

# Unemployment in Canada and the United States: The Role of Unemployment Insurance Benefits

Over the last two decades, a large gap between the unemployment rates of Canada and the United States has emerged. These rates were very close throughout the 1950s and 1960s, then diverged in the 1970s when Canada's rate surpassed the U.S. rate by half a percentage point. In the 1980s, this gap widened further, averaging an enormous two and a half percentage points (Chart 1, Table 1).<sup>1</sup>

This divergence is puzzling because in many respects the economies of the two countries are very much alike. Demographic trends in Canada parallel those in the United States. The structure of labor markets is similar, as is the sectoral composition of employment.<sup>2</sup> Moreover, the business cycles of the two countries are closely correlated, and their inflation rates, though slightly different, have moved in tandem. Another notable similarity concerns the method of measuring unemployment: both Canada and the United States use household surveys to determine the number of unemployed persons.

Although many articles have analyzed the reasons for the U.S.-Canadian unemployment gap, no consensus has been reached on its causes. Some authors

have pointed to demand deficiency in Canada, while others have argued that Canada's higher unionization rate and more generous unemployment insurance (UI) system have given rise to greater "labor market rigidities" than exist in the United States. Other studies find that conventional explanations based on supply or demand are unsatisfactory.<sup>3</sup>

This article argues that the unemployment gap can be primarily attributed to more liberal UI benefits in Canada. An important distinction between this analysis and other studies emphasizing the role of UI is the contention that a critical feature of the Canadian UI system—the provision of benefits not only to those unemployed persons who have lost their jobs, but also to some who have reentered the labor force or left their jobs—has been largely responsible for Canada's higher unemployment.

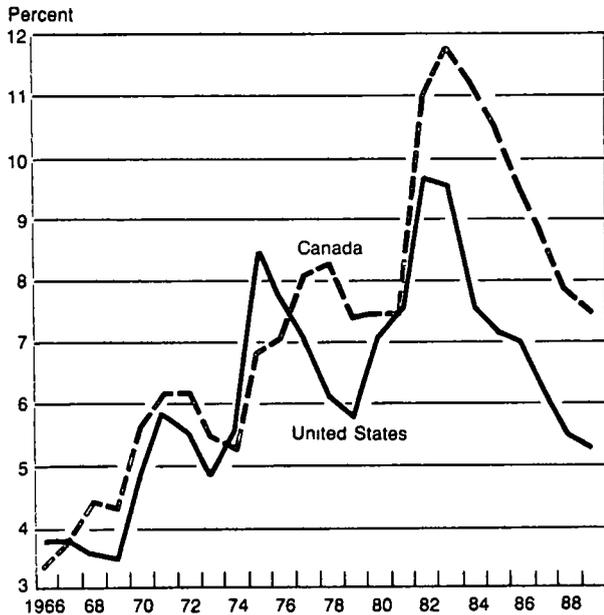
The article demonstrates that Canada's more inclusive beneficiary pool is a key to understanding certain unemployment trends that other studies have failed to analyze or satisfactorily explain. First, benefits were more generous in Canada even in the 1950s and 1960s, yet Canada's unemployment rate was not appreciably higher than the U.S. rate until the 1970s.

<sup>1</sup>Before 1966, a consistent unemployment rate series is not available for Canada. However, available data indicate that the unemployment rates were quite similar prior to 1966. The implications of the pre-1966 data are discussed later in this article.

<sup>2</sup>Canadian and U.S. collective bargaining agreements are fashioned along comparable lines, and in both countries employers respond to short-run declines in demand by laying off workers temporarily—a practice that is far less prevalent in continental Europe. The sectoral composition of employment in the two countries is also remarkably similar, with about three-fourths of total employment in the service sector.

<sup>3</sup>Some recent articles illustrate the range of arguments advanced. Pierre Fortin ("How Natural is Canada's High Unemployment Rate?" *European Economic Review*, 1989) stresses the role of demand deficiency. Herbert Grubel ("Drifting Apart: Canadian and U.S. Labor Markets," *Contemporary Policy Issues*, vol. 6 [January 1988], pp. 39-54) emphasizes real wage rigidity in Canada, which he attributes to more generous UI and a higher unionization rate. Orley Ashenfelter and David Card ("Why Have Unemployment Rates in Canada and the United States Diverged?" *Economica*, vol. 53 [1986], Special Supplement, S 171-95) find no explanation for what they characterize as a post-1981 unemployment gap.

Chart 1

**Unemployment Rates**

Second, despite measures to tighten some provisions of the UI system in the late 1970s, Canada's unemployment rate in the 1980s was higher than in the 1970s

The first trend is explained by the interaction of two developments in the 1970s: benefits to unemployed persons other than job losers were significantly liberalized under Canada's Unemployment Insurance Act of 1971, and the labor force participation of women accelerated. In preceding decades, Canada's unemployment rate was not appreciably higher than the U.S. rate because the labor force was dominated by adult men, whose labor force participation is less responsive to the availability of UI than that of women. In the 1970s, however, with the adult male portion of the labor force declining, workers with a lower employment commitment gained substantially greater access to UI, and their unemployment rate surged. A related explanation is offered for the second trend, the sharp increase in the unemployment rate in the 1980s. Despite the increased stringency of the Canadian UI system since the late 1970s, a substantial component of the unemployed other than job losers continue to receive benefits.

**Comparative economic performance**

Macroeconomic analysis suggests that the emerging unemployment gap in the 1970s was masked by

Table 1

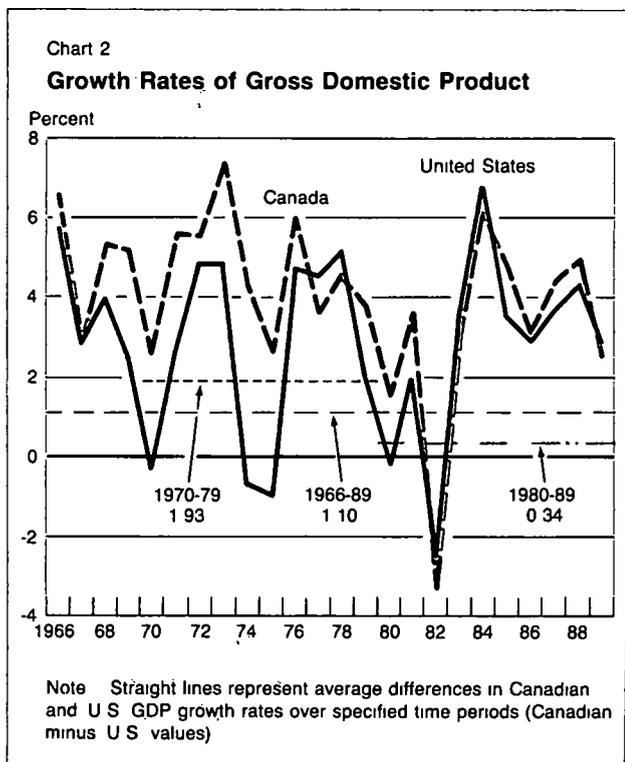
**Unemployment Rates by Demographic Groups**

