INSURANCE FOR THE UNEMPLOYED: CANADIAN REFORMS AND THEIR RELEVANCE FOR THE UNITED STATES

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*****Forthcoming in Long-Term Unemployment and Reemployment Policies, Laurie J. Bassie and Stephen A. Woodbury (eds.), pages 217-247, Stamford, Connecticut, 2000. This paper builds on an earlier paper, "The Canadian UI Program: Problems and Suggested Reforms", prepared for the *Conference on Employee Benefits, Labor Costs, and Labor Markets in Canada and the U.S.* which was jointly sponsored by the U.S. Donner Foundation and the W.E. Upjohn Institute. In July of 1996, the main reforms we helped conceive, and which were described and discussed in our original paper, were enacted in Bill C-12, the "EI Act". Key provisions of the EI Act and the reform process that resulted in the passage of that Act are examined in this revised paper. Additional financial support for this research was received from the Social Sciences and Humanities Research Council of Canada. Alice Nakamura is deeply indebted to Ging Wong and other researchers at the Department of Human Resources Development Canada (HRDC) and Statistics Canada as well as to Lloyd Axworthy and the other members of the Axworthy Social Security Reform Task Force for ideas shared and critiqued and for making this experience possible. The authors also thank Bill Alpert, John Cragg, David Green, Jonathan Kesselman, Lars Osberg, Emi Nakamura, Shelley Phipps, Kathleen Sayers, Wayne Vroman, Stephen Woodbury and the participants in a seminar at the U.S. Department of Labor for helpful discussions on social policy and comments on earlier versions of this paper, with the usual disclaimer that all opinions and shortcomings of the paper are our sole responsibility.

ABSTRACT

Early in 1994, Lloyd Axworthy, then Minister of Human Resources Development, launched a reform of Canada's Unemployment Insurance (UI) program. UI expenditures had grown rapidly in Canada. This stimulated the adoption of new worker side experience rating provisions. The United States also has problems of planned repeat UI program use that the US employer side experience rating does not adequately control.

This paper explains the mechanisms of Canadian worker side experience rating as this has been introduced in Canada, and suggests how this could be adapted for the United States. Also, this paper provides a conceptual model for the UI taxes and benefits that is more suitable for considering the repeat use problem and alternative measures to deal with that than the simple proportional UI tax models that appear in the public finance literature and textbooks. Furthermore, the conceptual framework we provide makes it possible to more fully characterize the main insurance side reforms that were adopted in Canada in 1996 with the passage of Bill C-12: a Bill that changed the name of the Canadian program from Unemployment Insurance (UI) to Employment Insurance (EI).

Key words: UI, unemployment insurance, payroll taxes, public finance, labor supply

Classification codes: J65, J32, H2

CONTENTS

1. INTRODUCTION

Canada, like the United States, has a large income support program for the unemployed.[1] The growth over time of the program expenditures in Canada has been more rapid than in the United States. This stimulated fundamental reforms in Canada, while also attracting the interest of Canadian as well as U.S. researchers and policy analysts.[2] The Canadian reforms include a new form of experience rating that is relevant for the United States as well. Although expenditures have grown less steeply in the United States, there is still a serious problem of planned repeat program use that the employer side experience rating now utilized in the United States does not adequately control. The success of the new Canadian worker side experience rating as a means of controlling this abuse could be anticipated from the findings of the Illinois Claimant Bonus and Employer Bonus Experiments conducted between mid-1984 and mid-1985 by the Illinois Department of Employment Security (Woodbury and Spiegelman, 1987). The main purposes of this paper are to explain the motivations for and the mechanisms of the worker side experience rating that has been introduced in Canada, and to suggest how this could be adapted for use in the United States.

In addition, this paper provides a conceptual model for the taxes and benefits that comprise the income transfer component of an unemployment insurance program. This model is a more suitable framework for considering the repeat use problem and alternative measures to deal with that than the simple proportional tax models of unemployment insurance programs that appear in the public finance literature and textbooks. Certainly this new conceptual framework makes it easier to characterize and understand the main insurance side reforms that were adopted in Canada in 1996 with the passage of Bill C-12: a Bill that also changed the name of the Canadian program from Unemployment Insurance (UI) to Employment Insurance (EI).[3]

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[1] In 1994, the year when the Canadian reform efforts discussed in this paper got underway, Human Resources Development Canada(1994, p.13) was predicting UI expenditures for 1994-95 of $16.2 billion (B), consisting of $12.4B for regular UI benefits, $1.7B for UI maternity/parental/adoption and sickness benefits, $1.9B for UI employment programs and other developmental uses, and $1.2B for UI administration. To put these numbers in perspective, the 1994-95 federal deficit target then was $39.7B (Finance Canada 1994, p.7).

[2] For example, drawing on research by Green and Riddell(1993) and historical records for the U.S. and Canadian UI programs, Baicker, Goldin and Katz(1996, p.8) observe that:

> "Our neighbor to the north passed a national UI law in 1940. Through the early 1970s the general features of the two programs moved in tandem. But since then expenditures on the Canadian system have exploded in comparison with the United States. The reasons concern major legislative changes in Canada."

[3] Alice Nakamura participated in the reform process as an outside expert on the Social Security Reform Task Force that was formed and chaired by Axworthy. In addition to being a member of this Task Force, Alice Nakamura headed the Task Force committee on programs for adults: the committee dealing with the changes to the unemployment insurance program. Versions of the three EI innovations discussed in section 3 were brought to the

We begin in section 2 by outlining the reasons given by the Department of Human Resources Development Canada (HRDC) for the 1996 overhaul of the Canadian UI system. Our conceptual model for the income transfer functions of an unemployment insurance program is presented next, followed by hypothetical examples that illustrate some of the cases modeled.

The key Canadian EI reforms are explained in section 3. The relevance of some of the EI reforms to the situation in the United States is the topic of section 4.

Section 5 briefly concludes.

2. PROBLEMATIC INCENTIVE FEATURES OF THE OLD UI PROGRAM

2.1 A Brief History of the EI Act

Early in 1994, Lloyd Axworthy, the Minister of Human Resources Development, created a number of forums for debating the goals and means and evidence in favor of reform for Canada's social security programs.[4] Drawing on the these deliberations, in October of that year HRDC released *Improving Social Security in Canada: a Discussion Paper* (referred to hereafter as "the *Discussion Paper*"). Its purposes were to explain why reform was necessary and to outline reform options.

The following four problems were highlighted in the *Discussion Paper*:

1. The UI caseload and expenditures had ratcheted up over time, rising in recessions and then failing to drop back to pre-recession levels. This had resulted in rising program costs and UI premium rates that many believed were harming employment. The *Discussion Paper* states that:

> "Unemployment insurance premiums are a form of payroll tax. Currently, they represent 42 per cent of federal and provincial payroll taxes and are the largest source of federal revenue next to personal income taxes. It is widely agreed that, at least in the short run, payroll taxes discourage job creation." (p.50)

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adults committee by Nakamura and grew out of ongoing discussions with Ging Wong of HRDC and with Erwin Diewert who was serving then as an advisor on social security and tax policies to the Business Roundtable of New Zealand. The worker side experience rating proposal was motivated by insights from the index number literature and the literature on dead weight losses associated with different forms of taxation – literatures to which Diewert has been an active contributor. J.P. Voyer was the HRDC support person for the adults committee of the Task Force and contributed in important ways to the political positioning of the worker side experience rating innovations.

[4] These included the Social Security Reform Task Force that Alice Nakamura was a member of. For more on the reform process, and for references to more of the academic research that provided the intellectual basis for the EI reforms, see Nakamura(1995) and also Banting(1995).

2. There had been a growth over time of repeat use of UI. The *Discussion Paper* noted that:

> "Almost 40 per cent of the people on Unemployment Insurance in 1993 had claimed UI benefits at least three times in the previous five years -- and the number is rising. The number of such 'frequent claimants' has almost doubled between 1980 and the early 1990s." (p. 18)

This repeat use was inconsistent with the stated social insurance purposes of the UI program. Moreover, the program was poorly suited for the delivery of long term income support, or as a tool for regional equalization or economic development.[5]

3. Abuse of the UI program was a third problem highlighted in the *Discussion Paper*:

> **"The program rules are open to abuse.** The UI program allows some employers and industries to organize their work schedules around the weeks required to qualify for UI." (p.42)

The *Discussion Paper* links the abuse and the repeat use issues:

> "[I]t should be recognized that frequent claimants of UI face many different kinds of circumstances. For example, they include: ...workers for employers who intentionally make decisions about hiring and layoffs around the availability and duration of UI benefits as well as workers who make similar calculations." (p.44)

The focus on program abuse stimulated concern about a range of potentially related behavioral responses. It was feared that the program might be inducing some workers to extend their spells of unemployment, and others to seek jobs and then become unemployed with the premeditated intent of collecting UI benefits.[6] It was feared too that UI might be undermining the willingness to work of some segments of the population.[7]

4. A fourth problem noted in the Discussion paper was the growing proportion of workers in jobs of under 15 hours per week and in other forms of nonstandard employment not covered by the UI program.[8] This problem was believed to stem from peculiar aspects of the conditions for

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[5] Kesselman(1983, pp.xi-xii) aptly sums up the main reasons why the old UI program was a poor mechanism for making need-based income transfers:

> "The program pays benefits based on an individual rather than family basis, excludes persons who have not paid premiums, fails to test for all sources of income or assets, and applies a very short accounting period for beneficiaries. Programs designed for income maintenance are better suited to redistribute incomes."

