

14 The distribution of income, wealth, and economic security: the impact of unemployment insurance reforms in Canada

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Introduction

The development of the modern welfare states can only be explained by some general aversion to risk . . . if a society, by free choice and democratic procedure, introduces a welfare state, risk aversion must in some way dominate the decision process. (Borch, 1968, p. 74)¹

Most of the debate on reform of the welfare state has focused on the size of income transfers to and from various groups in society and the possible incentive effects of social welfare programs on labor market behavior. However, very little attention has been paid to the role which potential social transfers also play in reducing economic insecurity for all members of society, although reducing economic insecurity is one of the fundamental reasons for the existence of the welfare state. Insecurity and economic inequality are linked, since the value of the increased security produced by social insurance programs is very different at different points in the income distribution. Changes to the social insurance role of the welfare state therefore affect the overall distribution of economic well-being both directly, by changing the expected transfer income of different groups in society, and indirectly, by altering the economic security and the labor market behavior of individuals.

Since unemployment insurance is the largest single Canadian social insurance program,² this chapter focuses on the change in the distribution of economic well-being in Canada implied by changes in unemployment insurance. Over the last two decades, benefit/wage replacement rates have been reduced, entrance requirements have been tightened, and benefit durations reduced. For some workers (e.g. a tenured professor), the impact of these changes has been very small. People who have (1) nil risk of unemployment; or (2) relatively high income (hence relatively small marginal utility of income changes); or (3) sufficient assets and/or

access to credit to maintain consumption during spells of low earnings, do not need unemployment insurance to provide income security – hence they lose little by its reduction.

However, low income workers (e.g. research assistants) typically do not have these characteristics. In general, the value of the security which unemployment insurance provides depends on the probability of an individual becoming unemployed; their ability to smooth consumption by borrowing or dissaving; and the change in utility implied by changes in consumption. Since low income individuals have a tendency to (1) face a relatively high probability of unemployment, (2) have a high marginal utility of income, and (3) have low assets and/or poor access to credit, the determinants of the security value of unemployment insurance are correlated. Individuals also differ in the degree to which they can change their labor market behavior in response to changes in unemployment insurance parameters. Given the correlation of these factors, the objective of this chapter is to assess the impact on the distribution of economic well-being of changes in the level of unemployment insurance, as an example of the more general issue of the impact of the welfare state on the distribution of economic well-being.

The next section outlines our theoretical framework for discussion of income risk, and the reasons why we believe it is appropriate to measure the income value of the change in expected utility associated with changes in unemployment insurance regimes, rather than the change in expected income associated with social policy reform. We then discuss the empirical calculations, which have two major steps. We first use a micro-simulation model to estimate, for a representative sample of individuals, the fluctuations in labor earnings and unemployment insurance receipts associated with alternative Canadian unemployment insurance regimes (those in place in 1971 and 1994). The model incorporates individual behavioral responses, such as changes in the incidence and duration of unemployment, which may result from changes in unemployment insurance legislation. Given estimated changes in labor earnings and unemployment insurance transfers, we then use a Stone–Geary utility function to calculate the present discounted values of individual utility associated with each unemployment insurance regime. These are used to calculate the implied certainty equivalent income value of the change in expected utility associated with decreased protection from income loss due to unemployment. We then discuss the distribution of these changes in economic well-being within the Canadian income distribution, and finally draw some conclusions.

Theoretical perspective

In the market for private insurance against such risks as fire, automobile theft, or loss of life, individuals can be observed voluntarily paying premiums which exceed the expected value of their insurance claims (due to administration costs and profits within the insurance industry). Although the marginal individual may be indifferent between purchasing or not purchasing insurance, infra-marginal individuals with greater risk aversion receive net gains in their utility from the existence of the option to decrease risk. Although the net expected income of insurance buyers is on average lower than in the absence of insurance (by the amount of the administration costs and profits of the insurance industry), the average utility of insurance buyers is increased by their ability to avoid risk. In private insurance markets, one can use the demand for insurance at different premium levels to estimate willingness to pay for insurance protection and the implied social benefits of the existence of the option to insure against particular risks.

