than-average firms should explicitly be avoided. Such large firms present difficulties for two reasons. First, the utilization rate will depend upon decisions by relatively few actors; failure to interest the large firms in the program (or their subsequent withdrawal from it) could bias an entire site. There will be much more protection from disaster if participation decisions are dispersed. Second, from an analytical point of view, there will be a great deal of interest in examining behavior by management, workers, and unions within specific firms. Since SWC payments are tied to individuals, large firms will be much more costly per research observation than smaller firms. The firm size (or relative size) screen can best be implemented judgmentally.

Stability of UI and Other Relevant Programs. A demonstration should avoid sites in which changes are expected in UI or related laws that would significantly change the context in which the demonstration was

conducted. For example, states that contemplate either introducing SWC as part of UI or significantly raising the ceiling of UI payments could substantially shift the set of opportunities and incentives facing the subject employers and employees. Should this occur in mid-stream, substantial research resources could be wasted. This selection criterion is approached by talking to federal UI personnel who are aware of the programmatic, political, and legislative situations in each of the states that might contain possible demonstration sites.

Receptivity of Business, Union, and Community Leaders. When the list is reduced to a small set of sites acceptable along the criteria specified above, the level of cooperation of the key community leadership must be determined. This can be done by talking to union leaders, business groups, and national political groups. In addition to the level of cooperation expected from the leadership, locations dominated by a small number of powerful unions should also be eliminated. The reasoning here is the same applied for large-firm domination (sample size and risk), although ensuring industrial diversification and a mix of firm sizes will presumably automatically control for the problem of union domination.

An approach to applying these criteria is to use the first five to eliminate generally inappropriate sites from a master list. This should result in a relatively small working list. The last three criteria, which are less quantifiable, can then be used for further screening. To correct for some imbalances (e.g., geographic) remaining with this procedure, some of the criteria can be selectively and slightly relaxed.

4. Data Collection Strategies

To this point we have (1) documented the policy issues for SWC that cannot be resolved by theory or available information (Chapter III), (2) described how a demonstration could resolve many of these issues (Section A of this chapter), (3) described the nature of a demonstration (Subsection 1, above), (4) proposed specific demonstration regulations (Subsection 2, above), and (5) discussed the appropriate setting for a demonstration and site selection criteria (Subsection 3, above). The remaining topics relate directly to the evaluation of the demonstration. Given the list of unresolved questions, it is clear that the analysis should have two major components. The first would be an analysis of the process of implementation and operations; the second would be a quantitative participation and impact analysis for the respective groups.

The first of the two remaining topics concerns data collection strategies. Analysis of the policy issues described above requires collecting data on participating employers and employees and, for each group, on an appropriate comparison group. While the choices of these comparison groups are discussed in more detail in the next subsection, they should include nonparticipating firms, employees who experience full layoffs, and employees who are not laid off. For each group, the principal data collection question concerns the timing of the data collection. Potential recall error and the desire to obtain information throughout the demonstration argue for an ongoing program of data collection, while cost considerations, the desirability of measuring longer-run outcomes, and the difficulty of determining membership in the comparison groups before the end of demonstration argue for data collection toward the end of the

program. Those considerations can be balanced by collecting some data throughout the demonstration, and by collecting other, more detailed data at the end of the demonstration. The various sources of data we expect to be useful for analytical purposes are discussed below.

Management Information System (MIS) Data. An MIS will be useful for providing continuing data for program operations. These data would include data collected when a firm is certified, as well as data on each individual SWC recipient (eligibility-determination data and data used for the weekly benefit computation). To make these data more useful for ongoing analysis, we suggest collecting and using some additional data not strictly needed for certification and eligibility. For employers, a one-page set of questions could be added to the certification form, primarily to collect information on the employer's source of knowledge about the program. These data will be useful if it is decided that program publicity should change during the course of a demonstration. Other data likely to be subject to substantial recall error at a later date might also be added to the certification form. For participants, additional data not needed for eligibility or payments will include basic demographic data typically collected for UI recipients--age, sex, race, industry, and occupation. These data will allow continuing comparisons between SWC and regular UI recipients.