[6] Card and Riddell(1993) argue that changes in the fraction of non-working time that is reported as unemployment rather than nonparticipation are one cause of the higher measured unemployment rates in Canada compared with the United States. Their evidence suggests that some workers were reporting weeks of unemployment and collecting UI in periods when, without the UI program, these persons would neither have worked nor have looked for work.

[7] For example, May and Hollett(1995) claim that the UI program has undermined work incentives in Atlantic Canada, particularly for youth.

[8] See Nakamura, Cullen and Cragg(1997). Lin(1995) finds that:

UI covered employment that were part of the old Canadian program. It was feared that these program features were resulting in attrition of program coverage that was weakening the automatic macroeconomic stabilization potential of the program. Workers left uncovered had only provincial welfare to fall back on when thrown out of work.[9] There were also fears that the Canadian UI program was contributing to the growth of nonstandard employment. In the *Discussion Paper* it was stated that:

> "Whichever reforms are made, the UI program will need to consider the needs of workers in 'nonstandard' employment, who have increased significantly over the last decade…. In 1993, more than 60 per cent of all jobs created were part-time. Many of the nonstandard workers are not fully covered by unemployment insurance for all the hours worked, and some are excluded from coverage entirely. Some firms adopt such working arrangements specifically to avoid paying insurance premiums." (p.49)

2.2 Empirical Evidence

Studies based on data from so-called *natural experiments* and descriptive analyses of large administrative and survey data files were what led to the focus of the 1996 EI reforms on methods for controlling the repeat use problem.

The studies based on data from natural experiments concentrate on specific events and provide measures of the total responses to these events. An example of such a study is the 1994 paper of Green and Riddell. In that study they examine the employment responses to an unexpected 1990 change in the qualifying weeks of employment for the UI program. Green and Riddell explain that:

> "[We] focus on an event that is amenable to natural experimental analysis, i.e. the temporary suspension in 1990 of the variable entrance requirement…. The analysis focuses on behaviour in 'maximum entitlement regions,' UI regions with an employment rate equal to or greater than 11.5 percent throughout 1989 and 1990. In these regions, 10 weeks of employment in 1989 provided a UI claimant with up to 42 weeks of benefits,

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> "The total number of jobs in Canada grew from 14.1 million in 1986 to 14.8 million in 1990, which amounted to a growth of 5 percent over a five year period.... Jobs covered by UI experienced a modest growth of 2.4 percent (from 11.4 million to 11.7 million), but jobs excluded from UI grew at a much faster pace of 16 percent (from 2.7 million to 3.1 million). By 1990, UI provisions were responsible for excluding close to 1 million paid jobs with 15 or fewer hours worked per week, and nearly 2.2 million self-employed jobs from the coverage of UI's social safety net."

[9] According to the *Discussion Paper*(p.20), "provincial data indicate that 45 per cent of heads of households receiving social assistance [i.e., welfare] were 'employable' in March 1993." M. Cragg (1996) documents the rise in the percentage of "employables" on the British Columbia welfare caseload from 38% in 1980-82 to 64% in 1991-92. Unlike the U.S. situation, the welfare caseload in Canada is not primarily made up of single mothers. See also Bruce, Bailey, Warburton, J.G. Cragg and Nakamura(1996).

whereas from January 6 to November 18, 1990, 14 weeks of employment were required to qualify for benefits.

The findings of Green and Riddell are unambiguous:

> Increasing the entrance requirements leads to significant increases in employment spell duration at or near entrance requirement weeks. Specifically, the sharp increase or 'spike' in the job leaving rate observed at 10 weeks in 1989 moves to 14 or more weeks in 1990…. Low wage workers in seasonal industries are the most affected by the changes. The fact that employment duration changes are much more pronounced in spells ending in layoffs than in those ending in quits suggests that the observed adjustment involves firms as well as workers."

An important advantage of well conceived natural experiments like the 1994 Green-Riddell one is that the "treatment" -- the suspension of the variable entrance requirement in that study -- is independent, by virtue of historical accident, of the other factors that might have caused the observed responses. This rules out the possibility that the estimated coefficient of the treatment variable is picking up proxy effects of other explanatory factors that have been omitted from the analysis or included in inappropriate ways. Another desirable aspect of the 1994 Green and Riddell study is that the "treatment" variable on which they have data arises out of the past operation of the actual UI program. Thus, it was readily apparent to policy makers how these results related to the reform debate.

Empirical analyses providing basic descriptive information from survey and administrative data files also influenced the reform debate and the EI Act. These studies factually documented phenomena such as repeat use of UI and persistent patterns of cross subsidization. The careful analyses of UI administrative data by Corak and Pyper provided compelling confirmation of some of the anecdotal reports of behavioral responses by employers to the UI rules. Corak and Pyper(1995, Abstract) report that:

> "The transfers imposed through UI are heavily concentrated at the firm level. Only 12 per cent of firms consistently receive a net positive transfer in each year. While they account for only 14 per cent of all jobs, they are responsible for more than 38 per cent of all UI benefits paid…. While 'always subsidized' firms tend to be concentrated in 'always subsidized' industries (particularly in construction), a significant fraction of the firms in most industries are of this sort. That is, in addition to considerable between-industry cross-subsidization, the UI program entails considerable within-industry cross-subsidization."

The 1994 Green-Riddell study and the 1995 Corak-Pyper one were among 22 UI evaluation studies commissioned by HRDC that greatly influenced the EI reform debate. Smith comments on this in her 1996 *Insight Conference* address where she describes her own experiences as a senior HRDC participant in the EI reform process. In that address, Smith states that:

> "What was perhaps unique is the extent to which evaluation results helped shape and support the policy process.... The significance of these evaluations lay in the ability to counter social policy mythology with the closest thing to hard facts that anyone could find. In areas as emotional and opinion-laden as the bread and butter issues which lie at the heart of social policy, the ability to lay a fact on the table can go a long way."

Smith used the following example to illustrate her point:

> "For example:
>
> | | |
> |---|---|
> | Statement: | Seasonal workers are only on UI because there is no other work. |
> | Counterfactual: | One in twenty jobs ends at exactly the point when the worker has enough work to qualify for UI." |

Proponents of competing reform approaches often disagreed on *why* the patterns and changes documented in empirical analyses were occurring, but were generally persuaded by the empirical evidence concerning the *existence* of the patterns and changes. This helped focus the debate on solving these problems.[10]

2.3 Modeling the Tax and Benefit Implications of a UI Program

The institutional basics of the old Canadian UI program and the interrelationships between the problems and concerns noted above and the UI program features can be better understood by formally modeling how key categories of workers were treated under the program. For the different cases covered, the program rules are applied just as stated, treating the employment situations of workers in the different cases as given and benefits as fully taken up by those eligible.[11]

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[10] See, for example, Nakamura, Cullen and J.G. Cragg(1997) and the references given there. We call attention also to the numerous relevant research reports by Statistics Canada researchers including G.L. Cohen, G. Lemaître, J.-M. Lévesque, R. Logan, N. Noreau, H. Pold and especially M. Corak, R. Morissette, and G. Picot in various issues of the Statistics Canada publications *Perspectives on Labour and Income* and the *Canadian Economic Observer*. The role played in the recent UI reform debate by articles authored by Statistics Canada analysts illustrates the point made in Nakamura and Diewert(1996, p.33) on the importance of a high quality national statistical agency for fostering high quality public policy discourse:

> "In addition to contributing to substantively better decisions, common, trusted sources of accurate information can also greatly facilitate multiple-party decision making, reducing the time and costs required to arrive at decisions and lessening the prospects for breakdowns in decision processes."