	Canada				United States			
	Total	Men	Women	Youth	Total	Men	Women	Youth
1966	3.4	2.6	2.7	5.6	3.8	2.2	3.3	8.5
1967	3.8	3.0	2.8	6.5	3.8	2.0	3.7	8.7
1968	4.5	3.5	3.3	7.7	3.6	1.8	3.2	8.6
1969	4.4	3.2	3.7	7.5	3.5	1.7	3.2	8.4
1970	5.7	4.1	4.4	10.0	4.9	2.8	4.1	11.1
1971	6.2	4.3	5.0	11.1	5.9	3.5	5.0	12.7
1972	6.2	4.1	5.7	10.9	5.6	3.1	4.6	12.1
1973	5.5	3.4	5.4	9.6	4.9	2.6	4.1	10.5
1974	5.3	3.3	5.1	9.3	5.6	3.0	4.6	11.9
1975	6.9	4.3	6.5	12.0	8.5	5.5	7.0	16.1
1976	7.1	4.2	6.6	12.7	7.7	4.8	6.4	14.7
1977	8.1	4.9	7.4	14.4	7.1	4.2	6.0	13.6
1978	8.3	5.2	7.7	14.5	6.1	3.4	5.1	12.2
1979	7.4	4.5	7.0	12.9	5.8	3.3	4.9	11.8
1980	7.5	4.8	6.5	13.2	7.1	4.8	5.5	13.9
1981	7.5	4.8	6.7	13.2	7.6	5.1	5.9	14.9
1982	11.0	8.2	8.8	18.7	9.7	7.5	7.3	17.8
1983	11.8	9.2	9.6	19.8	9.6	7.7	7.2	17.1
1984	11.2	9.0	9.7	17.8	7.5	5.7	6.0	13.9
1985	10.5	8.3	9.4	16.4	7.2	5.3	5.9	13.6
1986	9.5	7.6	8.6	15.1	7.0	5.4	5.5	13.3
1987	8.8	7.0	8.3	13.7	6.2	4.8	4.8	12.2
1988	7.8	6.0	7.5	12.0	5.5	4.2	4.3	11.0
1989	7.5	6.1	7.3	11.3	5.3	3.9	4.2	10.9

demand conditions favorable to Canada over that decade Chart 2 plots the annual growth rates of gross domestic product (GDP) for both countries from 1966 onwards Growth in the two countries is highly correlated, and Canada's GDP growth generally exceeds that of the United States, that is, its potential growth rate is higher<sup>4</sup> The straight lines in Chart 2 correspond to the difference in the average actual growth rates (the Canadian rate minus the U S rate) over different periods Although both countries underwent a productivity slowdown starting in the early 1970s, the difference in their average growth rates over the last two decades was 1.1 percentage points, identical to the difference in the 1950s and 1960s Between 1966 and 1989—the period analyzed in detail in this article—the average growth rate difference was also 1.1 percentage points

However, a comparison of the rates for the 1970s and 1980s in Chart 2 reveals substantial differences in average growth In the 1970s, in part because of the stimulus provided by high real commodity prices, Canada's growth rate exceeded that of the United States by 1.9 percentage points In the 1980s, when real com-

<sup>4</sup>The correlation coefficient between annual GDP growth rates over this period is 0.76 Canada's higher growth rate is largely due to higher productivity growth



modity prices slumped, the difference in GDP growth—the Canadian value minus the U.S. value—was a minuscule 0.3 percentage points

The relationship between each country's potential and actual growth reveals a similar pattern. An econometric estimate puts Canada's average potential growth rate between 1970 and 1979 at 4.1 percent, while its actual growth rate averaged 4.6 percent. Over the 1980s its estimated potential growth rate was 3.4 percent, while its actual growth rate averaged 3.1 percent<sup>5</sup> Thus, in the 1970s, Canada's unemployment rate was unusually low since its GDP growth was about half a percentage point above its potential, but in the 1980s, its actual growth was below potential In contrast, in the United States, output growth was below potential in the 1970s but roughly at potential in the 1980s In the 1970s, actual GDP growth and potential GNP growth averaged 2.6 and 3.1 percent, respectively, during the 1980s, actual GDP growth and potential GNP growth averaged 2.4 and 2.5 percent, respectively<sup>6</sup>

In brief, if Canada and the United States had grown at roughly their potential during both the 1970s and the 1980s, the large unemployment gap would have emerged in the 1970s, rather than in the 1980s Thus, what needs to be explained is not only the enormous actual gap of the 1980s, but also the large latent gap of the 1970s

### Assessing differences in UI generosity

A feature of the two labor markets that may influence their unemployment rates is the extent of UI benefits To assess the generosity of a country's UI program, one must look at a wide range of benefit characteristics Some programs might pay benefits that replace a substantial portion of a worker's wages, while others might offer benefits over a longer period of time One must also keep in mind that since UI systems are essentially set up to assist laid-off workers, the actual benefits received by the unemployed depend on demand conditions and increase in a recession Moreover, even the maximum benefits allowed in a UI program also depend on demand, because the upper limit is usually raised—by legislation or automatic rules—during recessions

<sup>5</sup>The estimates for Canada are from the International Monetary Fund, *World Economic Outlook*, October 1988 The estimates presented here are weighted averages of the IMF estimates for subperiods

<sup>6</sup>The difference between GDP and GNP growth for the United States is negligible The estimates of potential GNP growth for the United States are from Jeffrey D. Hallman, Richard D. Porter, and David H. Small, *M2 per Unit of Potential GNP as an Anchor for the Price Level*, Board of Governors of the Federal Reserve System, Staff Study no. 157, 1989

Five criteria provide a reasonably comprehensive basis for evaluating the generosity of UI

- (1) the replacement rate, or the ratio of UI benefits to wages
- (2) the maximum duration of benefits
- (3) the fraction of the work force covered by the UI system
- (4) the weeks of work necessary to qualify for benefits
- (5) the categories of unemployed persons who qualify for UI Some UI programs extend benefits only to those who have lost their jobs, under other programs, those who reenter the labor market, enter it for the first time, or leave their jobs may also qualify for UI<sup>7</sup>

These five criteria usually vary across individuals by industry, region, seniority, and so forth They can be aggregated, however, to get economy-wide measures,

<sup>7</sup>A system that appears generous when judged by criteria 1 to 4 may turn out to be less liberal when judged by criterion 5 Sweden, for instance, is often cited as a country that combines generous UI and low unemployment Judged by criterion 5, it may not be so generous only job losers qualify, and even they can be denied benefits if they turn down training or a job offered by the local labor market board (Anders Bjorklund and Bertil Holmlund, *The Structure and Dynamics of Labor Market Behavior Sweden and the United States* [Amquist & Wiksell International, 1981]) Sweden's example suggests that another aspect of UI, the disqualification rate for those who apply for benefits, is also an important criterion

which are strongly cyclical Judged by most of the above criteria, the Canadian system has always been more generous than the U S system, and in the 1980s the generosity gap was larger than in the 1970s, in part because of declining U S benefits The following section provides a description of the salient features of the UI systems in the two countries and an account of the changes each has undergone in the 1970s and 1980s This information is also summarized in Table 2

#### United States

In the United States, benefits are granted primarily to *job losers* — workers on temporary and permanent lay-off — whose jobs are covered by the UI system Under some limited circumstances, workers who quit for “just cause” can qualify, but in general, job leavers, new entrants, and reentrants to the labor force cannot qualify for benefits Persons discharged for misconduct (“fires”) also do not normally qualify for benefits. The percentage of the civilian labor force covered by UI schemes grew to roughly 90 percent by 1978, with very little change since then<sup>8</sup> This expansion came about primarily through large discrete increases in coverage in 1956, 1972, and 1978, when entire categories of

<sup>8</sup>Jobs, not workers per se, are covered under the UI system in the United States As of 1978, roughly all employees on nonagricultural payrolls were covered, there has been a slight decline in coverage since then because some small miscellaneous programs were phased out (Payroll employment is roughly 90 percent of the civilian labor force)