Administrative Data. As discussed above, one aim of a demonstration is to obtain information on the feasibility and cost of administering SWC. Information and data for this purpose should be collected in two ways. First, the evaluation of the SWC demonstration should include a documentation of the administrative processes used in each

of the sites. The major program functions described should include eligibility determinations for employees and employers, benefit calculation and disbursement, and any enforcement and compliance activities. It is important that this descriptive material clearly indicate which administrative functions occur only as part of the demonstration, and which would be likely to occur if the program were an ongoing part of the UI system. This distinction is necessary for estimating the administrative costs of an ongoing program.

Second, administrative costs should be measured. It will be desirable to disaggregate these costs by function. Further disaggregation should be done if any administrative activities relate only to the demonstration and if there are functions that would most likely be subjected to different procedures in an actual implementation of SWC. This would allow using these data to estimate administrative costs for alternate procedures. These cost data should be collected from the state agencies, using, if possible, the data collection procedures currently followed by state agencies.[1/]

Unstructured Interviews. Informal, relatively unstructured interviews with participating (and probably nonparticipating) local unions and firms would provide early, useful background information. Such interviews could be conducted both at the beginning of the demonstration, to obtain information on initial reaction, and toward the end of the demonstration, after workers, unions, and firms have had experience with

---

[1/]For a description of the method used by the UI system to measure costs, see Cost Model Management System: Handbook (United States Department of Labor, 1977).

SWC. These interviews may provide useful background information on responses to SWC, and they may also provide insight into why certain employers participated and others did not.

Structured Employer Interviews. The primary data can be obtained in two interviews administered near the end of the demonstration. One interview, a relatively short telephone interview administered to both participating and nonparticipating firms, can be used for analyzing the participation decision. The other interview should be given to a small group of participating and nonparticipating firms. This interview would be rather lengthy, and would have to be administered in person to a knowledgeable official of the firm (perhaps the personnel director). The data collected in this interview would focus on employment and hours decisions and productivity both during the demonstration and prior to it. These data can then be combined with data from the certification process, the payments file, and the other employer interview for analysis.

There are three alternate or additional data collection strategies for employers. First, a baseline interview would provide more accurate predemonstration data to be used as benchmarks against which changes induced by SWC can be measured. However, it is doubtful that most of the types of information to be collected from firms (about employment, for example) is "perishable," in the same sense that personal interview data are, and the extra expense of having a baseline interview does not seem to be warranted.

Second, using UI records for data on nonparticipating firms is warranted by the likelihood that it may be difficult to obtain interview cooperation from the nonparticipating firms. Using UI records would at

least permit a measurement of layoffs for such firms, and would therefore provide partial tests of some of the hypotheses about employment-hours choices. Although it is obviously important to consider using UI data in this way to correct for interview nonresponse, a number of factors argue against using such data as a primary measurement strategy. The data may not provide the type of detail necessary to test the employment-hours hypothesis. Even if the data were sufficient to test some rough hypotheses (on number of layoffs by industry, for example), such tests would not be very powerful because of the likely absence of data both on past behavior and on other important explanatory variables. Further, UI data would provide no information at all on a principal hypothesized benefit of SWC--increased worker productivity. In sum, the UI data source can at best be regarded as a supplement.

Interviewing firms earlier in the demonstration (the third possibility) offers the advantages of providing better data on predemonstration behavior and of generating cost savings if the interviewing is conducted in conjuction with such other demonstration activities as SWC certification or information dispersal. An earlier interview would also permit an analysis of certain demonstration outcomes (e.g., participation) on a more timely basis than under an end-of-demonstration schedule. However, likely lags in firms' adjustments to SWC availability argue strongly against such an alternative. Since participation rates are expected to increase over the duration of the demonstration and since firms' employment-hours choices are probably more flexible over the long-term, conducting an early interview without a follow-up runs the danger of missing a substantial portion of demonstration

outcomes. It also runs the danger of seriously biasing long-run cost estimates. To avoid such problems, an early interview would consequently have to be accompanied by some type of follow-up. That would make the option too costly, and it might also inhibit employers' cooperation for the follow-up interview.