Unemployment insurance (UI) also provides insurance against the risk of income loss, but evaluation of UI presents a range of difficulties not present in the private insurance example. Private markets for UI are not feasible, partly because private insurers would face huge losses in recessionary times, due to the correlation of unemployment outcomes across individuals. Individuals with private knowledge of their greater risk of personal unemployment could also be expected to self-select for the purchase of UI, at any given premium rate.³ UI is not, therefore, voluntarily purchased.⁴

Furthermore, since UI, like other social insurance programs, embodies ideas of *social* fairness, not *actuarial* fairness, one can expect to observe systematic differences across individuals in the ratio of expected UI benefits to UI premiums.⁵ Nonetheless, UI retains an insurance function – since UI reduces the risk of income loss due to unemployment, risk averse individuals can be expected to be willing to pay some amount, which differs according to individual circumstance, for the reduction in income risk which UI provides.

To fix ideas, figure 14.1 outlines the position of a risk averse individual (decreasing marginal utility of income) who faces some risk of income loss. It contrasts the situation of the individual in a regime with high UI benefits for high premiums (*aa'*) and a regime with low UI benefits and low premiums (*bb'*). If the individual remains fully employed, a net income of Y'_b is received, when the low benefit UI scheme is in operation. However, since higher UI benefits require higher UI premiums, Y'_a is the

Empirical calculations

Micro-simulation of income and labor market outcomes under the 1971 and 1994 UI regimes

The rationale underlying micro-simulation is the idea that if we are to understand how the economy would have functioned under a different set of incentives (such as those embodied in different UI regimes), we have to take full account of the heterogeneity of individual characteristics, the interdependence of economic processes, and the endogeneity of individual characteristics over time. The origins of micro-simulation lie in the work of Guy Orcutt and his colleagues (Orcutt, 1957; Orcutt, Merz and Quinke, 1986). The basic idea is to take microdata on a representative panel sample of individuals and simulate the impact over time of alternative policy scenarios on *each* individual member of the panel. The aggregate implications of changes in policy are, therefore, built up from explicit calculation of its impacts on each and every individual. One of the major advantages of micro-simulation modeling is that it allows the simultaneous consideration of policy impacts on a number of different behaviors (e.g. the impacts of UI on both unemployment and labor force participation) which imposing consistency of predicted impacts (e.g. weeks unemployed *plus* weeks employed *plus* weeks not in the labor force must sum to 52).

In a series of papers and reports (Erksøy, Osberg and Phipps, 1994a, 1994b, 1994c), we have outlined the methodology of our micro-simulation model, presented explicitly the estimated behavioral equations which drive the model and demonstrated its sensitivity to alternative assumptions (e.g. the importance of past labor market outcomes). We present an abbreviated description of the model in appendix B (p. 337) and refer interested readers to our other work for additional detail.

For present purposes, the key thing about our microsimulation model is that it generates, for each of the 19,488 respondents to Statistics Canada's 1984 Survey of Assets and Debts, a predicted vector of labor earnings, UI receipts, weeks unemployed, weeks employed, and weeks not in the labor force for each year of the business cycle. We run the model with two alternative policy frameworks – Canadian 1971 UI legislation and 1944 UI legislation – and compare the results.

The impact of revisions to UI on well-being

If changes to social insurance have only small impacts on income riskiness, and produce the same expected value of income flows, then the

Arrow–Pratt risk premium can be estimated directly from data on absolute risk aversion, without explicit representation of the underlying utility function of individuals. However, the Canadian revisions to UI between 1971 and 1994 are not like that. When policy revisions have relatively large impacts on both income riskiness *and* the expected value of some individuals' incomes, calculation of the impact of those policy changes on certainty equivalent income requires the specification of some underlying utility function.

Economists typically use the idea of utility maximization to drive their theories of individual behavior, and most find it easy to agree on general characteristics – e.g. individual utility is a positive function of income, but there is declining marginal utility of income and wealth. Beyond that, there is little consensus. Indeed, although empirical economists have estimated many models of individual behavior (such as labor supply) whose empirical specification also implies an underlying individual utility function, the characteristics of these implicit utility functions have often not been carefully examined (as Stern, 1986, has emphasized).

In this chapter, we use estimates of Canadian labor supply behavior based on the Stone–Geary utility function to estimate the utility value of income flows associated with 1971 and 1994 UI regimes, over the 1981–89 business cycle. In each case, we calculate the present discounted value of yearly flows of utility over the entire period, using a discount rate of $5\frac{1}{2}$ percent per annum (the average real interest rate on home mortgage indebtedness in Canada from 1981 to 1989). The change in well-being attributable to UI revisions is the difference between the present discounted value of utility under the alternative UI regimes. To put a money value on this change in utility, we calculate the certainty equivalent income which corresponds to the average annual level of utility under each UI regime, at average annual levels of labor supply.

