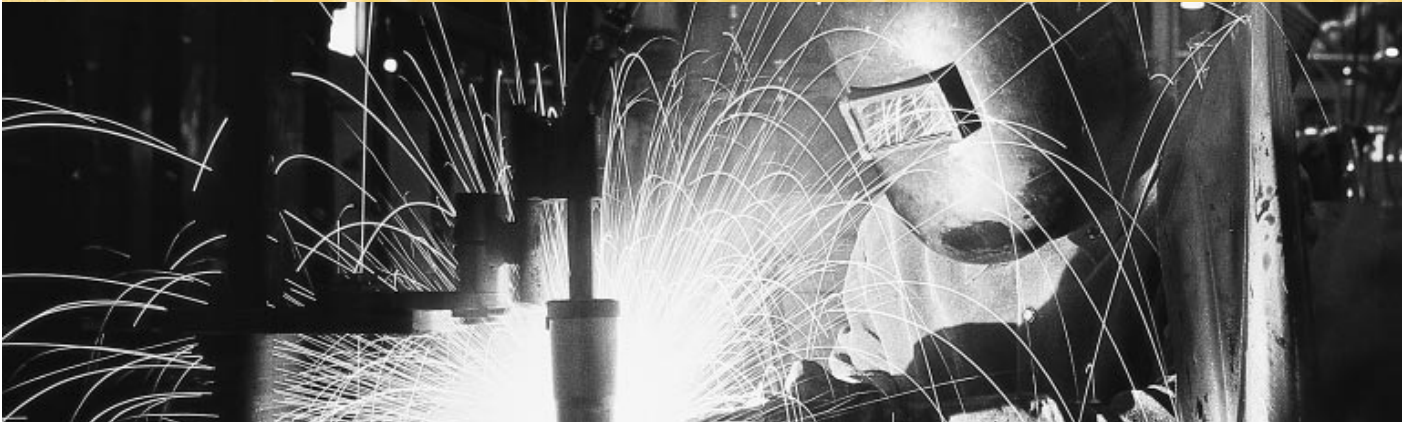




*Jobs Excluded from the
Unemployment Insurance
System in Canada:
An Empirical Investigation*

by Zhengxi Lin



Human Resources
Development Canada

Développement des
ressources humaines Canada

UI and the
Labour Market

Canada

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Unemployment Insurance Evaluation Series

Human Resources Development Canada (HRDC), in its policies and programs, is committed to assisting all Canadians in their efforts to live contributing and rewarding lives and to promote a fair and safe workplace, a competitive labour market with equitable access to work, and a strong learning culture.

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I.H. Midgley
Director General
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Table of Contents

Abstract.....	7
Introduction	9
1. Jobs Excluded from UI Coverage: Evidence and Characteristics	10
2. Determinants of UI-Excluded Jobs	17
3. Conclusion.....	23
Appendix A: Data and Sample	25
Appendix B: Variable Definitions	26
Appendix C: Sample Means and Standard Deviations	28
Appendix D: Proportion of Jobs Excluded from UI Coverage	30
Bibliography	31
List of UI Evaluation Technical Reports	50

List of Tables

Table 1	Jobs by UI Coverage, Canada 1986-1990	10
Table 2	Composition of Jobs Excluded from UI Coverage, Canada 1986-1990	11
Table 3	Distribution of All Jobs and UI-Excluded Jobs, Canada 1986-1990	12
Table 4	Characteristics of Paid Jobs by UI Coverage, Canada, 1986-1990	15
Table 5	Self-Employed Jobs by Type of Job, Canada, 1986-1990	16
Table 6	Estimated Logistic Model on the Probability of UI Coverage Exclusion, Canada, 1986-1990	18
Table 7	Estimated Probability of UI Coverage Exclusion, Canada, 1986-1990	20
Table 8	Estimated Probability of UI-Exclusion: Best and Worst Scenarios, Canada, 1986-1990	22



Abstract

Overall, there was substantial labour market growth in the second half of the 1980's. The total number of jobs grew from 14.1 million in 1986 to 14.8 million in 1990, an increase of over 5 percent. Jobs covered by UI grew from 11.4 million to 11.7 million over the period, a gain of merely 2.4 percent. In contrast, UI-excluded jobs grew at a rate of nearly 16 percent, from 2.7 million in 1986 to 3.15 million in 1990.