Employee Interviews. An in-person interview should be administered to samples of SWC participants and nonparticipants who are laid off. These two groups will permit a test of hypotheses that are conditional on a change in employment status. Overrepresentation of those with a change in employment status should not, however, lead to the exclusion of those without such a change. If these issues are to be estimated properly, some of them (e.g., the analysis of probabilities of layoff and hours reductions) would require data from workers who have not had a change in status. For this reason, there should also be a shorter interview, probably by telephone, of a sample of workers who are not laid off.

The interviews of participants can be administered approximately six months after the initial payment is made. This should provide enough time to observe labor-market activity after the receipt of SWC (i.e., Did the person go back to full-time work or get laid off?), while allowing questions about adjustments and other behavior during the receipt of SWC without encountering major problems with recall. The nonparticipant interview should be administered using a similar timing strategy. However, this may prove to be more difficult for two reasons. First, during the course of the demonstration it cannot be determined who will ultimately be a SWC participant and, hence, who will be a nonparticipant. This problem, however, will not be severe given the expected low participation rates: if

laid-off individuals not on SWC are interviewed during the demonstration, the chances of "wasting" the interview if the person eventually collects SWC are very small. A second, more severe problem, however, is that workers from firms included in the employer sample should be interviewed. If this is done, the data base for employees will be considerably enriched. Thus, nonparticipating employees cannot be interviewed before determining which firms will be in the non-SWC sample. There is no simple resolution to these conflicting aims.

5. Comparison Group Methodologies

Most of the policy issues that are to be addressed in a SWC demonstration involve the fundamental issue of how SWC availability affects the outcomes observed for firms and for workers. Ideally, such issues might best be addressed in an experimental setting. If eligibility for SWC benefits were assigned randomly among firms, then the effect of the program could be observed by comparing the behavior of firms and employees eligible for the program to the behavior of those not eligible. Because of the direct policy value of conducting a SWC demonstration as an entitlement program (so that, for example, the participation decision can be examined), it would not be possible to adopt such a "pure" experimental methodology. Rather, it will be necessary to structure the data collection and analysis strategy in a way that will provide a "quasi-experimental" design while retaining the program's basic demonstration character. In this final section we describe the ways in which this can be accomplished. We begin by rejecting the use of "control" sites. We then turn to an examination of the two research strategies that are recommended--using data on past behavior, and interviewing nonparticipating firms.

Arguments Against Using Comparison Sites. One research strategy that is often suggested for evaluating a demonstration of this type would make use of data collected from firms and workers in (presumably similar) nondemonstration sites. Analysis would then proceed by comparing these data to data on the behavior of firms and workers participating in the demonstration. We reject this "control site" methodology for three reasons. First, few of the policy issues that are of central importance to a demonstration concern area-wide outcomes. A demonstration will probably be too small to be able to exert a measurable impact on the local economies in which it takes place. Hence, it makes little sense to use control sites to measure such effects. Further, relying on control sites to provide the necessary data to examine the issues related to firms' and workers' behavior does not really solve the problem presented by not assigning the SWC "treatment" randomly. SWC participants will remain a self-selected group, and a simple comparison to firms in non-SWC sites may yield biased results. It will never be possible to know whether such other firms would have participated in SWC. Since data from nonparticipating firms in the SWC sites pose very similar problems (see below), but can be gathered at much lower cost, we believe such data are superior. This provides our second reason for rejecting the comparison-site methodology.

Finally, our decision not to recommend using comparison sites is based on our belief that it is very difficult, if not impossible, to identify sites that are sufficiently similar to the demonstration sites. No two labor markets are identical in all aspects, and no two local economies follow exactly the same pattern over the business cycle. Such differences between the demonstration and control sites may seriously

interfere with the ability to provide an unbiased estimate of the effect of SWC, and that possibility is especially striking because of the small number of sites envisioned.