[11] We do not deal with how the UI program might have affected the *proportions* of workers in the various designated cases through induced behavioral changes. Also, it is important to note that a worker who was eligible for UI but did not apply would not have received any UI benefit payments. Storer and Van Audenrode(1995a, 1995b) report that between 10 and 15 per cent of unemployed persons eligible for benefits in Canada never actually claim them. Slightly higher percentages are reported in studies for the U.S. such as McCall(1995). Blank and Card(1991) discuss this for the United States.

The formal mathematical expressions presented provide a framework that can be used as well in subsequent empirical evaluations of the program.

For expositional clarity, here and in the following subsection we ignore less important specifics of the old UI program rules and all non-UI forms of taxation, so the phrase net income means net of *just the UI taxes* and including any UI benefits to which a worker was entitled. For each case, a hypothetical worker is specified to have had a single job[12] for h hours per week and W weeks of the year at an hourly wage w. The employer's annual labor cost is given by the product of the weeks of work times the hours per week times the hourly wage rate, or

(0) $$W\,h\,w.$$

We focus on how different values for W, h and w would have resulted in differing UI wedges between the cost to the employer and the worker's after-tax, after-benefit net income.

Since W denotes weeks of work, the number of nonworking weeks is given by $(\,52\text{-}W\,)$. These are treated as weeks of unemployment in our examples. The main parameters characterizing the old UI program are:

- the combined employer and employee UI payroll tax rate,[13] p ;
- the qualifying minimum weeks of work at a job providing at least 15 hours of work per week that was required for eligibility for UI benefits, denoted by *QMIN* ;
- the maximum number of weeks of UI benefits for which the specified individual could collect benefits while unemployed, denoted by *BMAX* ;
- the maximum insurable weekly earnings for the program, *IMAX* ; and
- the UI replacement rate for insurable weekly earnings, r.[14]

[12] Multiple jobs are ignored here solely for expository convenience; not because they are unimportant. The number holding multiple jobs has been increasing (Cohen 1994). The EI reforms are important for those holding multiple part time jobs who had no coverage under the old UI program for jobs that provided less than 15 hours of work per week.

[13] The combined rate is used here for expository convenience. When the EI Act was tabled, the employee UI tax rate was $3 per $100 of earnings up to the weekly cap of $815 on insurable earnings. The employer UI tax was 1.4 times that, or $4.20. Hence the combined employee-employer UI tax rate was $7.20 per $100 of earnings up to the maximum insurable weekly earnings. The *combine*d tax does, of course, equal the difference due to the UI program (i.e., the UI tax wedge) between what the employer paid for labor and what the workers had as after tax earnings. As Boadway and Wildasin(1984, p. 476) explain:

> "A wedge, equal to the *combined* tax rates on employees and employers, is driven between a worker's net-of-tax wage and the firm's gross wage payment."

[14] The replacement rate was 55 percent for most workers, and 60 percent for low income workers with dependents.

We begin with the base case in which the hypothetical worker and his or her employer owed no UI taxes and the worker was not eligible for any UI benefits.

Case 0: *no taxes/no benefits.* The worker had a job providing less than 15 hours of work per week and hence was UI exempt. No UI premiums were paid in weeks of work and no UI benefits were received in weeks of unemployment. The worker's net income is the employer's labor cost, given in expression (0) above. The UI tax and benefit wedge is zero.

This is essentially the "no UI" case.

For the next three cases, the hypothetical worker had a job that provided at least 15 hours of work per week with weekly earnings less than or equal to the maximum insurable weekly earnings (i.e., $h\,w \leq IMAX$) so that all earnings were subject to the UI payroll taxation. The three cases differ in terms of the extent to which the employment earnings of the worker were insured in the event of job loss:

Case 1: *full taxation with no benefit entitlement*. For workers whose weeks of work were too few to qualify (i.e., $W < QMIN$), or else the person worked all 52 weeks so no UI benefits could be collected, the net income for the year is

(1) $$W\,h\,w\,(1\text{-}p),$$

which equals the employer's labor cost multiplied by one minus the combined employer and employee UI payroll tax rates.

Case 2: *full taxation with benefits in some weeks of unemployment.* For this case, the weeks of work were enough to qualify for benefits ($W \geq QMIN$), and the weeks of nonwork (assumed here to be unemployment) were positive and exceeded the maximum number for which benefits could be collected (i.e., $52 - W > BMAX$). The worker's net income for the year is

(2) $$W\,h\,w\,(1 - p) + (BMAX)\,r\,(h\,w).$$

The first term in (2) is the income from work minus the combined employer-employee UI payroll tax rate. The second term is the worker's total UI benefits for the year, denoted hereafter by *B*.

Case 3: *full taxation with benefits in all unemployment weeks.* For workers whose weeks of work were enough to qualify for benefits and UI benefits could be collected for all weeks of nonwork because the number did not exceed *BMAX*, so the worker's net income for the year is

(3) $$W\,h\,w\,(1 - p) + (52 - W)\,r\,(h\,w).$$

The first term in (3) is the income the hypothetical worker received from work minus the UI payroll taxes, while the second term denotes the total UI benefits, B , received for the $(52 - W)$ weeks of nonwork.

Cases 1-3 can be summed up as follows. In case 1, no benefits could be collected so the after-tax, after-benefits net income of a worker was just the employer wage bill times the earnings retention rate of one minus the combined employer and employee payroll tax rate. Thus, case 1 workers face a negative tax wedge of *-W h w p*. Workers of the case 2 and 3 types also received after-tax earnings that were less than their employers paid out by a factor of *(1 - p)*. However, these workers could collect UI benefits in weeks of nonwork.[15] For a case 2 or 3 worker there is a tax and benefits wedge of *(B- W h w p)*, with *B* denoting the total UI benefits received in the weeks of unemployment. This wedge could be *positive*, in which case it would act as an inducement to work for persons who would not necessarily do so in the absence of the unemployment insurance program.

Corresponding to cases 1-3, there are three more cases for workers who had a job that was for at least 15 hours of work per week, but with weekly earnings exceeding the maximum insurable earnings for the UI program (i.e., $h\,w > IMAX$) so that the earnings were only partially taxed in periods of work and only a portion of the hours of work were covered in the event of job loss:[16]

> Case 4: *partial taxation with no benefit entitlement.* For workers whose weeks of work were too few to qualify (i.e., $W < QMIN$) or equaled 52 and the weekly earnings exceeded the maximum insurable weekly earnings (*IMAX*), the net income is
>
> (4) $$W\,(\,IMAX / w\,)\,w\,(1 - p) + W\,[h - (\,IMAX / w\,)]\,w.$$
>
> The first term denotes the worker's after-tax earnings for the year due to the hours of work each week that were subject to UI payroll taxation. The second term denotes the earnings from the hours of work that were not subject to UI taxation because of the weekly earnings being over the insurable weekly earnings maximum.

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[15] Behavioral changes induced by taxation can cause what are sometimes referred to as deadweight economic losses. As Diewert and Lawrence(1994, p.xiv) explain:

> "[A]n important additional cost arises from the changes in behaviour induced by taxation. These costs are generated when people turn to less preferred substitutes as a result of taxation, or employ less satisfactory methods of production. These losses are known as *deadweight costs* or the *excess burden* of taxation."

A social program like UI involves both taxes and benefits. Taxes represent reductions in spending power, causing those paying the taxes to turn to less preferred spending bundles. But benefits expand spending power and allow the recipients to enjoy *more* preferred baskets of goods and services. Gruber(1994, pp.7-8) explains how the standard diagrammatic analysis of the labor market effects of payroll taxation must be changed for a program that provides tied benefits to participants. On the concept and measurement of deadweight costs of taxation, see also Diewert(1988, 1985a, 1985b, 1984) and Diewert and Lawrence(1996). Related applications of deadweight loss measures for UI taxes and benefits include Topel(1983) and Anderson and Meyer(1993).

[16] At the time the EI Act was tabled, the maximum on insurable weekly earnings was $815. Thus, 82 hours of work per week were UI covered for a $10 per hour employee, 41 hours for a $20 per hour employee, and only 28 hours for a $30 per hour employee. (An hourly wage of $30 per hour corresponds to full time, full year earnings of about $62,400.) Thus a large share of the earnings of higher wage workers was not subject to UI taxation. In addition, the UI tax base did not include nonlabor earnings such as returns on financial investments. These aspects of the financing of UI were carried over into the new EI, with the maximum insurable earnings being reduced to $750.

Case 5: *partial taxation with benefits in some weeks of unemployment.* For workers whose weeks of work were enough to qualify for UI benefits, whose weekly earnings exceeded the maximum insurable earnings, and whose weeks of nonwork exceeded the maximum number of weeks for which UI benefits could be collected (*BMAX*), the worker's net income is

(5) $$W\,(IMAX / w)\,w\,(1 - p) + W\,[h - (IMAX / w)]\,w + (BMAX)\,r\,IMAX.$$

The first term is the income for the year due to the hours of work subject to UI payroll taxation. The second term is the income due to the hours of work that were exempt from UI taxation. The third term denotes the UI benefits for all of the eligible nonwork weeks as determined by the maximum number of benefit weeks for this worker *(BMAX)*.