Table 2

### How Canada and the United States Differ in the Provision of Unemployment Insurance Benefits

	United States	Canada
1 Average rate of wage replacement	About 50 percent after taxes during the 1970s It fell in the 1980s because of the taxation of benefits	About 50 percent after taxes during the early 1970s, lower since the late 1970s The effective replacement rate is likely to be higher because the unemployed have greater access to medical care than do their U S counterparts
2 Maximum duration of benefits	Twenty-six weeks during normal circumstances, possibly up to sixty-five weeks during the 1975 recession During the 1982 recession, benefits beyond twenty-six weeks were often not available	Available in phases of varying lengths depending on the unemployment situation Maximum duration was fifty weeks in both the 1970s and the 1980s
3 Coverage	By 1978, almost all wage and salary workers, or about 90 percent of the labor force, were covered	Near universal coverage of labor force was provided in 1972, up from 80 percent earlier
4 Qualifying period	About nine weeks for a full-time worker at the minimum wage, twenty weeks or more in some states It rose slightly in the 1980s	In 1972, lowered from thirty weeks to eight weeks for most claimants, raised to a range of ten to fourteen weeks in the late 1970s
5 Persons qualifying	Essentially job losers Requirements were more stringent in the 1980s	Job losers, reentrants to the labor force, and some job leavers Requirements have been more stringent for the latter two categories since the late 1970s

workers were brought under the aegis of the UI system.<sup>9</sup>

Regular benefits in the United States are provided through state programs for about twenty-six weeks. When they are exhausted, additional (*extended*) benefits of varying duration are provided if economic hardship warrants. Before 1970, such additional benefits were only granted under special programs enacted in recessionary times. In 1958 and 1961, Congress enacted laws establishing the temporary Unemployment Compensation Program for those who had exhausted regular benefits.

In 1970, partly in response to rising unemployment, the Federal State Extended Unemployment Compensation Act was passed. The law provided extended benefits for an additional thirteen weeks if warranted by the insured unemployment rate.<sup>10</sup> More specifically, the law allowed extended benefits if the insured unemployment rate in a state reached 4.5 percent or if the nationwide insured unemployed rate reached 4 percent. In addition, federal programs were enacted to provide *supplemental* benefits when extended benefits ran out during the 1975 and 1982 recessions. These benefits varied in duration up to twenty-six weeks. Thus in the 1975 recession, a worker in the United States qualifying for regular, extended, and supplemental benefits could obtain up to sixty-five weeks of benefits.

The economy-wide average pretax replacement rate—the ratio of average weekly benefits to average weekly earnings—is around 40 percent in the United States and has not varied much throughout the postwar period.<sup>11</sup> Assuming a 20 percent tax rate on wage or salary income, the 40 percent pretax replacement rate amounts to a 50 percent after-tax rate when UI is not taxed. Before 1979, benefits were not taxed, by 1987, they were fully taxed. Although replacement rates have been the focus of numerous empirical studies analyzing the effects of UI, replacement rate data may not be very useful: the growing divergence between

wages and compensation (the latter includes medical and related benefits that are generally terminated when an employee ceases to work) makes it difficult to calculate the effective replacement rate, tax considerations aside.

The minimum number of weeks that a person must have worked to qualify for UI has also not varied much in the postwar period. In the United States, a worker has to accumulate a minimum amount of “wages” in order to qualify for UI. Dividing qualifying wages (a standard which varies by state) by actual weekly wages yields the (implicit) number of qualifying weeks. Between 1971 and 1979, the ratio of minimum qualifying wages to average weekly wages, averaged across states, was about three.<sup>12</sup> This implies a qualifying period of about nine weeks for a full-time worker at the minimum wage (about one-third of average hourly earnings). This statistic may, however, understate the minimum qualifying period for the whole United States because some states impose an explicit number-of-weeks requirement (usually twenty) and also because the maximum duration of benefits in some states depends on the length of previous employment.

In the 1980s, benefits in the United States declined sharply following the 1979 revision of the UI law and other changes. The major changes were: partial federal taxation of benefits and full taxation by 1987; a small increase in the qualifying work period; the reduction of extended benefits through a 1981 increase in the state “trigger” insured unemployment rate from 4.5 percent to 6 percent and the abolition of the national insured unemployment rate trigger; the tightening of qualifying conditions, and much greater stringency in enacting supplemental benefits during the 1982 recession relative to the 1975 recession.

### Canada

Canada's UI system shares many of the administrative features of the U.S. system. The forty-eight regions through which UI is administered differ in specific qualification requirements and provisions, just as the state programs in the United States differ in their rules. Extended benefits are granted in phases of varying length, up to a cumulative maximum of fifty weeks, and are triggered by high regional and/or national unemployment, as they are in the United States. These administrative similarities notwithstanding, the Canadian UI system is far more liberal by most criteria and particularly by criterion 5. workers others than job

<sup>9</sup>If only job losers qualify for UI, an increase in coverage to relatively noncyclical sectors with low rates of job loss, such as government employees, does not per se constitute a significant increase in UI generosity.

<sup>10</sup>The insured unemployment rate is the ratio of the number of continuing claims filed by those receiving regular benefits to a twelve-month lagged average of covered employment.

<sup>11</sup>The actual replacement rate received by individuals varies by state, industry, and other factors. Even if these rates were equal for all individuals, the average rate, as defined above, would be less than the actual rates for individual workers since UI replaces wages only up to a certain level of earnings. The average replacement rate goes up in a recession, average weekly earnings fall, and cyclical shifts in the composition of unemployment tend to raise the average weekly benefit. Hence, empirical studies of the effect of replacement rates on unemployment are subject to “simultaneity bias” if they do not use panel data or actual replacement rates.

<sup>12</sup>This statistic and other important data pertaining to the UI system are summarized in Walter Corson and Walter Nicholson, *An Examination of Declining UI Claims During the 1980's Draft Final Report*, U.S. Department of Labor, Employment and Training Administration, May 1988, Table III 2, p. 57.

losers can obtain benefits. Benefits were greatly liberalized after the passage of the June 1971 Unemployment Insurance Act. Official sources explained the goals of the legislation thus:

In essence, the document [that is, the June 1970 white paper that led to the passage of the act] proposed to make UI compatible with other Social Security programs,...to enable Canadians to cope with interruptions in their labour earnings, [and] to assist individuals to enter and reenter the labour market....One major objective of the Law was to provide "adequate" income support for *all individuals experiencing temporary earnings interruption*. The Act provided universal coverage, eased eligibility and added new benefits in case of sickness, maternity and retirement.<sup>13</sup>

The act distinguished between claimants with a minor attachment to the labor force and those with a major attachment. The former were eligible only for *regular* benefits, while the latter were eligible for *special* or *miscellaneous* benefits (sickness, maternity, retirement, job training, and so on) as well. The minimum number of qualifying weeks of work for minor attachment claimants was reduced from thirty to eight weeks, while major attachment claimants had to have twenty or more weeks. Although claimants for UI had to prove that they were unemployed, capable of and available for work, and unable to find suitable employment, these last two requirements were waived for those receiving miscellaneous benefits<sup>14</sup>

Thus the mandate of the act to assist "all individuals experiencing temporary earnings interruptions" greatly enhanced the availability of UI to unemployed persons other than job losers. Further, coverage of the labor force was expanded to 96 percent in February 1972 from 80 percent previously, and the pretax replacement

rate was raised substantially from 28 percent in 1971 to 41 percent in 1972.<sup>15</sup>

Benefits were then tightened in 1975, 1977, and 1979. These changes consisted of lowering, in phases, the *maximum* replacement rate (that is, the benefit amount as a proportion of maximum insurable earnings) for all workers from 75 percent in 1972 to 60 percent by 1979 and raising the minimum qualifying work period from eight weeks (mandated in 1972) to a variable between ten and fourteen weeks, depending on the regional unemployment rate. The 1979 reform also raised the qualifying work period to twenty weeks for long-term reentrants, that is, those out of the labor force for most of the preceding year. However, unlike the United States, Canada continued to make benefits beyond twenty-six weeks easily available in the 1980s.