In calculating the change in certainty equivalent income for individuals which correspond to a change in policy regimes we are, in essence, asking each individual: “If you knew in advance how you would fare under each policy regime, what sum of money (positive or negative) would make you equally well off in one policy regime, compared to the other?” This chapter asks specifically: “If you knew in advance how you would have fared, over a business cycle such as that of 1981 to 1989, under the 1994 rules of Canadian UI legislation compared to the 1971 rules, what sum of money per year would make you equally well off with 1994, compared to 1971 UI legislation?” This can be seen as performing an *ex ante* evaluation of the realized (*ex post*) outcomes of policy reform – in a sense we are asking what fully informed individuals would think would be the implications of

policy reform (which may perhaps be a somewhat idealistic type of policy evaluation).

In table 14.1, the Y_{71}^* is the certainty equivalent annual income corresponding to the 1971 UI regime and Y_{94}^* is the certainty equivalent annual income corresponding to the 1994 UI regime. More specifically, define:

Y_{71} = income from earnings and UI under 1971 legislation

Y_{94} = income from earnings and UI under 1994 legislation

L_{71} = weeks of non-labour time under 1971 legislation

L_{94} = weeks of non-labour time under 1994 legislation

i = individual

t = year (1981-9)

$$\bar{L}_i = \sum_{t=0}^8 L_{it}/9$$

$$U_{it} = U(Y_{it}, L_{it})$$

$$U_{it}^* = U(Y_{it}^*, L_{it}^*)$$

$$\hat{U}_i = \sum_{t=0}^8 \frac{U_{it}}{(1+0.055)^t} = \text{present value of utility of individual } i \text{ under 1971 legislation}$$

$$\hat{U}_i^* = \sum_{t=0}^8 \frac{U_{it}^*}{(1+0.055)^t} = \text{present value of utility of individual } i \text{ in period } t \text{ under 1994 legislation}$$

$$Y_{71}^* = U^{-1}(\hat{U}_i/9 | L_{71} = \bar{L}_i)$$

$$Y_{94}^* = U^{-1}(\hat{U}_i^*/9 | L_{94} = \bar{L}_i)$$

In evaluating the labor supply responses of Canadian households to UI reforms, Phipps (1990, 1991a, 1991b) used the Stone-Geary functional form

$$U_{it} = B[Y_{it} - \gamma_0]^{1-\theta} [L_{it} - \gamma_1]^\theta$$

where Y_{it} is earnings plus UI transfers received by individual i in period t and L_{it} is weeks of non-labor time.

The Stone-Geary functional form has the convenient feature that Phipps (1990, 1991a, 1991b) has already provided estimates of its

Table 14.1 Impact of 1971-94 UI revisions on average annual "income," by deciles, ages 16 to 65*

Decile	Males			Females		
	Y_{71}^*	Y_{94}^*	$\Delta Y^{*0\%}$	Y_{71}^*	Y_{94}^*	$\Delta Y^{*0\%}$
1	619	280	54.8	598	565	5.5
2	2,917	1,874	35.8	1,751	1,679	4.1
3	7,015	6,059	13.6	2,893	2,767	4.4
4	10,435	9,602	8.0	3,534	3,404	3.7
5	14,226	13,251	6.9	4,083	3,967	2.8
6	17,759	16,899	4.8	5,772	5,479	5.1
7	21,232	20,317	4.3	8,557	8,140	4.9
8	25,193	24,266	3.7	12,024	11,515	4.2
9	30,612	29,708	3.0	16,468	15,915	3.4
10	45,390	44,487	2.0	26,510	25,932	2.2
Overall	17,539	16,674	13.7	8,219	7,936	4.0
Gini	0.42003	0.43923	-4.6	0.494	0.498	-0.8
Theil	0.30919	0.34073	-10.6	0.411	0.417	-1.5
CV	0.7850	0.8210	-4.6	0.996	1.010	-1.4
Atkinson						
$r = 0.5$	0.17377	0.19662	-13.1	0.205	0.207	-0.9
$r = -0.5$	0.70162	0.77475	-10.4	0.633	0.633	0.0
$r = -1.0$	0.91471	0.93762	-2.5	0.859	0.862	-0.3

Note: Labor earnings and UI receipts only, 1981\$, for 1981 labor market participants.