Case 6: *partial taxation with benefits in all unemployment weeks.* In the final case, the weeks of work were enough to qualify for UI benefits and the weekly earnings exceeded the maximum insurable earnings *(IMAX)*, but the weeks of nonwork (*52*-W) were less than the maximum number for which UI benefits could be collected. Now the worker's net income is

(6) $$W\,(IMAX / w)\,w\,(1-p) + W\,[h - (IMAX / w)]\,w + (52 - W)\,r\,IMAX.$$

The first term gives the after-tax earnings from the hours of work subject to UI taxation, the second term gives the earnings for the untaxed hours of work, and the third term gives the UI benefits that a worker in this situation could collect.

In summary, in case 4 no benefits could be collected, and there is a negative tax wedge given by $-\gamma_w W h w p$ where $\gamma_w=(IMAX/hw)$ is the wage specific ratio of the maximum insurable weekly earnings to the actual weekly earnings. By definition, $0<\gamma_w \leq 1$, so the tax and benefits wedge for case 4 must be equal to or less than for case 1.

For cases 5 and 6, there is a tax and benefits wedge of $(B-\gamma_w W h w p)$, where *B* denotes the UI benefits received for the year. This wedge can be *positive*. In expression (2), *B* is equal to *(BMAX)r(hw)*. This term must be less than or equal to the expression for *B* in (5) which is *(BMAX)rIMAX* because, in defining case 2, it was specified that *hw* is less than or equal to *IMAX* which is the maximum insurable weekly earnings for the UI program. Similarly, in expression (3), *B* is equal to *(52-W)r(hw)* which, by definition, must be less than or equal to *(52-W)rIMAX*, the expression for *B* in (6). Thus the tax and benefits wedges are expected to be systematically larger in cases 5 and 6 than in the corresponding cases 2 and 3.

2.4 Possibilities for Adapting to the Old UI Rules

From the above cases it can be seen that the UI program provided monetary incentives -- tax and benefits wedges -- for workers to alter their work effort, or the way their work effort was

reported, and similar incentives for employers. The following hypothetical examples illustrate some of the specific sorts of behavioral adjustments that were of concern in the reform process.[17]

Consider a school board that had always paid an office staff worker an annual salary spread over 12 monthly payments, though the person only came to work during the school year. The board could afford $20,800 per year in total expenses (including any UI taxes), with a gross weekly wage bill of $400. If the weekly hours of work were at least 15, this is a case 1 situation. In that case, $400 of the weekly wage would have been subject to UI taxation and no UI benefits could have been collected by the worker because of the year round employment contract and wages. At $3 per $100 of earnings for the employee tax and 1.4 times this for the employer tax, a total of $1,497.60 in UI taxes would have been owed, leaving the staff person with an after tax income of $19,302.40.

If the board had switched to paying the $20,800 to the worker over 10 months, with the person being laid off for the summer, then the gross weekly wage bill would have been $472.73 which is still under the maximum insurable weekly earnings. The entire wage bill would still have been subject to UI taxation, with $1,497.60 owing, so the staff person would still have had $19,302,40 in after-tax labor earnings for the year. However, with a benefit replacement rate of 55 percent, these labor earnings would have been supplemented by $2,080 in UI benefits, yielding an after-tax, after-benefits net income of $21,382.40 which is $582.40 more than the school board's expenditure. This is a case 3 situation with a positive tax and benefits wedge.

Under the old UI program, there was scope as well for employers to minimize the portion of their labor costs lost to UI payroll tax payments by altering the mix of workers. For instance, the school board could have opted to replace the full time job with four part time ones of 10 hours per week each. This would be a case 0 situation with no UI payroll taxes due and no UI benefit entitlements for the workers. What the school board could have afforded in total costs for each of the part time workers is one fourth of $20,800. Each of the four workers would have had an annual net income of only $5,200 from this employment, though collectively they would have received the full $20,800 paid out (ignoring possible increases in training and other costs that could result from the use of part time labor).

These examples and the expressions provided in the previous section for the net income of workers in various situations make it clear that representing the financial implications of the old

[17] Many purportedly real examples of workers and their employers adjusting their behavior in response to the UI tax and benefits rules were brought to the attention of Axworthy Task Force members and have been noted in media accounts and articles. May and Hollett(1995, pp.48-49) note that the federal and provincial governments had been actively helping some of those who had been on welfare for long periods of time to qualify for UI instead. See also the Macdonald Commission (Canada 1985), the Forget Commission (Canada 1986), and the House Commission (Newfoundland and Labrador 1986) reports. We are not in a position to judge the veracity of the examples.

UI program with a simple proportional tax rate parameter, as has been the practice in some public finance simulation models and theoretical analyses, overlooks key economic incentives that were built into the old Canadian UI program. The Canadian empirical research on the old UI program helped focus attention on key institutional details of the actual program that had been simplified away in many of the more generic studies of unemployment insurance.

3. FROM UI TO EI IN CANADA

3.1 Choosing Directions

A fundamental choice in the reform debate was whether to move Canada's unemployment insurance program further in the direction of fair user funded insurance or further in the direction of a fair income transfer program. Atkinson(1991, p.113) asserts that "key elements in social insurance are that it is compulsory and that it does not involve, as such, a test of means." On a practical level, family means testing, of the sort relied on to prevent welfare abuse would have added greatly to the expense of the UI program. Family means testing would also have denied better off workers and their families access to public unemployment insurance benefits. Many felt that those who are well off should still be able to have unemployment insurance. Certainly, most people would not feel that only poor homeowners should be allowed to have homeowner's insurance. These are arguments in favor of the position that unemployment insurance should "not invoke, as such, a test of means" in Atkinson's words. However, without experience rating, it seemed evident that repeat use of the program and the resulting cross subsidization of some categories of workers by others would continue to be a very serious problem.[18]

The EI Act is a response to concerns that the UI program had become too expensive and was adversely affecting employment; that the repeat use of the program and persistent cross subsidization were unfair and that these problems were getting worse; and that growing numbers of part-time workers were not covered and this was eroding the automatic stabilization capacities of the program. A political consensus emerged that Canada should continue to have mandatory

[18] There was also debate as to whether there should continue to be any sort of public unemployment insurance. Some argued that the private sector should provide unemployment insurance for those wanting this. A key argument against this position was the observation that the private sector has not been in the business of providing insurance for hazards that can involve unpredictable widespread losses -- losses that are not only unpredictable at the individual level but also collectively, so that it is impossible to accurately predict even the aggregate *expected* losses from one period to the next. For example, affordable homeowner's private insurance coverage for the so-called acts of God such as wars, major earthquake damage, major floods, and hurricanes is not readily available. Recessions and depressions are similarly unpredictable and can inflict widespread unemployment.

unemployment insurance, but that the program should be shifted in the direction of a more fair and affordable participant funded insurance system.

3.2 Three Fundamental Reforms

The EI Act brought about three key structural reforms:

1. A switch from using weeks of work to ***hours of work as the main unit of account*** for the program, with individual rather than job based accounts.

2. ***The Intensity Rule***, whereby the replacement rate for insured earnings falls with increased use of the program by an individual worker.

3. ***The clawback provisions***, which result in repayment of greater amounts of the benefits collected by repeat users with relatively high incomes.

Though operationally different, these three reforms have linked objectives. Before considering the specifics of each of these, it is useful to be aware of the linkages.

The second and third of these structural reforms introduce worker side experience rating into EI. The experience rating of unemployment insurance programs in other countries such as the United States has involved raising the premium rates of *employers* whose workers have claimed more unemployment insurance benefits over specified past periods.

Examination of UI administrative data revealed that the regular part year workers who habitually collected UI in their off seasons from work almost surely included both those who had been taking advantage of the UI system and could have found more work if that had been wanted or who were in families that were too affluent to justify (or qualify for) ongoing welfare type support, and those who truly had no other employment opportunities and who would qualify for other forms of public support if they were no longer able to draw unemployment benefits on a regular ongoing basis.[19] An *intended*, though controversial, objective of the introduction of worker side experience rating was to begin the process of moving those in need of ongoing income support off of the unemployment insurance system and onto family income or means tested public support programs such as welfare and an expanded federal Child Tax Benefit.[20] It was obvious that this sort of a proposal, however well intended and appropriate, would raise fears among many of those who had been depending for years on UI support and among

[19] Prior to 1971, those who were laid off from regular part year jobs could only receive UI benefits for the remainder of the usual season for those jobs. It is after 1971 that the UI Act was changed so that part year workers could receive unemployment benefits in their off seasons as well, and regional variation provisions were introduced that allowed those in high unemployment regions to qualify for benefits with fewer weeks of work and to draw more weeks of benefits than those in lower unemployment regions.