To compare the UI systems, it is necessary to weight the five criteria identified earlier and summarized in Table 2. As an alternative to obtaining or constructing measures of criteria 1 to 5 and then weighting them, it is more informative to look at comprehensive "reduced-form" measures of *actual* UI that reflect the interaction of these various factors. Two such measures are (1) the ratio of beneficiaries to all unemployed, and (2) the (after-tax) ratio of UI income to wage and salary income.

These measures, both strongly cyclical, are plotted in Chart 3 and Chart 4, respectively. Annual data, going back to 1966 for the first measure and back to 1950 for the second measure, are used.<sup>16</sup> The ratio of beneficiaries to unemployed in Chart 3 does indicate, for Canada, the increase in generosity in 1972 and the slight subsequent tightening in the late 1970s. For the United States, Chart 3 indicates the stark difference in UI availability in the 1975 and 1982 recessions.

However, Chart 4 is more comprehensive than Chart 3 because it fully reflects the effect of criterion 5, that is, the effect of granting benefits to unemployed persons other than job losers. For Canada, the ratio of beneficiaries to unemployed rose from about 0.80 in 1971 to about 0.95 in 1972, an increase which does not seem inordinately large. However, UI income as a percentage of wage and salary income increased enormously, from 2.3 percent in 1971 to 3.9 percent in 1972. Chart 4 reveals that, while UI was always more gen-

<sup>13</sup>*Unemployment Insurance Statistics*, Annual Supplement, Statistics Canada, 1986, p. 9, emphasis added.

<sup>14</sup>See *A Chronology of Response: The Evolution of Unemployment Insurance from 1940 to 1980*, Employment and Immigration Canada, p. 62, for a description of qualifying requirements. Most of the miscellaneous beneficiaries — about 10 percent of total beneficiaries on average — would have been identified as "employed" or "not in the labor force" rather than "unemployed" in the Labour Force Survey because the survey definition of the "unemployed" required that they be looking for and available for work. However, it is possible that a few of the miscellaneous beneficiaries might have been classified as unemployed. (Also see the definition of "unemployed" in *The Labour Force*, Statistics Canada, for other minor exceptions to the available-for-work condition.) Although Canadian job leavers and persons discharged for misconduct "without just cause," like their U.S. counterparts, did not generally qualify for UI benefits, these stipulations were made less stringent as a result of the 1971 Act.

<sup>15</sup>Although benefits have been taxed in Canada since 1972, the reported benefits are adjusted for taxes (*Unemployment Insurance Statistics*, Annual Supplement, Statistics Canada, 1986, p. 16).

<sup>16</sup>For the 1979-86 period, when benefits were partially taxed in the United States, marginal tax rates on U.S. benefits were assumed to lie between 0 and 20 percent. Full details on the tax adjustments as well as annual data for various UI measures and labor force statistics are provided in a more detailed version of this article, "Unemployment in Canada and the United States," Federal Reserve Bank of New York Research Paper, forthcoming.

erous in Canada, the gap between Canadian and U S UI payments increased through the 1970s and became much larger in the 1980s <sup>17</sup>

**Evidence for the effect of UI on unemployment rates**

If the Canadian system encourages unemployment more than the U S system does, the outcome should be apparent in higher unemployment in those categories of workers who can obtain benefits in Canada but not in the United States This section provides evidence that unemployment in two such categories accounts for a substantial portion of the overall unemployment differential between Canada and the United States

(1) *job leavers* (those who have left their jobs and moved into unemployment),<sup>18</sup> and

<sup>17</sup>The available labor force data indicate that between 1954 and 1965 the ratio of beneficiaries to unemployed was close to unity in Canada, while in the United States it varied in the 50 percent range Thus the data corroborate the evidence from Chart 4 that UI was more generous in Canada even prior to 1966

<sup>18</sup>Job leavers are defined in this article as those who leave their jobs and move into unemployment, in practice, most job leavers or "quits" move on to another job directly

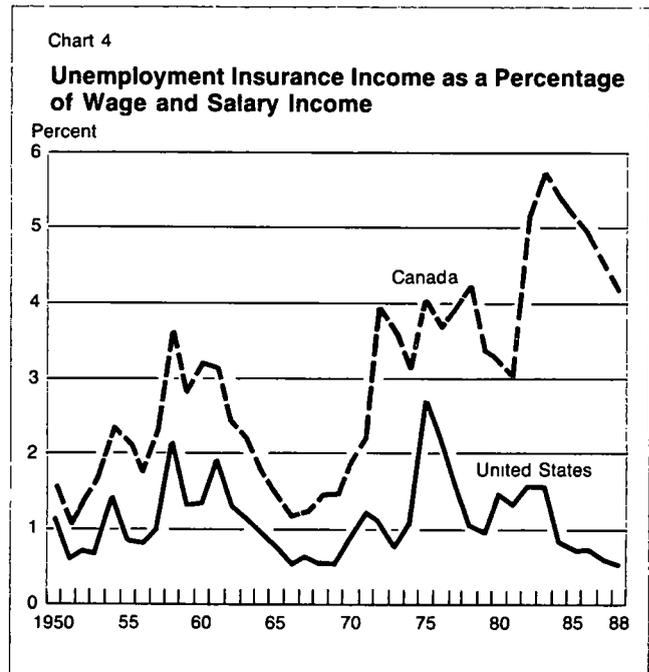
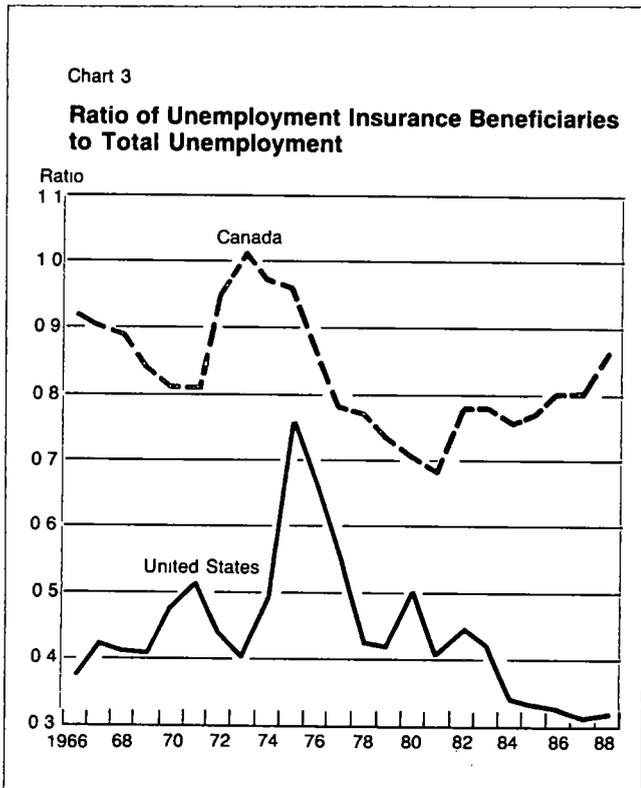
(2) *secondary workers* (those with weak labor force attachment, some women and teenagers would come under this category)

*Unemployment by reason and the job leaver rate*

Since the Canadian UI system provides benefits more easily to unemployed persons other than job losers, a breakdown of total unemployment by "reason for unemployment" can clarify how the incentives created by Canada's more generous UI system affect total unemployment Table 3 provides such a breakdown from 1975 – the year in which these data are first available for Canada – to 1988 The unemployed are divided into job losers, job leavers, new entrants and reentrants to the labor force <sup>19</sup> As a first approximation, job loss can be considered involuntary, that is, the unemployed are willing, or *more* than willing, to trade places with identical employed workers Other reasons for unemployment – most obviously, job leaving – involve a greater degree of volition