parameters in the explicit context of the influence of UI on labor supply.⁷ Its disadvantages include the fact that all goods must be substitutes, Engel curves are constrained to be linear and the labor supply function is constrained to be monotonic with respect to wages.⁸ Another feature of the Stone-Geary functional form (which we dislike) is that it assumes that all non-labor time has positive utility value. An alternative perspective (dominant in social psychology and sociology) sees unemployment in a more negative light, as something which is psychologically harmful, which people typically do not like (see Hayes and Nutman, 1981; Jahoda, 1979 and Kelvin and Jarrett, 1985). In the economics literature, Narendranathan and Nickell (1985) found a negative valuation on unemployment time, while Clark and Oswald (1994, p. 658) use survey evidence to

argue strongly that "unemployed people in Great Britain in 1991 have much lower levels of mental well-being than those in work." In future research, we hope to devise a way of distinguishing the relative utility of time spent unemployed, time spent in leisure, and time engaged in unpaid work. However, since our focus in this chapter is on *income* security, we proceed with the Stone-Geary specification.

Distributional impact of social insurance revisions

Table 14.1 presents the average annual certainty equivalent income⁹ for men and women and for each decile of the income distribution under the 1971 and 1994 regimes, as evaluated over the business cycle from 1981 to 1989. Although the dollar value of the average income change associated with the 1971 to 1994 revisions to UI is roughly comparable across many of the deciles of the male distribution, this income loss is a much larger fraction of the annual income of poorer deciles than of richer. For males, there is thus a very significant decrease in income associated with UI cutbacks, which is unambiguously much larger, in percentage terms, for the poorer deciles of the income distribution. For females, it is clear that the 1971-94 revisions to UI in Canada increase the inequality of the distribution of economic well-being – but the distributional impacts are smaller and less clearly concentrated on poorer deciles of the income distribution.¹⁰

Several caveats are, however, in order. First, since the income concept used in this chapter is that of annual labor earnings *plus* annual receipts of unemployment insurance payments, capital income and (more importantly) pension income and social assistance receipts are excluded. The relatively low annual earnings and unemployment insurance receipts of poorer deciles reflects in part a tendency of those with long duration unemployment spells to withdraw entirely from labor force participation – a tendency which is particularly important for older cohorts and for women. Since our objective is to model the distributional impacts of a particular social insurance program (UI), we do not build in any assumptions of automatic receipt of social assistance by individuals with low annual income or automatic receipt of pension income by retirees. Clearly, however, UI is part of the larger welfare state of public and private social transfers, and the extent to which other transfers will kick in to offset cutbacks in UI is a crucially important issue.

Furthermore, one must emphasize that table 14.1 refers to the population of individuals who participated in the labor market in 1981 (some of whom may have withdrawn from the labor force from 1982-9). Table 14.1 contains no consideration of household income or household size.

Table 14.2 Males, 16 to 65: Stone-Geary utility functions, percentage gains/losses from UI revisions, by decile of income under 1971 scheme

Decile	Loss			Nil			Gain		
	More than 50% loss (1)	26%-50% loss (2)	6%-25% loss (3)	No change ± 5% (4)	6%-25% gain (5)	26%-50% gain (6)	More than 50% gain (7)		
1	47.02	14.14	5.90	21.65	1.48	1.40	8.41		
2	34.53	11.59	14.20	28.58	2.10	0.99	8.02		
3	10.45	8.64	18.21	56.60	2.66	1.40	2.04		
4	4.95	6.53	18.28	67.70	1.08	0.82	0.64		
5	3.82	4.74	14.80	75.35	0.53	0.21	0.56		
6	1.84	3.91	15.27	78.27	0.47	0.00	0.23		
7	2.11	1.39	14.68	81.55	0.27	0.00	0.00		
8	1.18	1.60	11.28	85.87	0.00	0.00	0.07		
9	1.31	1.96	12.39	84.31	0.00	0.03	0.00		
10	0.43	1.18	6.85	91.35	0.12	0.00	0.07		

The Stone-Geary utility function underlying the calculations of certainty equivalent annual income is that for single males and females. Evaluating the distribution of utility across households raises complex issues of equivalence of incomes (see Phipps, 1997) and of the division of resources within households (see Phipps and Burton, 1995) which we hope to address more fully in future work.