Using Past Behavior as a Control. A more promising methodology would be to use past behavior as a "control" observation. This strategy would be employed primarily in connection with the analysis of firm behavior. This would permit an examination of such questions as, Did the firm behave differently in response to a downturn in demand while participating in SWC than it did prior to the program's availability? Using this strategy, however, poses two potential problems. First, collecting the required retrospective data may be costly. Second, the technique poses problems in deciding exactly which prior historical periods were similar to the current period. Although we believe that these problems are serious, they can be solved in most cases. Because the past-behavior methodology would focus on firms' behavior, data collection problems would be minimal. Most of the required information (on output, payroll, hours, and so forth) should be reasonably accessible. Problems raised by the possibility of noncomparability between past and current periods can be reduced by collecting retrospective data both from nonparticipating firms (as discussed below) and from participating firms. This should permit a more accurate estimate of the SWC effect, as changes in behavior differ from those of the non-SWC firms. Of course, these solutions to the problems with the past-behavior methodology are not foolproof, and each requires that a number of unproven assumptions be satisfied.

Using Nonparticipants as a Control. A second promising control-group strategy involves interviewing a random sample of nonparticipating firms and their employees in the SWC sites. Data collected from firms would be used to provide more efficient estimates of changes from past behavior, to provide a direct comparison with firms participating in SWC, and to supplement the data collected from workers in these firms. The first of these uses has already been mentioned. The underlying idea is that changes in past behavior observed in nonparticipating firms will help identify those changes in the behavior of SWC firms that are attributable to the program. The second use of the data, for direct comparisons between participants and nonparticipants, is problematic but still potentially useful. The principal problem is, of course, that SWC participants will be a self-selected group; thus, simple comparisons are likely to produce biased estimates of program effects. For example, firms that find it easy to adjust workers' hours will be more likely to participate in the program. Hence, a comparison of participants and nonparticipants will identify firms that find it easy to adjust hours, and will also reflect any true program impact. The solution to this problem is to adopt analytical methods that control for the participation decision. Whether this can be done remains an open question at this time. However, the likelihood of relatively low overall participation rates (and, hence, of large numbers of nonparticipating firms that are "similar" to participants), and the probability that SWC participation and other aspects of firms' behavior may depend on rather different variables suggest that this strategy may be no more difficult to implement in a reliable way than it has been in other quasi-experimental contexts.

Perhaps the most important use of data collected from nonparticipating firms will be to provide a sample frame for collecting data from workers in those firms and to supplement their workers' data files. For many of the principal evaluation issues, a comparison of workers in SWC and non-SWC firms is necessary, and those comparisons can be made more efficiently if data on firms are available. These comparisons will probably be less affected by self-selection bias than will comparisons among firms, because workers may be less immediately involved in the decision to participate. Using workers in nonparticipating firms as a control group for SWC workers also seems far preferable to relying on retrospective data from workers, for whom problems of recall are likely to be severe. Hence, the need to examine workers' outcomes provides the third rationale for collecting data from nonparticipating firms.

V. CONCLUSION

Shared-work compensation is but one of several programs that have been discussed in recent years as relevant, effective modifications to the traditional work schedule. Under the broad name of "alternative work patterns," the list of programs also includes "flex-time" (workers have some flexibility in their work schedule), compressed workweek (the traditional five-day week is compressed into fewer but longer days), part-time employment, job sharing (two or more workers each work part time but together fill a full-time job slot), and phased retirement (tapering off work to prepare for retirement). Variations of each of these programs have been implemented in both the private and public sectors, and interest in them can be expected to grow.[1/] SWC is unique among them in that its implementation would absolutely require that the government cooperate (specifically, through the UI system) with the course laid out by labor and business.

Shared-work compensation has been proposed as a policy that would stabilize employment over short economic downturns. Its objective is to minimize layoffs by altering incentives so that workers are willing to accept limited-duration hours reductions that are applied broadly, rather than layoffs that affect only a few. This policy has been applied successfully elsewhere, but there is limited evidence on its potential in our own social and economic environment.

[1/] A great deal has been written about alternate work patterns, and an excellent review of recent work is provided by Barry (1980).