Between 1975 and 1988, Canadian unemployment averaged 1.5 percentage points more than U S unemployment, however, its job loser rate averaged only 1 percentage point more than the U S job loser rate What is much more striking is that over this period, the

<sup>19</sup>For the United States, job losers are further broken down into those "on layoff" and "other job losers"; the former expect to be recalled to their job and the latter are considered to be on indefinite or permanent layoff



job leaver rate in Canada averaged 1.7 percent, roughly twice the job leaver rate in the United States, 0.8 percent. In Canada, job losers averaged a little over 50 percent of total unemployment and job leavers averaged a little under 20 percent, while UI beneficiaries averaged about 80 percent of unemployment between 1975 and 1988. By contrast, in the United States, job losers also constituted about 50 percent of unemployment while job leavers constituted a little over 10 percent of unemployment, UI beneficiaries constituted about 45 percent of unemployment between 1975 and 1988. The much higher job leaver rate in Canada, despite higher overall unemployment, suggests that Canadian workers are more willing to tolerate being

unemployed than their U.S. counterparts. Thus it appears that providing benefits to some job leavers in Canada induces such behavior.

The classification by reason for unemployment is also useful in examining the influence of unions on unemployment. Unionized workers are often seen as "insiders" and nonunionized workers as "outsiders." It has been argued that when the employed union insiders are insulated from the unemployed nonunion outsiders, wages do not decelerate in the face of high unemployment, which therefore tends to persist.<sup>20</sup>

<sup>20</sup>Assar Lindbeck and Dennis Snower ("Cooperation, Harassment, and Involuntary Unemployment: An Insider-Outsider Approach," *American Economic Review*, vol. 78 [1988], pp. 167-88) stress the insider-

Table 3

**Unemployment Classified by Reason**

(Percent of Labor Force)

United States							Ratio of UI Beneficiaries to Job Losers
Total†	Loser	Leaver	New Entrant	Reentrant			
1975	8.5	4.7	0.9	0.9	2.0	1.4	
1976	7.7	3.8	0.9	0.9	2.0	1.4	
1977	7.1	3.2	0.9	1.0	2.0	1.3	
1978	6.1	2.5	0.9	0.9	1.8	1.1	
1979	5.8	2.5	0.8	0.8	1.7	1.0	
1980	7.1	3.7	0.8	0.8	1.8	1.0	
1981	7.6	3.9	0.8	0.9	1.9	0.8	
1982	9.7	5.7	0.8	1.1	2.2	0.8	
1983	9.6	5.6	0.8	1.1	2.2	0.7	
1984	7.5	3.9	0.7	1.0	1.9	0.7	
1985	7.2	3.6	0.8	0.9	2.0	0.7	
1986	7.0	3.4	0.9	0.9	1.8	0.7	
1987	6.2	3.0	0.8	0.8	1.7	0.7	
1988	5.5	2.5	0.8	0.7	1.5	0.7	
1967-74 average	4.7	2.0	0.7	0.6	1.5	1.1	
1975-88 average	7.3	3.7	0.8	0.9	1.9	0.9	
Canada							Ratio of UI Beneficiaries to Job Losers
Total	Loser	Leaver	New Entrant	Reentrant			
1975	6.9	2.7	1.9	0.4	1.8	2.4	
1976	7.1	3.3	1.7	0.4	1.8	1.9	
1977	8.1	4.1	1.7	0.5	1.8	1.5	
1978	8.3	4.2	1.8	0.5	1.9	1.5	
1979	7.4	3.6	1.5	0.5	1.9	1.5	
1980	7.5	3.7	1.5	0.4	1.9	1.4	
1981	7.5	3.8	1.4	0.4	1.9	1.4	
1982	11.0	6.5	1.6	0.5	2.3	1.3	
1983	11.8	7.0	1.6	0.6	2.6	1.3	
1984	11.2	6.4	1.7	0.5	2.5	1.3	
1985	10.5	5.8	1.8	0.5	2.4	1.4	
1986	9.5	5.3	1.7	0.4	2.1	1.4	
1987	8.8	4.7	1.7	0.4	2.1	1.5	
1988	7.8	4.0	1.6	0.3	1.9	1.7	
1975-88 average	8.8	4.7	1.7	0.5	2.1	1.5	

†Totals may not sum because of rounding

For many years, unionization rates in both countries were fairly similar, hovering in the range of 30 percent to 35 percent, but then began to diverge in the early 1960s (Chart 5). In Canada, this rate increased to about 40 percent by the early 1980s and thereafter declined slightly. In the United States, the unionization rate has been declining steadily since the early 1960s, dropping steeply in the 1980s to about 17 percent by 1988.

Viewed in isolation, stronger union power in Canada might seem to explain much of Canada's higher unemployment. However, Canada's higher job leaver rate suggests that union effects on total unemployment are not of primary importance. An employed worker in Canada is roughly twice as willing to trade places with the unemployed as in the United States. If insider/outsider effects were important, Canada would have a lower job leaver rate because insiders would be more reluctant

*Footnote 20 continued*

outsider distinction and the role of unions in causing unemployment. Olivier Blanchard and Lawrence Summers ("Hysteresis and the European Unemployment Problem," *National Bureau of Economic Research Macroeconomics Annual*, vol. 1 [1986], pp. 15-78) argue that recessionary shocks have caused unemployment to persist in many European countries owing in part to their strong unions. Hysteresis can also occur if the unemployed lose their job skills and become unemployable.

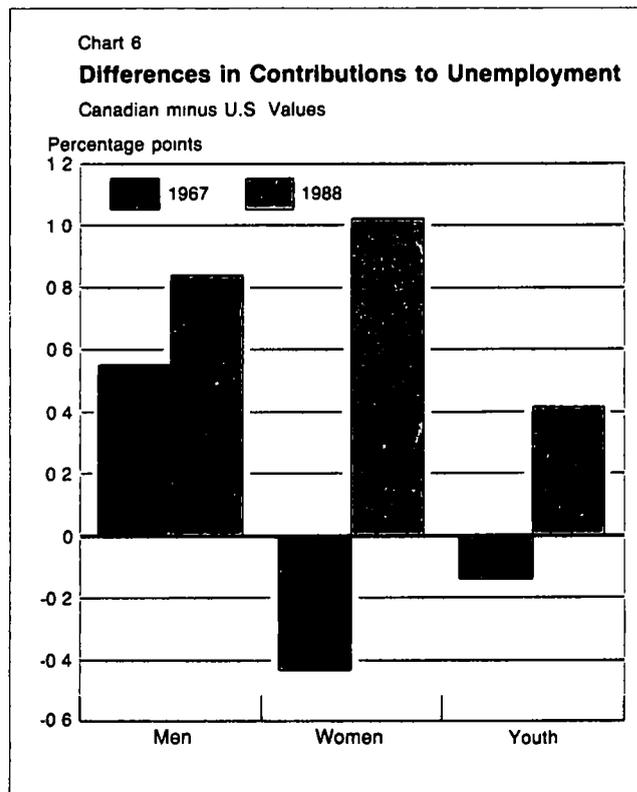
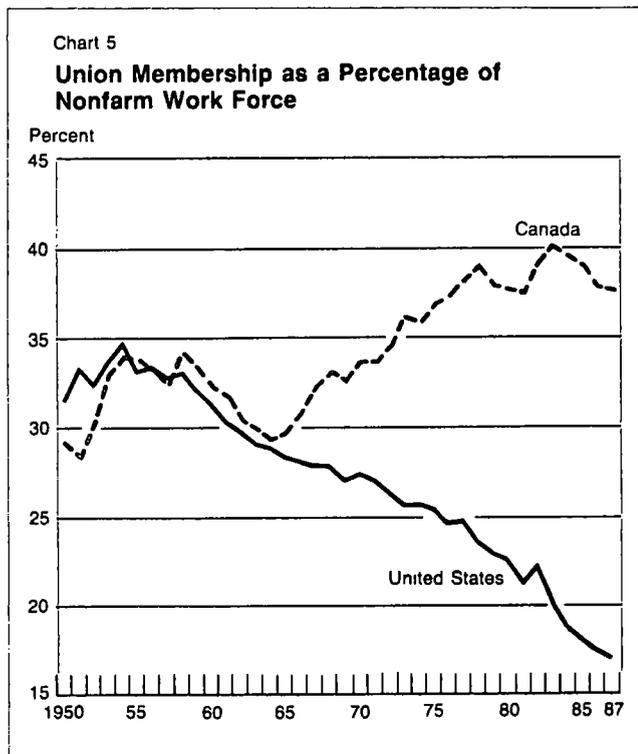
to become outsiders <sup>21</sup>