Table 14.1 is based on deciles of incomes, as ordered by 1971 and 1994 income, respectively. Since UI revisions imply that some individuals experience gains, while others experience losses, the individuals in each decile of 1971 and 1994 income are not all the same. To illustrate the dispersion in impacts within income deciles, tables 14.2 and 14.3 illustrate the distribution of the percentage change in income, by decile of original income under the 1971 UI regime. All these tables tell essentially the same story (although much stronger for males than for females). The percentage of individuals which is essentially unaffected by revisions to unemployment insurance rises with income – over 90 percent of the top income decile are essentially unaffected by unemployment insurance revisions, while only 20 percent of the males (60 percent of the females) in the bottom income decile are similarly unaffected. Within the lower deciles of the income distribution, there is a very significant minority who experience very large percentage losses in annual income, and a very much smaller proportion who experience gains.

Table 14.3 Females, 16 to 65: Stone-Geary utility functions, percentage gains/losses from UI revisions, by decile of income under 1971 scheme

	Loss		Nil		Gain		
	More than 50% loss (1)	26%–50% loss (2)	6%–25% loss (3)	No change ± 5% (4)	6%–25% gain (5)	26%–50% gain (6)	More than 50% gain (7)
1	3.50	4.32	15.07	62.66	9.57	1.50	3.38
2	1.47	4.41	16.66	70.00	5.52	0.93	1.00
3	1.86	2.02	14.19	79.16	1.67	0.55	0.56
4	0.59	0.39	12.34	86.32	0.37	0.00	0.00
5	0.67	3.76	14.85	80.57	0.14	0.00	0.00
6	0.36	1.48	17.96	79.09	0.98	0.09	0.04
7	0.64	2.54	19.87	75.95	0.77	0.23	0.00
8	0.19	1.69	14.41	83.64	0.00	0.00	0.00
9	0.53	1.07	11.57	86.51	0.32	0.00	0.00
10	0.10	0.65	6.03	93.03	0.19	0.00	0.00

So far, this chapter has focused on the utility gains and losses associated with the risk of *income* fluctuations, but economists normally think of utility as being derived not from *income*, but from the *consumption* which income permits. However, in order to go from a discussion of variations in income flows to an analysis of consumption flows, one needs to discuss saving and dissaving behavior. Up to this point, intertemporal utility maximization has been based on a time separable utility function and a discount rate of 5.5 percent, but savings behavior depends on more than that. The issue we are concerned with in this chapter is income insecurity, and to the degree that income flows are more uncertain, choices between more and less liquid forms of saving (bank accounts and term deposits versus home ownership, automobiles, durables, pensions) will shift toward the liquid assets available to smooth consumption during a spell of unemployment, rather than the illiquid assets which are not. Changes in social insurance legislation are therefore likely to alter both the level and the composition of personal savings.

A full resolution of these issues lies beyond the scope of this chapter. Furthermore, Canada does not now have¹¹ longitudinal panel data which would enable one to assess directly the impact of income fluctuations over time on individual consumption and savings patterns. Table 14.4 therefore simply asks what percentage of the population in fact has enough assets to smooth consumption to any significant degree – i.e. we use cross-sectional evidence on net household assets to assess the relative

Table 14.4 Income deciles and net liquid assets^a

Deciles	Males		Females	
	Net liquid assets (1)	Available home equity (2)	Net liquid assets (3)	Available home equity (4)
Poorest 10%	46.43	76.84	33.80	65.92
11–20	32.15	61.86	31.89	58.51
21–30	21.21	44.70	27.11	56.20
31–40	21.74	49.88	30.58	64.08
41–50	24.04	54.75	32.90	60.56
51–60	26.57	58.52	30.07	60.95
61–70	29.17	65.15	31.14	57.30
71–80	34.88	70.01	28.71	59.22
81–90	38.00	76.00	32.89	61.46
Top 10%	47.00	81.88	38.35	67.15
Overall average	32.12	63.96	31.74	61.14

Note:

^a Percentage with greater than \$3,020, 16 to 64 years; \$3,020 = 1981 single person poverty line for 21.6 weeks (the average uninterrupted duration of a spell of unemployment in 1984).

importance of liquidity constraints (i.e. the percentage of individuals who are members of households whose assets or access to credit are insufficient to smooth consumption, so that $Y_{it} \approx C_{it}$ necessarily). Columns (1) and (3) of table 14.4 present the percentage of persons within each 1981 income decile living in households where liquid assets are greater than \$3,020¹² while columns (2) and (4) add to those liquid assets the credit limit on available home equity loans.¹³

Conclusions

The innovation of this chapter is its attempt to evaluate the impacts on the distribution of economic well-being of revisions to the social insurance role of the welfare state by combining micro-simulation of behavioral responses to policy changes with an explicit specification of the utility functions of individuals. We have argued that reforms to the welfare state can be expected to alter individual labor market behaviors and that individuals care about both the expected value of their income and the riskiness of that income – hence it is necessary to evaluate jointly

the expected value of future income, the uncertainty of income flows, and the behavioral responses of individuals.