[20] See Nakamura and Erik M. Diewert(1994) on the motivations for this.

advocates of the poor. Thus, in our initial proposal, we recommended that only a mild degree of general worker side experience rating should be introduced at first, with the parameters of the new measures being adjusted subsequently, if need be, to achieve a greater degree of experience rating once it was seen how such a system would actually operate. This is what was done.

However, the government was also intent on reducing the costliness of the unemployment insurance system[21] and large numbers of Canadians clearly wanted reform measures that would put a quick, rather than a gradual, end to what were viewed as the more extreme forms of abuse of the program through intentional repeat use. Thus, the architects of EI coupled the mild general worker side experience rating embodied in the Intensity Rule (the second of the structural reforms listed above) with yet another innovative form of worker side experience rating. In particular, under EI, the clawback of benefits paid out was also experience rated, with the degree of this experience rating rising with the beneficiary's taxable income level.

The Intensity Rule and the EI clawback provisions increased the equity of the program for regular part-year workers versus those who usually work full year. However, these two reform measures did nothing to improve the equity between those whose usual weeks of work were part-time versus longer hours. This problem is addressed by the switch from using weeks of work to hours of work as the main unit of account for the program. It is this reform, listed as number 1 above, that that is explained in subsection 4.3. Consideration of the second and third of the reforms is deferred to subsections 4.4 and 4.5.

3.3 Hours of Work as the Unit of Account

> "The insurance system is changed from one based on weeks of work, with a weekly minimum and maximum on insurance coverage, to a system based on total earnings and total hours worked, starting from the first dollar and first hour. The minimum requirement to qualify for benefits is expressed in hours based on the national average for hours of work per week of 35 hours. This creates a system that better accommodates the variety of work arrangements in today's labour market. It also permits simplification of the reporting requirements for employers and of premium collection, which is from the first dollar earned up to an annual maximum." (***The EI Act***, p. 1a)

Under the EI Act, the minimum qualifying period is set at 420 to 700 hours of work (depending on the region's unemployment rate), rather than 12 to 20 weeks of work at a job providing 15 or more hours of work per week. This shift to using *hours,* rather than *weeks,* of work as the unit of account for qualifying for benefits is coupled with the establishment of individual based records, rather than job based records as under the old UI program. For EI, all

[21] See Greenspon and Wilson-Smith(1997).

hours of work, including those at jobs for under 15 hours per week, count toward qualifying for benefits. There are several reasons why this should improve program coverage in years to come.

As already noted, by excluding jobs offering less than 15 hours of work per week, the old program provided businesses with a monetary incentive to turn full-time jobs into mini jobs for which no UI payroll taxes were owed. This perverse incentive has been largely eliminated with the change to an hourly unit of account, with earnings on all jobs subject to EI payroll taxes.

Second, under the rules of the old UI program, the growth in the prevalence of part-time jobs had been, and would have gone on, eroding program coverage which erodes the automatic stabilization functions of the program.[22] The move to an hourly unit of account will help reverse this erosion of coverage.

Third, this reform will lead to greater equity of treatment within the unemployment insurance program between those working part-time versus full-time hours per week. This is important in an economy in which growing numbers of workers can find employment only in part-time jobs, though they are working full time when their hours on all their jobs are counted.

Finally, the move to an hourly unit of account will help to bring the taxes that individual workers pay into the insurance fund more into line with the expected benefit payments.[23] Under the old UI program, a laid off worker in a region with high unemployment could qualify for benefits after a minimum of 12 weeks in a UI covered job of just 15 hours per week. That is, a worker could qualify for benefits with just 180 hours of UI covered work, provided that this work was arranged so that it comprised the needed 12 weeks of UI covered employment. A fellow worker who put in ten hours a day, seven days a week for 10 weeks might have paid the UI payroll tax on all 700 hours of earnings. However, although the second worker had almost four times as many hours of work as the first, the 10 weeks of covered employment were not enough to qualify for UI benefits if out of work.

Workers of the first sort were systematically treated more generously under the old program than workers of the second sort. In contrast, under EI, all covered workers in regions where the unemployment rate is 13 percent or more will need 420 hours of insurable employment to qualify for benefits. Thus, the second of the workers above -- the one who paid the EI tax on 700 hours of work -- can qualify for EI benefits, while the first one, who paid the tax on only 180 hours of employment, can not.

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[22] It is hoped that the move from UI to EI will help to stem the growth of part-time jobs at the expense of full-time ones. Nevertheless, it is clear that there are other reasons as well for the expansion over time of part-time employment, and this trend is expected to continue.

[23] Gruber(1994, p. 9) stresses the importance of improving this sort of a taxation-benefit linkage, noting that: “If every dollar of taxes paid were perceived by the worker to be returning in benefits, this would not be viewed as a tax at all, and there would be no distortion.”

3.4 The Intensity Rule

> "The benefit rate is reduced by up to five percentage points based on the number of weeks of regular benefits a claimant has received in the past five years."
> (***The EI Act***, Minister of Human Resources Development 1996, p. 1a)

Under the new EI Intensity Rule, the benefit replacement rate drops by one percentage point with each added 20 weeks of benefits collected over the previous five years, down to a minimum of 50 percent. The rationale for this is that those who have collected benefits for more weeks in the recent past are at greater risk of making future claims.

Experience rating workers in an unemployment insurance program by reducing the coverage provided for those with more weeks of prior claims, rather than by raising premium rates, is a new --and we think better-- way to experience rate an unemployment insurance program. Immediate costs are not raised for the workers (or employers) who are already facing serious problems. Also, the difficult problems of experience rating firms are avoided.

Some people oppose the worker side experience rating instituted in the new EI program on the grounds that it is employers, not workers, who "cause" unemployment. But consider household theft insurance. It is governments and the legal system that control most of the policy options that can affect crime rates. Yet it is householders who pay the premiums for homeowner's insurance, and households that are experience rated for this insurance coverage. Experience rating workers in the new EI program will help to curb employer as well as worker abuses of the program's intent since employers can shift their labor costs onto an unemployment relief program only to the extent that their workers are *eligible* to collect.

3.5 The Clawback Provisions

> "For claimants who have higher incomes and have received benefits in the past five years, their previous weeks of benefits increase the amount of benefits they must repay through the tax system."
> (***The EI Act***, Minister of Human Resources Development 1996, p. 1a)

Under the old UI program, benefits were taxable as regular income. Under UI it was also the case that individuals whose annual taxable income was more than 1.5 times the maximum insurable earnings were subject to a flat 30 percent clawback of the lesser of

(a) the total benefits paid to the claimant in the taxation year, and
(b) the amount by which the claimant's income for the taxation year exceeded 1.5 times the insurable earnings.

These provisions are unchanged in EI except that the 30 percent clawback pertains to, and is computed using, 1.25 times the maximum yearly insurable earnings (rather than 1.5 as before) and applies only to those who collected 20 weeks or less of regular benefits in the last five years. Under EI, stiffer clawback provisions apply *for all those who received more than 20 weeks of regular benefits over the last five years* and whose income for the taxation year exceeds 1.0 times the yearly insurable earnings. For these EI claimants, the repayment of benefits received is computed using the percentages in Table 1.

Table 1. EI Benefit Clawback Percentages for Those Who Received over 20 Weeks of Benefits in the Previous 5 Years

Number of weeks of regular benefits received over last 5 years	*Percentage repayable*
21-40	50%
41-60	60%
61-80	70%
81-100	80%
101-120	90%
Over 120	100%

Source: Minister of Human Resources Development(1996, p. 111).

4. THE RELEVANCE FOR THE UNITED STATES OF WORKER SIDE EXPERIENCE RATING

Unemployment Insurance programs in the United States differ from what Canada had prior to Bill C-12 in four main ways: (1) UI in the United States is administered at the state rather than the federal level; (2) it is less generous, in terms of both the maximum benefit levels and the number of weeks of benefits that can be collected, which is basically 26 in all states; (3) the U.S. programs are paid for with a payroll tax that is levied only on employers, rather than on both the covered workers and their employers as in Canada; and (4) the U.S. programs are experience rated on the employer side whereas the old Canadian UI program was not experience rated at all (and, in fact, systematically provided more coverage for the same price to those in higher unemployment regions). In moving from UI to EI in Canada, two of the three structural changes pertain to the introduction of experience rating into the Canadian program, as discussed in section 3. In this way, the new EI is more similar to the U.S. programs for unemployment

insurance than the Canadian UI program was. However, the form in which experience rating has been implemented in EI is quite different from the U.S. case.