*Interaction between demographic changes and UI*

A classification of unemployment by demographic groups also reveals the role of UI in inducing higher unemployment in Canada. To begin with, although Canada has had slightly higher population growth than the United States, the overall trend in the growth of the working-age population has been remarkably similar in both countries. Nevertheless, markedly different trends in unemployment across demographic groups have emerged in the two countries. Although the relationship between Canadian and U.S. male unemployment has shown little change, Canadian and U.S. female unemployment has diverged considerably. This divergence can be traced to the more generous Canadian UI system and is documented here with respect to unemployment rates, the composition of total unemployment, labor force growth, and labor force participation rates.

The differing paths of male and female unemployment in Canada vividly illustrate the effects of the

<sup>21</sup>While Canada's higher total job leaver rate may be due to a higher job leaver rate in the nonunionized/low-wage sector, the evidence suggests that union effects on the total job leaver rate and thereby on total unemployment have not been of primary importance.



Unemployment Insurance Act, which went into full effect in 1972. It is noteworthy that the unemployment rate for women rose from 5.0 percent in 1971 to 5.7 percent in 1972, while the unemployment rate for men fell from 4.3 percent in 1971 to 4.1 percent in 1972, as Table 1 indicates.<sup>22</sup> (The total unemployment rate was unchanged at 6.2 percent.) In 1972, GDP growth in Canada was 5.7 percent, estimated potential growth in that year was 4.9 percent. The unusually large increase in female unemployment in 1972, a year when

output growth was above potential, suggests that the increase in female unemployment was a response to the act. Opposite movements in Canadian male and female unemployment of this magnitude have not occurred in other years, nor have they occurred in the United States.<sup>23</sup>

To analyze further the evolution of unemployment in both countries, it is useful to compare 1967, when the overall unemployment rate in both countries was 3.8 percent, with 1988, when a 2.3 percentage point gap had emerged between the Canadian rate (7.8 percent) and the U.S. rate (5.5 percent). A decomposition of the

<sup>22</sup>"Youth" in the United States corresponds to those aged sixteen to twenty-four, in Canada, youth corresponds to those aged fifteen to twenty-four. Men aged twenty-five and over and women aged twenty-five and over are simply called "men" and "women," respectively. All the demographic data in this article pertain to the civilian labor force. "total" refers to the aggregate, as distinct from demographic subgroups. The definition of "total" in this article differs from the customary labor force definitions, in which "total" includes the military.

<sup>23</sup>The other noteworthy case of opposite movements in male and female unemployment in Canada occurred following the tightening of benefit qualification in 1979 for reentrants. The male unemployment rate rose from 4.5 percent in 1979 to 4.8 percent in 1980, while the female unemployment rate fell from 7.0 percent in 1979 to 6.5 percent in 1980. In 1980, GDP growth in Canada was 1.5 percent, a rate well below the estimated potential growth of 3.5 percent.

Table 4

**Summary of Unemployment and Demographic Data**

		Unemployment Contributions†								
		Men		Women			Youth			
		1967	1988	1967	1988		1967	1988		
Canada		1.62	2.73	0.60	2.58		1.60	2.46		
United States		1.07	1.89	1.03	1.56		1.74	2.04		
Difference		0.55	0.84	-0.43	1.02		-0.14	0.42		
		Labor Force Participation Rate‡			Employment-Population Ratio‡			Growth Rates between 1967 and 1988§		
		1967	1988	Change	1967	1988	Change	Population#	Labor Force	Employment
Men	Canada	84.5	77.7	-6.8	82.0	73.0	-9.0	2.12	1.72	1.56
	United States	83.3	77.0	-6.3	81.6	73.8	-7.8	1.86	1.50	1.39
	Difference			-0.5			-1.2	0.26	0.22	0.17
Women	Canada	32.3	55.2	22.9	31.4	51.1	19.7	2.28	4.83	4.60
	United States	39.4	54.9	15.5	37.8	52.6	14.8	1.81	3.40	3.37
	Difference			7.4			4.9	0.47	1.43	1.23
Youth	Canada	56.6	69.6	13.0	52.9	61.3	8.4	0.69	1.67	1.38
	United States	57.8	68.4	10.6	52.7	60.8	8.1	0.97	1.77	1.65
	Difference			2.4			0.3	-0.28	-0.10	-0.27
Total	Canada	57.6	66.7	9.1	55.4	61.5	6.1	1.87	2.57	2.37
	United States	59.6	65.9	6.3	57.3	62.3	5.0	1.68	2.16	2.07
	Difference			2.8			1.1	0.19	0.41	0.30

†The unemployment contribution of a group is the percentage points of overall unemployment attributable to that group; the unemployment contributions sum to the total unemployment rate. The unemployment contribution of a group can be calculated by dividing the number of unemployed in that group by the total labor force.

‡In percent.

§Growth rates are calculated as the compounded annualized percentage changes between 1967 and 1988.

||Percentage points.

#Civilian noninstitutional population of working age: sixteen to sixty-five years in the United States, fifteen to sixty-five in Canada.

total unemployment rate into the unemployment contributions of the three groups—men, women, and youth—reveals that the greater part of the 2.3 percentage point unemployment gap between 1967 and 1988 can be attributed to women and youth.<sup>24</sup> Of the 2.3 percentage point increase in the unemployment rate gap, only 0.29 percentage point is due to men (0.84 minus 0.55), 1.45 percentage points (1.02 minus negative 0.43), or almost two-thirds of the increase, is due to women, and 0.56 percentage point (0.42 minus negative 0.14), or about a quarter of the increase, is due to youth (Chart 6 and Table 4)

A comparison of the growth rates of the working-age population, the labor force, and employment in the two countries also suggests that Canada's more generous UI offers a greater incentive to be in the labor force. Total population growth is slightly faster in Canada, by 0.19 percentage point; however, total labor force growth is 0.41 percentage point higher. What is particularly noteworthy is the very large difference in female labor force growth rates (1.43 percentage point) in Canada and the United States, despite a much smaller difference in female population growth rates (0.47 per-