Since our micro-simulation model incorporates behavioral response to changes in UI parameters, it explicitly takes account of "moral hazard" in UI induced changes in labor market behavior. Moreover, incorporating behavioral response in a logically consistent model structure implies that we consider the implications of changes in *both* labor force participation and unemployment. Part of the "moral hazard" story about Canadian UI is the argument that easier entrance requirements after 1971 increased the labor supply of some "marginal" workers, who entered the labor force in order to qualify for UI benefits (see Card and Riddell, 1993) – the implication is that when UI qualification becomes more difficult, as in 1994, such workers will decrease their labor supply, thereby decreasing total earnings. Even though the unemployment rate falls when there is a change to a more restrictive UI program, this produces a drop in labor force participation which means that average total incomes also fall.

In doing all this, we are well aware that calculation of the value of a Stone–Geary utility function under alternative UI and unemployment scenarios is a rather bloodless exercise. In the real world, people stay up late at night worrying about how they are going to make ends meet and what they will do if they lose their jobs. Economic anxiety makes real people tense and irritable and they may lash out at their families or try to drown their anxieties in alcohol or drugs. Our model does not capture the sense of anxiety and powerlessness that comes from the increasing withdrawal of the Canadian state from its social insurance role and its denial of responsibility for macroeconomic outcomes.¹⁴

Much more needs to be done to improve our analysis. We are in the process of revising our micro-simulation model to incorporate demographic transitions and some consideration of household influences on labor market behavior. We need to know more about savings/dissavings and the ability of households to smooth consumption flows over time, despite variations in income flows. We want to experiment further with alternative specifications of the functional form of utility functions and the appropriate specification of utility for individuals within households, and we want to investigate the sensitivity of the importance of income risk to alternative parameter values for individual utility functions.

We have two major concerns with the Stone–Geary specification – that it may not exhibit enough risk aversion to income change and that it imposes a common (positive) valuation on all non-labor time. For the Stone–Geary utility function, evaluated for males at an income of \$30,000 and two weeks' leisure, the Arrow–Pratt coefficient of relative

risk aversion is 0.28 – far below other estimates of risk aversion. The logarithmic utility function is popular in the financial literature (see Rubinstein, 1977) and is somewhat more consistent than the Stone–Geary specification with observed risk aversion behavior in financial portfolios, but the Arrow–Pratt coefficient of relative risk aversion is still only 1 – Friend and Blume (1975) concluded that the coefficient of relative risk aversion is at least 2.

Even when unemployment is relatively high (e.g. 10 percent), the vast majority of the labor force (90 percent) are employed – hence the majority of people have relatively little non-labor time, and it seems reasonable that they derive positive utility from it. However, the pleasures of another day with nothing to do decline rapidly as the days add up. Unemployment, particularly long duration unemployment, is very different from "leisure," and we are convinced by such authors as Clark and Oswald (1994) that unemployment generally reduces utility. In future work we hope to experiment with functional forms which allow the utility value of non-labor time to vary with its duration and nature.

Meanwhile, since the current Stone–Geary specification implies that increased non-labor time partly "balances" lower money income and since we suspect that our current results under-state the importance of income risk, a more satisfactory treatment of these two issues would very probably strengthen the conclusions of this chapter.

Although there are many technically complex steps to our argument, the basic conclusion is fairly direct. The 1971–94 revisions to UI in Canada substantially decreased the level of benefits paid by the Canadian UI system, and produced decreases in economic well-being for all deciles of the income distribution. Since declines in economic well-being were especially large, in percentage terms, for the poorest deciles of the distribution, UI revisions increased the inequality of the distribution of economic well-being, in addition to decreasing average economic well-being. And, as we have noted in other work (Erksøy, Osberg and Phipps, 1994c), UI revisions have the same qualitative impact on the distribution of income, whether measured by annual income or the present value of income over the business cycle.

Furthermore, since we get essentially the same result from examination of the distribution of certainty equivalent income, the present value of income flows over the business cycle, or annual money incomes, our hunch is that our results are fairly robust. And we also think that the Canadian public knows that reducing the social insurance role of the modern welfare state increases inequality and decreases economic well-being – when asked in March 1994 whether they approved or disapproved of reducing the level of UI benefits, 61 percent of Canadians