In this section, we summarize the basics of experience rating in the United States and then argue that the Canadian form would be an useful complement to the U.S. approach.

4.1 UI Experience Rating in the United States

The institutional features of unemployment insurance are much harder to find out about for the United States than for Canada. As Baicker, Goldin and Katz (1996, p.1) explain:

> "The unemployment compensation (UI) system of the United States is distinctive.... No national system in the industrialized world cedes to their states, provinces, or cantons as much autonomy to establish tax rates, set benefits, and determine eligibility as does that in the United States. Unemployment compensation in the United States is not one system; it is many... 53 to be precise."

However, all of the U.S. state UI programs involve experience rating on the employer side.

The employer side experience rating in the state UI programs is implemented through increases in the payroll tax rates for firms whose workers have drawn more in UI benefits.[24] As Anderson and Meyer(1993, pp.114-117) explain, there are two main methods for doing this: the reserve ratio method (30 states) and the benefit ratio method (15 states). For the first of these, the *reserve ratio* is defined as the difference between measures of the taxes paid by a firm and the benefits disbursed to its employees, all divided by the firm's average UI covered payroll. For this method, typically the firm's payroll is averaged over the past three years while taxes paid and benefits received are summed over all past years without being discounted. For the second method, the *benefit ratio* is defined as the ratio of the average benefits paid to the average taxable wages for the firm's workers, where both are generally averaged over the last three years.

With either of these two methods, the UI tax rate rises in steps as the relevant ratio falls. Thus, the tax schedules have "flats," with the tax rate only changing between reserve ratio intervals. Also, there are state maximums and minimums for the UI tax rates. Thus even large period to period changes in the reserve or benefit ratio for a firm do not always result in changes

[24] Thus, to understand the functioning of the experience rating methods, it is helpful to understand certain details of UI taxation in the United States. Anderson and Meyer (1993, p.114) outline the relevant specifics:

> "The United States has chosen to finance its system mainly through a tax on employers, with the tax rate based on some measure of the firm's past experience with the UI system. While overall the tax is only 1.1 percent of total wages and 2.1 percent of taxable wages, the maximum rate (which varies by state) is typically over 6 percent and in several states reaches 10 percent. Currently, employers must pay a 6.2 percent tax on the first $7,000 of each employee's wages to the federal government. However, the law also provides for a credit of 5.4 percent to all employers paying state taxes under an experience-rated UI system."

in a firm's UI tax rate. Because of this, and because the tax rate increases that are built into the schedules generally fail to fully reflect the increases in the risk of benefit claims for unemployment, the experience rating is termed *incomplete.* Anderson and Meyer(1993, p. 115) provide the following explanation of incomplete experience rating:

> "[F]or most firms in almost all states, the tax rates do not rise sufficiently when the ratios fall to cause firms to pay the full UI costs of laying off a worker. Additionally, statutory minimum and maximum tax rates imply that there are large ranges at the top and bottom of the tax schedule over which a firm's layoff behavior has no effect on its tax payments. Provisions such as these result in the experience rating being incomplete, so that a firm laying off an employee can expect to pay back less in future taxes than the full cost of the benefits received by that employee. As a result, the system provides an incentive to use temporary layoffs to adjust to demand fluctuations.... This is in comparison with a perfectly experience rated system. The choice of some experience rating over no experience rating does encourage employment stabilization."

In fact, the experience rating in the state UI programs is "incomplete" not only in the sense of Anderson and Meyer that the UI tax rate of a firm does not rise enough to fully cover the benefit payout costs resulting from the firm's own past layoffs, but also according to the more standard insurance criterion that the tax rate does not rise enough to cover the full *actuarially expected* benefit costs for a firm's workers.[25] The evidence of this is that there are *persistent* patterns of cross subsidization, as has been documented by Anderson and Meyer (1993, 1994) and others. We revisit this issue in the following subsection.

It is interesting that all of the state UI programs involve employer side experience rating, despite many other differences. According to Baicker, Goldin, and Katz(1996, pp. 19-20):

> "As passed in 1935 Titles II and IX of the Social Security Act, those that dealt with unemployment compensation, called for a federal tax of 3 percent ... on all wages of employers of 8 or more workers. States that subsequently passed their own UI legislation, approved by the Social Security Board, would receive a tax credit of 2.7

[25] The Anderson-Meyer characterization of "full" experience rating is in line with the historical development of UI experience rating in the United States. In commenting on the Wisconsin UI bill often associated with the name of John R. Commons, Baicker, Goldin and Katz(1996, p. 10) write:

> "The Huber (or Groves) Bill, as it was eventually called, underwent various modifications before becoming law in 1932. The most important change concerned the establishment of employer-reserve accounts instead of a state-pooled fund, with employer liability limited to the amount of the fund.... Groves ... thought that employer funds, and thus full experience-rating, would appear less like socialism to the voters. Some firms had already created their own unemployment insurance funds and with full experience-rating there would be no cross-subsidization."

Baicker, Goldin and Katz(1996, p. 12) do acknowledge that this concept of "full" experience rating is not quite the usual insurance one: "Of course compulsory employer reserves does not constitute 'social insurance,' but, rather, is compulsory 'self insurance' by firms." We feel the distinction is important. Common public misconceptions about insurance hampered the Canadian UI reform debate.

> percent. ... States not passing a UI law would be ineligible to draw from the fund. The tax provided a strong incentive to pass UI legislation....
>
> Each state had its own fund, managed by the U.S. Treasury. When state reserves reached 7.5 percent of total covered wages the state could lower tax rates on some firms. ***Most importantly, the reduction in the tax rate would be acceptable only if the state devised an approved experience-rated system to penalize firms for unemployment*** " [emphasis added].

The financial inducement provided in the 1935 Act to encourage state governments to make employer side experience rating part of their UI bills was there because the architects of the Social Security Act believed that experience rating provision was important, and realized many others opposed this. This sort of inducement has been used more recently as well,[26] and could presumably be used again to achieve nationwide change within a state based system.

Pre-1935 unemployment insurance legislation considered by the state legislatures of Wisconsin and of Ohio reflected the historically opposing views on the experience rating of firms. The Wisconsin bill, drafted largely by John R. Commons, involved experience rating (termed "merit-rating" at that time). The reasons given by the bill's proponents for incorporating experience rating are summed up by Baicker, Goldin, and Katz(1996, p. 11):

> "Commons, and his associates at the University of Wisconsin, believed employers had wide leeway to reduce seasonal and other layoffs, and thus they championed merit-rating and employer-reserve funds. UI would be to unemployment what Workers' Compensation was to industrial safety. Both laws would penalize employers who engaged in practices that, to Commons and others, injured labor."

On the opposing side, the Ohio bill that Paul Douglas helped to draft did not involve experience rating. Baicker, Goldin, and Katz(1996, p. 11) summarize the rational for this:

> "Douglas, and his associates at the University of Chicago, saw in unemployment compensation a means of lifting the economy out of its doldrums through increased purchasing power. Contrary to Commons, Douglas was unconvinced that a large part of unemployment was at the discretion of the employer. Employers already had incentives to reduce unemployment and seasonal layoffs. A sound system based on pooled accounts, he believed, was essential to the automatic-stabilizing role he accorded unemployment compensation. Merit-rating would unduly penalize some firms that experienced negative shocks, and could even exacerbate a downturn by driving them into bankruptcy, according to Douglas."

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[26] This was done in 1982. Anderson and Meyer(1993, p. 116) report:
> "A provision of TEFRA [the Tax Equity and Fiscal Responsibility Act of 1982] that became effective in 1985 raised the gross federal UI tax rate from 3.4 percent to 6.2 percent and the creditable portion of the federal unemployment tax from 2.7 percent to 5.4 percent. For employers to receive the full credit for federal taxes paid, a state's maximum tax rate had to be at least 5.4 percent. In response,... states sharply increased their maximum tax rate and their range of rates between 1982 and 1985."

4.2 Problems of Persistent Cross Subsidization

Yet despite the experience rating of employers in all states of the United States, massive cross subsidization still takes place through the UI system. Using data from 22 states on UI taxes and benefits paid since 1980, Anderson and Meyer(1993, pp.117-118) find clear evidence of this:

> "It is important to examine a large number of states given their diversity of experience rating systems and industrial bases.... For each of eight industries, we report two numbers: the ratio of benefits received to taxes paid and the average annual subsidy to the industry (in millions of dollars) caused by incomplete experience rating.... [T]here is a striking tendency of the same industries in different states to receive subsidies. In all twenty-two states, construction receives a positive subsidy, and in all but Connecticut, Minnesota, and Vermont, manufacturing also receives one. Agriculture and mining also receive generally positive subsidies."