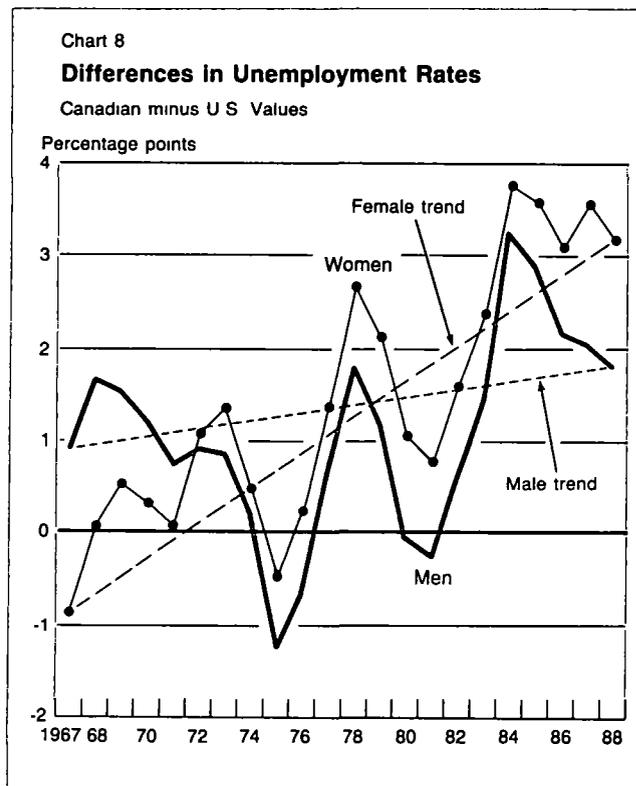
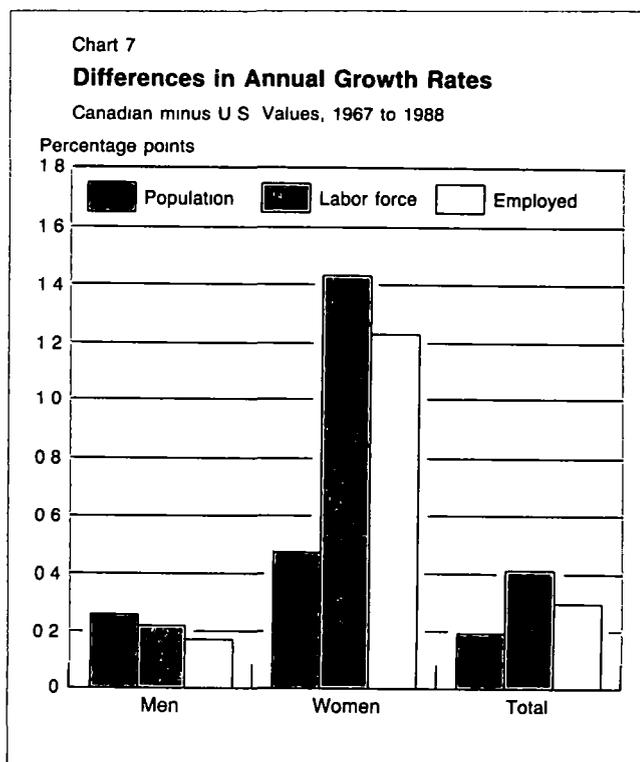
centage point) (Chart 7, Table 4)<sup>25</sup>

A comparison of the differences (Canadian minus U.S. values) in male and female unemployment rates over the period 1967 to 1988 reveals a much sharper upward trend in the unemployment rate difference for women (Chart 8). The regression analysis (see Box) buttresses this conclusion: there is a statistically significant upward trend in the difference in unemployment contributions and rates for women, but not in that for men.

The differential response of male and female unemployment to UI provides a basis for determining the extent to which benefits may have led to persistence, or hysteresis, in Canadian unemployment. It has recently been argued that a change in one element of the Canadian UI system—the abolition, in 1977, of the national unemployment rate trigger for one phase of

<sup>24</sup>The unemployment contribution of a group is merely the number of percentage points of unemployment attributable to that group; the contributions sum to the total unemployment rate.

<sup>25</sup>An extremely similar picture emerges if we compare the changes between 1967 and 1988 in labor force participation rates for Canada and the United States. In both countries, there is an upward trend in labor force participation for women and youth, and a downward trend in labor force participation for men. However, for Canada, the cumulative increase in female labor force participation is 7.4 percentage points higher and in youth participation 2.4 percentage points higher, while the cumulative decrease in male participation is 0.5 percentage point higher (Table 4).



### Box: Differences in "Okun's Law" Relationships by Demographic Groups

The link between unemployment and demand is usually examined using Okun's law regressions, which link GNP (or GDP) growth and changes in the unemployment rate † In the context of this article, the relevant question is To what extent do demand fluctuations explain the difference in the levels of U S and Canadian unemployment since 1966?

Regressions using the total unemployment rate seem to suggest that Canadian unemployment, looked at in isolation, does not appear to be unusually high in relation to Canadian GDP growth in the 1980s When the

links between Canadian and U S unemployment are taken into account, however, there is weak evidence that the difference between Canadian and U S unemployment is high in relation to differences in their GDP growth in the 1980s.‡

The regressions presented here examine the effects of differences in GDP growth on the differences (Canadian minus U S values) in unemployment by major demographic groups The groups chosen were men over twenty-five and women over twenty-five The

†For a detailed discussion and numerous estimates of Okun's law regressions for the United States, see Douglas Woodham, "The Changing Relationship between Unemployment and Real GNP in the United States," Federal Reserve Bank of New York, Research Paper no 8407 Woodham summarizes his findings in "Potential Output Growth and the Long-Term Inflation Outlook," this *Quarterly Review*, Summer 1984

‡These regressions are presented in the more detailed version of this article cited earlier The relation between GDP growth and unemployment can change for any number of reasons exogenous changes in productivity, the endogenous response of productivity to changes in labor costs, the response of labor force participation to changes in the availability of UI, and so on Hence, from an Okun's law equation, it is difficult to disentangle the effects of demand and supply on unemployment

#### Sample Period 1966-III to 1988-IV

$\bar{R}^2$ (S E R) ‡	Dependent Variable	Explanatory Variables†						Durbin-Watson Statistic
		Intercept	UCMLDIF(-1)	UCMLDIF(-2)	GRODIF	GRODIF(-1)	Trend	
919 (147)	UCMLDIF	08 (244)**	119 (123)*	-26 (-273)*	-441 (-291)*	-512 (-327)*	-001 (-29)	198
953 (110)	UCFMDIF	Intercept -03 (-89)	UCFMDIF(-1) 107 (102)*	UCFMDIF(-2) -19 (-175)*	GRODIF -156 (-132)	GRODIF(-1) -232 (-206)**	Trend 002 (200)**	197
927 (306)	URMLDIF	Intercept 16 (218)**	URMLDIF(-1) 120 (127)*	URMLDIF(-2) -28 (-295)*	GRODIF -924 (-293)*	GRODIF(-1) -105 (-323)*	Trend -0007 (-05)	196
934 (374)	URFMDIF	Intercept 21 (21)	URFMDIF(-1) 99 (937)*	URFMDIF(-2) -13 (-125)	GRODIF -554 (-138)	GRODIF(-1) -852 (-221)**	Trend 006 (189)***	198

Notes All "difference" variables are Canadian minus U S values

GRODIF = difference in GDP growth rates, measured as the difference of the natural logarithms of the levels

UCMLDIF = difference in male contributions to unemployment

UCFMDIF = difference in female contributions to unemployment

URMLDIF = difference in male unemployment rates

URFMDIF = difference in female unemployment rates

\*Significantly different from zero at the 1 percent level

\*\*Significantly different from zero at the 5 percent level

\*\*\*Significantly different from zero at the 10 percent level

†The t-statistics are reported in parentheses below the coefficient

‡The standard error of the regression (S E R) result is reported in parentheses below the (adjusted)  $\bar{R}^2$