This report was introduced with a series of questions that must be addressed by the research on this policy. However, currently available information and theoretical investigations of workers and business behavior do not adequately address them. Such investigations do, however, help sharpen our understanding of the issues and reformulate the questions. Thus, our summary of the review of the implications of SWC for participating groups is a larger, more focused set of questions. Our assessment is that they cannot be answered satisfactorily without actual program experience. Short of full implementation, the method for obtaining this experience is a demonstration of the program. This would permit a basic test of the concept and would provide information on both administration and program impacts, and it would limit the risk associated with full implementation of a new, relatively untried (in our environment) program.

REFERENCES

Azariadis, Constantine. "Implilcit Contracts and Underemployment Equilibria." Journal of Political Economy, December 1975, pp. 1183-1202.

Baily, Martin N. "On the Theory of Layoffs and Unemployment." Econometrica, July 1977, pp. 1043-1063.

Best, Fred and James Mattesich. "Short-Time Compensation Systems in California and Europe." Monthly Labor Review, July 1980, pp. 13-22.

Brechling, Frank P. R. "The Relationship between Output and Employment in British Manufacturing Industries." Review of Economic Studies, June 1965, pp. 187-216.

Canada Employment and Immigration Commission. "An Evaluation of Work Sharing in Canada: Executive Summary and Selected Statistical Tables." Program Evaluation Branch, Strategic Policy and Planning, Ottawa, Canada, November 1979.

Congressional Budget Office. The Productivity Problem: Alternatives for Action. The Congress of the United States, Washington, D.C.: U.S. Government Printing Office, January 1981.

Duetermann, William V., Jr. and Scott Campbell Brown. "Voluntary Part-Time Workers: A Growing Part of the Labor Force." Monthly Labor Review, June 1978, pp. 3-10.

Fair, Ray C. The Short-run Demand for Workers and Hours. Amsterdam: North Holland Publishing Co., 1969.

Farbor, Henry S. and Daniel H. Saks. "Why Workers Want Unions: The Role of Relative Wages and Job Characteristics." Journal of Political Economy, April 1980, pp. 349-369.

Feldstein, Martin. Lowering the Permanent Rate of Unemployment. Joint Economic Committee, Washington, D.C.: U.S. Government Printing Office, 1973.

Feldstein, Martin. "Temporary Layoffs in the Theory of Unemployment." Journal of Political Economy, October 1976, pp. 937-957.

Greer, Douglas F. and S.A. Rhoades. "A Test of the Reserve Labor Hypothesis." Economic Journal, June 1977, pp. 290-299.

Hall, Robert E. "Why is the U.S. Unemployment Rate So High at Full Employment?" Brookings Papers on Economic Activity, No. 3, 1970, pp. 369-402.

Henle, Peter. Work Sharing as an Alternative to Layoffs. Congressional Research Service, Washington, D.C.: Library of Congress, 1976.

Henle, Peter, Tom Joyce, Paul Fisher, and Fred Best. "European Short-Time Programs." Short-Time Compensation: An Approach to Saving Jobs and Skills. Office of the Assistant Secretary for Policy, Evaluation, and Research, U.S. Department of Labor, Washington, D.C., April 1979.

Levitan, Sar A. and Richard S. Belous. "Work-Sharing Initiatives at Home and Abroad." Monthly Labor Review, September 1977, pp. 16-20.

Miller, Jeffrey M. Innovations in Working Patterns, Report of the U.S. Trade Union Seminar on Alternative Work Patterns in Europe. The Communications Workers of America and The German Marshall Fund of the United States, Washington, D.C., May 1978.

Reubens, Beatrice G. The Hard-to-Employ: European Programs. New York: Columbia University Press, 1970.

Sadlier-Brown, Peter. Work Sharing in Canada: Problems and Possibilities. HRI Observations No. 18, Montreal: C.D. Howe Research Institute, 1978.

Seidman, Bert. "Layoffs." The MacNeil/Lehrer Report. Interview, June 6, 1980a.

Seidman, Bert. Statement to the Subcommittee on Public Assistance and Unemployment Compensation, Committee on Ways and Means, United States House of Representatives, June 26, 1980b.

State of California. Work Sharing Handbook. Employoment Development Department, Sacramento, August 1978.

United States Department of Labor. Cost Model Management System: Handbook. Employment and Training Administration Handbook No. 357, Washington, D.C., April 1977.