These subsidies are large. Even in the small state of Maine, Anderson and Meyer report that an average of $6.1 million was transferred annually by the UI program to manufacturing and $4.1 million to construction. For Minnesota, they calculate the average annual construction industry subsidy as $43.5 million, and for Pennsylvania it was found to be over $100 million.

To better understand the observed UI subsidy patterns, Anderson and Meyer(1993) merged data for eight states from the Continuous Wage and Benefit History (CWBH) project and UI administrative wage and benefit records for a sample of between 5 and 20 percent of each state's covered workers. Using this data, they find that the pattern of industry level cross subsidies is due primarily to temporary layoffs. Anderson and Meyer(1993, p. 128) conclude:

> "Overall, the results ... show that high rates of temporary layoffs for certain industries are the main reason for persistent interindustry subsidies. The relative importance of temporary compared to permanent layoffs further indicates that cross-subsidies are due not so much to permanent shocks to certain firms in an industry, but rather more to temporary or seasonal changes that lead to short-term employment adjustment."

In more recent research, Anderson and Meyer(1994) and Meyer and Rosenbaum(1996) also find that in *all* of the industries they have examined, the state UI programs tend to persistently subsidize the same firms and workers, much as Corak and Pyper(1995) found for Canada.

The persistence of massive cross subsidization of less stable industries and firms through the state UI programs has led to calls for more complete employer side experience rating. But, as Baicker, Goldin and Katz(1996, p.23, fn. 47) note, there continues to be opposition to this:

> "The recent ACUC report (1996) failed to reach a consensus whether to weaken or strengthen experience-rating. The argument for experience-rating remains those of Commons'. The argument against is that experience-rating creates an adversarial

> system in which firms contest workers' UI claims and that it creates an incentive for firms to use contingent workers who would not qualify for UI benefits."

Evidence of persistent UI cross subsidization has led some to question how effective employer side experience rating is for dealing with this sort of problem. One way to explore this question is through U.S.-Canadian comparisons. Baicker, Goldin and Katz(1996, p.31) explain the motivation for their own comparative analysis:

> "Canada and the United States introduced UI systems at nearly the same time.... The systems were initially of similar generosity regarding benefits, duration, and coverage. The major difference is that the U.S. system is experience-rated whereas Canada's is not. To the extent that experience-rating was effective [as implemented in the U.S. programs], the United States should have undergone more stabilization of seasonal employment fluctuations than did Canada from the pre-UI to the post-UI periods."

For the pre-UI period of 1909-1929, they used data from the U.S. Census of Manufactures. For the post-UI period, their data are from the LABSTAT data base maintained by the U.S. Department of Labor.[27] Baicker, Goldin and Katz(1966, p. 31) chose their data for this study so as to minimize the effects of differences in climate and industry structure:

> "To examine the hypothesis, we make some crude comparisons of changes in seasonal employment fluctuations in construction and manufacturing for Canada (as an aggregate) and for U.S. states on or close to the Canadian border. We use border states to control for other trends in seasonality that ought to be common to states and provinces with similar climate and industrial structure."

Their findings constitute weak evidence at best that employer side experience rating, as implemented in the United States, has been effective in reducing the seasonality of employment and associated repeat usage of UI. Baicker, Goldin and Katz(1996, p. 32) report that:

> "A larger reduction in seasonality in construction is found for the U.S. border states than for Canada, consistent with there being an impact of experience rating. But the manufacturing data give either the reverse finding or a small difference. We tentatively conclude that seasonality in construction may have been influenced by experience-rating, but the manufacturing data could lead to an opposite conclusion."

Betcherman and Leckie(1995) have also attempted to establish empirically that the total lack of experience rating of employer UI premiums in Canada led to greater use of layoffs by Canadian versus U.S. employers, which would mean that the U.S. employer side experience rating was effective in reducing layoffs. They collected data from firms in the metal sector in

[27] The LABSTAT data is on the Internet at http://STATS.BLS.GOV.

Ontario and in Pennsylvania, and in the machinery sector in Ontario, Wisconsin and Minnesota. Based on their empirical analyses of this firm level data, Betcherman and Leckie (1995, p.30) conclude: "In the final analysis, then, the modeling exercise offers no support for the hypothesis that greater experience rating acts as a deterrent to total layoffs, temporary layoffs, or new hires." They then discuss a whole list of reasons why empirical analyses of this sort may *not* reflect the underlying reality of how firms react.[28] Some of the suggested explanations for the lack of compelling evidence of the effectiveness of employer side experience rating seem plausible. But at this point in time, the salient fact is that this evidence *is* lacking.

4.3 Worker Side Experience Rating as a Potential Complement to the U.S. Employer Side Experience Rating

In the United States, only employers pay UI premiums. However, the Canadian approach to worker side experience rating could still be implemented in the United States because it involves decreases in the amount of coverage provided to workers as their past usage of UI benefits increases, rather than increases in worker premium rates.[29] Achieving better control of intentional repeat use of UI through the adoption of worker side experience rating would allow the United States to also improve the generousity of the benefits provided to those thrown out of work unexpectedly. This would improve the take-up rate for benefits by the sorts of unemployed workers for whom the program was originally intended and would enhance the effectiveness of the program as an automatic macroeconomic stabilizer.

Of course, for this proposal to be accepted, it must *make sense* as well as being operationally feasible. The decision to experience rate employers when UI was first instituted in the United

[28] For the U.S. firms the degrees and types of experience rating for their UI premiums differ by state. Betcherman and Leckie(1995, pp. 19-20) explain their efforts to arrive at an empirical measure of the degree of experience rating for the employer UI premiums paid by the U.S. firms:

> "For our purposes, the most important indicator of the state UI system was the extent to which employer contributions were experience rated. Determining this is not a straightforward task since the degree of experience rating *per se* does not appear in public documents. Initial attempts to compare states using recent information on UI tax rates and the ratio of maximum insurable earnings (MIE) limits to average earnings were unsuccessful, mainly because there are several cases of states with 'tight' UI tax rates (high and wide) but 'generous' MIE limits. Moreover, the current levels of the tax rates do not capture how responsive the tax rates are to layoffs (that is, the degree to which they are experience rated).

In the literature, researchers have used a variety of measures to represent experience rating across states. However, for the most part, these measures were also unsatisfactory for our purposes, being out of date, unpublished, insufficient (not the right states), or imprecise.

Ultimately, we adopted an approach used by Card and Levine (1994) and Topel (1983). Card and Levine have published estimates of marginal UI tax costs (MTCs) for five major sectors (construction, durable manufacturing, nondurable manufacturing, services and trade) in 36 states covering the 1978-1987 period."

[29] States could be encouraged to do this through amendment of the FUTA tax law to allow firms in cooperating states preferential rates.

States was rooted in the view that it is employers who are in a position to affect how the employment they provide is distributed over the year. However, it is individuals who are in a position to combine multiple part-year jobs, or to look for other sorts of work or other employers offering year round employment. It is also individuals who can decide when part-year work is sufficient, or even desired. After all, some women with young children, students, older persons, and persons with other sorts of special circumstances actually prefer part-year work. On these grounds, individuals are in as good or better a position as employers are to respond to experience rating incentives. These reasons in favor of worker side experience rating are as valid for the United States as for Canada.

Furthermore, there is evidence from two large social experiments carried out in the state of Illinois that worker side UI experience rating may be more effective than experience rating on the employer side. The Illinois Claimant Bonus Experiment and Employer Bonus Experiment, both conducted between mid-1984 and mid-1985 by the Illinois Department of Employment Security, were the first attempt to explore within a controlled experimental setting whether bonuses paid to UI beneficiaries or to their employers would be effective, and which of these approaches would be *more* so if both were effective, in reducing the weeks of benefit claims.

For these experiments, the size of the bonus paid to the claimant or to the employer if the claimant found a job within 11 weeks of filing the UI claim was only $500. Woodbury and Spiegelman(1987, p. 520) report evidence of a worker side response to the bonus payments:

> "The most striking results ... pertain to the Claimant Experiment: Average benefit receipt was lower in the Claimant Experiment group than in the control group by $158 to $194 over the full benefit year.... The differences are statistically different from zero at the 1-percent level (using a two-tailed test). Further, the average number of weeks of insured unemployment was lower in the Claimant Experiment group than in the control group by somewhat over a week, again measured over the full benefit year.... Further, compared with the control group, 5.5 percent more of those assigned to the Claimant Experiment ended their spell of insured unemployment within 11 weeks of filing, and 3.2 percent fewer exhausted their UI benefits. These last findings suggest that the Claimant Experiment reduced the duration of insured unemployment of workers throughout the distribution of unemployment spell lengths."