**Box: Differences in "Okun's Law" Relationships by Demographic Groups**  
(continued)

dependent variables are the differences in the unemployment contributions or unemployment rates for men and for women respectively (The unemployment contribution of a group is the number of percentage points of unemployment attributable to that group) The explanatory variables are the first and second lag of the dependent variables, current and lagged values of the difference in GDP growth, and a linear time trend These regressions indicate a statistically significant upward trend in the difference in female unemployment contributions and rates, but not in the difference in male contributions and rates

extended benefits and its replacement by a regional unemployment rate trigger—has caused regional and thereby total unemployment rate increases in Canada to persist in the 1980s<sup>26</sup> However, although the number of male beneficiaries increased proportionately much more than the number of female beneficiaries during the 1982 recession, it has also subsequently fallen more, only the increase in female beneficiaries has displayed substantial persistence over 1983-88 (See Chart 9, which plots all male and all female beneficiaries in Canada<sup>27</sup>) When demand revived, the number of male beneficiaries dropped sharply, suggesting that the regional trigger mechanism per se was not responsible for the persistence in unemployment

It is well known from labor market literature that the labor supply of secondary workers (a category including some women and teenagers) is more responsive to wages than that of primary workers<sup>28</sup> In the same vein, one might expect the labor force participation of these workers to be more responsive to the availability of UI than that of primary workers This variation in the response to UI would partially explain why male and female unemployment and hence total unemployment followed such diverse trends in Canada and the United

<sup>26</sup>See Ross Milbourne, Douglas Purvis, and David W Scoones, "Unemployment Insurance and Unemployment Dynamics," Institute for Economic Research, Queen's University, Discussion Paper no 750, June 1989 Between 1972 and 1977, Canada had a five-phase benefit structure, with both national and regional triggers for extended benefits In 1977 this was replaced by a three-phase structure, with only a regional trigger

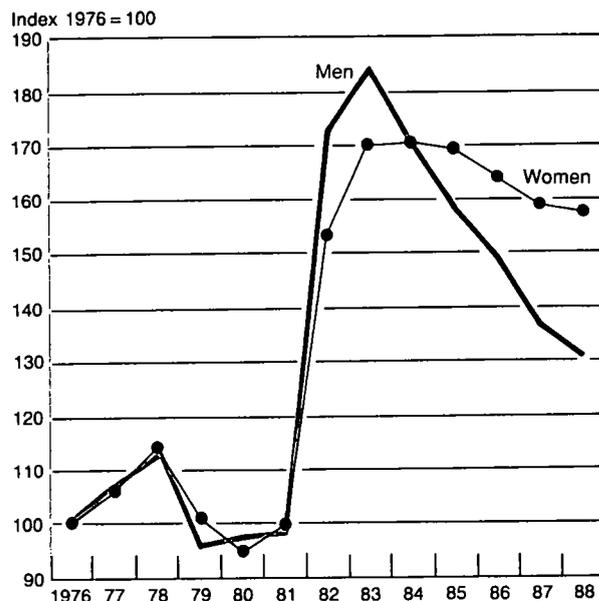
<sup>27</sup>The data on the number of beneficiaries are disaggregated by sex but not by age Chart 9 pertains to those receiving regular benefits, it excludes miscellaneous beneficiaries

<sup>28</sup>See, for instance, Glen G Cain and Harold W Watts, eds, *Income Maintenance and Labor Supply* (Rand McNally, 1973)

States In the 1950s and 1960s, when the bulk of the labor force consisted of primary workers, Canada's more generous UI system did not have a large impact on unemployment<sup>29</sup> Only when the generous Canadian UI system interacted with the increase in the labor force participation of women did the unemployment gap increase significantly This interaction continues to keep Canada's unemployment high, despite a slight tightening of benefits in the late 1970s Although male unemployment in Canada may also be responding to generous UI availability, the response is likely to be weaker, slower, and harder to detect

<sup>29</sup>In Ashenfelter and Card's Canadian unemployment rate series that adjusts the pre-1966 data to post-1966 age definitions ("Why Have Unemployment Rates in Canada and the United States Diverged?"), Canada's rate averages half a percentage point lower than the US unemployment rate between 1954 and 1959 However, before 1960, temporary layoffs were excluded from the definition of unemployed in Canada (see Ken Bennett, "40th Anniversary of the Labour Force Survey," *The Labour Force*, November 1985, which presents the unadjusted series) The exclusion of temporary layoffs may explain why unemployment is substantially lower in Canada than in the United States before 1960, even in the age-adjusted Ashenfelter and Card series In this series, Canada's unemployment increased between 1959 and 1960 by almost a full percentage point from 5.5 percent to 6.4 percent, an increase identical to that in the unadjusted series, although the US rate remained constant at 5.5 percent between those years

Chart 9  
**Male and Female Unemployment Insurance Beneficiaries in Canada**



## Conclusion

The difference between the Canadian and the U.S. unemployment rates, negligible until the late 1960s, has been rising since then. In the 1980s, it averaged a substantial two and a half percentage points. To a large extent, this difference can be traced to more generous Canadian UI provisions and, in particular, to the easier availability of benefits to unemployed persons other than job losers that resulted from the Unemployment Insurance Act of 1971. A comparison of unemployment by reason in both countries leads to this conclusion: Canada's job leaver rate over the period 1975-88 averaged 1.7 percent, about twice that of the United States.

The unemployment gap also reflects in part the interaction between the generous UI system in Canada and

the secular increase in the labor force participation of women. A classification of unemployment by demographic groups reveals that the unemployment gap between the two countries that emerged since the mid-1960s can be largely attributed to adult women. Recent theories of unemployment posit that shocks to unemployment tend to persist because of union power or other factors. However, the analysis presented in this article supports the simpler hypothesis that labor force participation and unemployment in Canada have evolved in response to the country's generous UI system.

Vivek Moorthy

## Appendix: Data Sources

### Canada

The Canadian data used here are from Statistics Canada and can be accessed via the CANSIM Main Base or the Data Resources Incorporated Mini Base. A convenient source, published annually, for most national income accounts and labor force statistics is the *Canadian Economic Observer*, Historical Statistical Supplement, Catalogue 11-210.

All the relevant UI data, some of which is not available in the *Economic Observer*, can be found in *Unemployment Insurance Statistics*, Annual Supplement, Catalogue 71-202. The number of beneficiaries was calculated by dividing the total benefit weeks paid by fifty-two times the number of unemployed. From 1972 on, benefit weeks based on regular benefits (not total benefits) were used. An alternative approach is to use the reported statistic "average number of beneficiaries," which is very similar to the computed average, but this series is available only from 1975 onwards. The ratio of UI income to wage and salary income is published in *Unemployment Insurance Statistics*, Annual Supplement, starting from 1972, and was adjusted to reflect only regular benefits. For the period before 1972, UI income can be computed as the average weekly benefit times the number of weeks paid. Wage and salary income data back to 1950 were provided by Statistics Canada.

The data on unemployment by reason for 1975-83, listed as "Flows into Unemployment," are available from the publication *Labour Force: Annual Averages*, Cata-

logue 71-529, and for succeeding years from the December issue (annual averages) of *Labour Force*, Catalogue 71-001. In 1989, some minor census revisions to the labor force statistics were made; these revisions have been incorporated in some, but not all, the data presented here. The data on unions were provided by Statistics Canada.

### United States

For the United States, data from the Commerce Department's National Income and Product Accounts and data from the Bureau of Labor Statistics' Current Population Survey are available on the major data bases, such as Citibase. The *Economic Report of the President*, published annually, is a convenient textual source for the above data, as well as for the UI benefits data. The reported statistic on the number of beneficiaries was taken from this source. The *Economic Report of the President* does not provide data on supplemental benefits; these and other UI data are available in *Economic Indicators*, published by the Joint Economic Committee for Congress. The *Social Security Bulletin* also provides comprehensive UI data. For the period 1954-80, the data on unions were drawn from the *Handbook of Labor Statistics*, Table 42 (1978); for the period 1981-85, from Ashenfelter and Card, "Why Have Unemployment Rates Diverged?" *Economica*, 1986; and for the period 1986-88, from the January issue of *Employment and Earnings*.