Thus, Woodbury and Spiegelman view the Claimant Experiment as showing that UI beneficiaries respond to monetary inducements by ending their claims sooner.[30] In contrast, the employers were found to be unresponsive. Woodbury and Spiegelman(1987, p. 521) report:

[30] Obviously, the strength of such a response would depend on the prevailing labor market opportunities. See Woodbury and Spiegelman(1987) for other qualifications as well.

> "The results of the Employer Experiment are quite different. Although there was an initial reduction in benefits received by the Employer Experiment group in the spell of unemployment immediately following the initial claim, the reduction in benefits paid to the Employer Experiment group over the full benefit year is statistically insignificantly different from zero. The evidence of an impact of the Employer Experiment on the number of weeks of insured unemployment is similar. Although there was a reduction in unemployment during the first spell, no statistically significant difference between the control group and the Employer Experiment group exists over the full benefit year."

There inevitably are problems when a new idea is first put into practice, but U.S. implementation of worker side experience rating could build on Canada's experience in this regard. Of course, the United States could also choose to go even further than Canada has in developing and implementing worker side experience rating. Four further innovations that seem worthwhile to us are outlined in the remainder of this section.

4.3.1 Experience rating the benefit period

The form of worker side experience rating introduced by the EI Act involves reductions in the replacement rate (the *Intensity Rule* discussed in subsection III.4) and also, for higher income recipients, decreases in the threshold for and increases in the rate for the clawback of benefits paid out (as explained in subsection III.5). Thus, under EI the benefit amount that can be received and retained is what is experience rated.

As stipulated in the current EI Act, the replacement rate drops by one percentage point for each 20 weeks of benefits collected over the past five years, from 55 percent down to a minimum value of 50 percent. It seems unlikely that this minimum can be reduced much below 50 percent; otherwise many lower income workers would not be able to live on their benefits. An alternative, or complement, to this would be to experience rate the maximum period for which a claimant can receive UI benefits. For example, this period might be decreased by a week for every additional 20 weeks the person received benefits over the last five years. Reductions in the maximum number of weeks of benefits that can be received would shorten the time until an unemployed worker without other means of support would need to, and would be eligible (in Canada, at least) to seek welfare assistance, which is family means tested. This additional innovation would make it feasible, therefore, to move much closer over time to a fully experience rated system of unemployment insurance.[31]

[31] It is already the case that the number of weeks for which benefits can be received under Canada's EI program does vary with the amount of insured work in the qualifying period, from a low of 14 weeks for those with under 770 hours in the qualifying period and who are in a region with an unemployment rate of 6% or under to 45 weeks for those with at least 1785 hours of work in the qualifying period and who are in a region with an unemployment rate of 11%, or with at least 1715 hours of work and who are in a region with an unemployment rate of 12%, or with at least 1634 hours and in a region with an unemployment rate of 13%, and so on, with progressively lower hours of work thresholds for the maximum 45 weeks of benefits up to a cutoff of at least 1330 hours with an unemployment

4.3.2 Changing the manner of measuring past program usage

In the new Canadian EI program, past program experience is measured in terms of the number of weeks of benefits collected over the previous five years. This measure provides an incentive for workers to conserve on the quantity of weeks of benefits collected, but not on the per week *amount* of the benefits. A better measure of past program usage might be a worker specific benefit ratio. Recall that for the benefit ratio method of experience rating employers that is in use in 15 states, as explained in subsection IV.1, the benefit ratio is defined as the ratio of the average benefits paid to the average taxable wages for the firm's workers, where both are usually averaged over the past three years. The worker specific counterpart of this measure would be the dollar value of the UI benefits received by the worker over the previous three years divided by the UI taxable earnings of the worker over that same period.[32]

4.3.3 Allowing claimants to collect partial benefits in weeks of claim

We feel that UI claimants should be offered the option of collecting less than the maximum benefit levels to which they are entitled during their weeks of claim. This proposal would, of course, make more sense if a method of worker side UI experience rating were adopted that used a measure of past experience that is sensitive to the dollar amount of benefits received per week, such as the worker specific benefit ratio recommended above.

4.3.4 Deductibles and mandated worker rainy day funds

Our final suggestion is that a deductible feature should be built into UI. Some would argue that this already *is* there. Both the state UI programs in the United States and the Canadian counterpart of these, before and after the EI Act, involve short initial waiting periods. That is, there is a period of a week or so that elapses between the initiation of a claim and when benefit entitlement actually begins. During this period, the unemployed worker must presumably live off of his or her own resources. However, for many of the alleged forms of abuse of the system, this waiting period would have been allowed for by the claimant, and hence would not be an effective deterrent. For instance, with employer collusion the pay for that week or so might be spread over the weeks of work, with the waiting period then serving as an undeclared, but nevertheless planned on, paid vacation. Or a worker might receive pay in the form of unreported cash from the employer laying him or her off. Still other workers may supplement their UI benefits with underground economy cash work from other employers during the waiting period.

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rate of more than 16%. (See Minister of Human Resources Development, 1996, Schedule I, p. 130.) Basically, the qualifying period is the 52 week period immediately prior to submission of the person's most recent claim. Since periods of work are not periods when benefits were collected, the innovation in worker side experience rating that we are recommending in this subsection is already partially implemented in the new Canadian EI program.

[32] This was part of the original proposal that Nakamura tabled with the adults committee of the Task Force. David Green has independently proposed this in discussions of how the Canadian program might be further modified.

With the deductibles for automobile or home insurance, the claimant must actually incur those amounts of expense themselves. We believe that a corresponding out-of-pocket deductible feature could be helpful in curbing UI abuse. Such a feature could be incorporated by re-instituting an individual worker counterpart of the old employer reserve funds that John R. Commons and his associates at the University of Wisconsin championed back in the 1930s and that originally were part of the UI programs for a number of the U.S. states.[33]

In the United States, some portion of the federal FUTA tax as well as some portion of the regular UI premiums owed by the employer for the worker could be diverted to a registered, tax sheltered personal rainy day account for the worker. Then, when a worker was laid off and applied for UI benefits, if the claim was approved, the first week of benefits could be paid for from the worker's personal rainy day account. This deductible feature could be waved for new workers and for certain categories of reentering workers. Or the UI qualifying rules might be changed so that new or reentering workers would not be eligible for UI at all until a sufficient reserve level was achieved in the worker's rainy day account to cover the required deductible payment. As an incentive, then, for workers to conserve on drawing down their rainy day accounts, they could be allowed to use any funds remaining in these accounts in their retirement years. This latter feature could also help address the twin problems of inadequate savings for retirement and a lower national savings rate than many economists view as desirable.

5. CONCLUDING REMARKS

This paper describes key insurance side features of the reform of the old Canadian Unemployment Insurance (UI) program that was implemented with the passage of Bill C-12 (the EI Act). The EI Act was the culmination of a reform effort that began in 1994, to which the authors contributed key program design ideas. This Act transformed the old Canadian UI into the new EI (for Employment Insurance). This paper particularly focuses on the move from weeks of work to hours of work as the unit of account for qualifying for benefits while unemployed, and on the new Intensity Rule and clawback mechanisms that introduced *worker side experience rating* into the new Canadian EI system. The degree of this worker side experience rating can be increased over time if repeat use of UI and systematic cross subsidization of specific regions, industries, employers, and workers continues to be a serious problem.

EI-style worker side experience rating could be usefully adopted in the United States as well as Canada. The final portions of the paper explain why and how the United States could add worker side experience rating to the employer side experience rating already in place. This

[33] Baicker, Goldin, and Katz(1996, p.10) report that "The system of employer-reserve accounts, although allowed by the federal act [the 1935 Social Security Act] and adopted by some, was eventually dropped by all states."

change would allow better control of deliberate repeat use of UI in the United States while at the same time permitting the adoption of more generous benefit schedules for workers suffering unexpected job loss. Right now, UI benefit levels in the United States are far below those in Canada and too low to meet the needs of many of the unemployed and their families, which is believed to be why the benefit take-up rates are much lower as well in the United States.

In short, if Canadian-style worker side experience rating were added to UI in the United States, rampant intentional repeat use could be curtailed, the program generousity could be improved, and the automatic macroeconomic stabilization capacity of the UI system would be enhanced as well. The ongoing support of regular repeat users of UI offers little, if any, benefit to the nation in terms of reducing the severity of cyclical economic downturns.

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