The distribution of all jobs in this period reveals a few remarkable patterns. First, employment growth was not evenly distributed across the provinces. The shares for Atlantic Canada and Alberta remained nearly unchanged; those of the two biggest provinces, Quebec and Ontario, each declined by half a percentage point; and those of Manitoba and Saskatchewan also declined slightly. Only British Columbia's share increased, from 11.3 percent in 1986 to 12.5 percent in 1990. Second, the labour market has undergone "age polarization" — the role of young (16-24) and older workers (55 and over) has steadily weakened and that of prime-age workers (25-54) has strengthened. Third, there has been an increase in the importance of education — the share of less educated workers (high school or below) has steadily declined and that of better educated workers (post-secondary or beyond) has increased. Finally, a trend of structural change that has seen the decline of the primary industry and manufacturing sectors and the increasing importance of the service sector — particularly amusement and recreation, business management, personal, and accommodation and food services — has continued into the second half of the 1980's.

UI-excluded jobs as a proportion of all jobs increased from 19.3 percent in 1986 to 21.4 percent in 1990. When this is broken down by components, the number of part-time paid jobs with 15 or fewer hours of work per week grew by 12 percent over the period, from 0.89 million to nearly 1 million. The number of self-employed jobs grew by almost 18 percent, from a little over 1.8 million to nearly 2.2 million.

As compared with paid jobs covered by UI, part-time, paid jobs excluded from UI coverage are more likely to be in smaller firms, less unionized, not covered by job-related pension plans, and less well-paid. However, there were some changes over the period. The gap in the degree of unionization narrowed appreciably, and the discrepancy in job-related pension-plan coverage also improved considerably. But the gap in average hourly wages widened substantially.

Turning to self-employed jobs, if we break them down by type of business, nearly 22 percent were incorporated and had paid help, 6 percent were incorporated and did not have paid help, 16 percent were unincorporated and had paid help, and 51 percent were unincorporated and did not have paid help. In terms of growth over the period, those that were incorporated and did not have paid help experienced the fastest growth, at 44 percent, those that were incorporated and had paid help grew by 16.5 percent, those that were unincorporated and had paid help grew by 14 percent, and those that were unincorporated and did not have paid help grew by 5 percent.

Introduction



The growth of non-standard employment in the Canadian labour market in recent years has attracted increasing attention from the general public and policy-makers. In a recent discussion paper on Social Security Reform (1994), the Government of Canada calls for UI coverage to be extended to non-standard employment in the context of the evaluation of the unemployment insurance system. But before this can be done, a definition of non-standard employment would have to be agreed upon in order to determine eligibility for UI coverage.

The existing literature offers no useful, direct evidence. Previous work (for example, Economic Council of Canada, 1990) has classified self-employment and part-time paid employment as non-standard.¹ Self-employment is currently excluded from UI coverage, as are part-time paid employees with 15 hours or less of work per week. However, those with 15-30 hours of work per week are covered.

The purpose of this study, therefore, is to provide empirical evidence on exclusion from unemployment insurance coverage in Canada. Specifically, the study addresses the following major questions: What is the level and growth pattern of UI-excluded jobs under the current provisions? What are their characteristics? And what are their statistical determinants?

We start by exploring some basic facts about UI-excluded employment in Section 2. In Section 3, we empirically investigate the statistical determinants of UI-exclusion. Finally, in Section 4, we summarize the major findings and make some concluding remarks.

Self-employment is currently excluded from UI coverage, as are part-time paid employees with 15 hours or less of work per week. However those with 15-30 hours of work per week are covered.

¹ Statistics Canada defines employment as part-time if the hours worked are less than 120 per lunar month or 30 per week.



1. Jobs Excluded from UI Coverage

The number of jobs covered by the unemployment insurance system grew from 11.4 million in 1986 to 11.7 million in 1990.

Table 1 reports the distribution of jobs (except those held by full-time students) by their Unemployment Insurance coverage in Canada in 1986-90. This period was the peak of the business cycle after the 1981-83 recession. Although unemployment remained relatively high, the period was marked by strong economic growth. This is reflected in the total number of jobs in the economy — the stock of all jobs grew by over 5 percent in this period, from 14.1 million in 1986 to 14.8 million in 1990. The number of jobs covered by the unemployment insurance system (i.e., paid jobs with more than 15 hours of work per week) grew from 11.4 million in 1986 to 11.7 million in 1990, an increase of merely 2.4 percent, which is much slower than the growth of all jobs. As a result, their proportion of all jobs declined from 80.7 percent to 78.7 percent over the period. The number of jobs excluded from UI coverage (i.e., paid jobs with 15 hours of work or less per week and self-employed jobs) grew much faster — at a rate of nearly 16 percent, from 2.7 million to almost 3.2 million. Consequently, their proportion of all jobs increased from 19.3 percent in 1986 to 21.3 percent in 1990.

Table 1
Jobs by UI Coverage, Canada, 1986-1990

	1986	1987*	1988	1989	1990
Coverage Excluded	2,731,080	3,048,667	3,064,775	3,158,727	3,167,241
% of All Jobs	19.33	20.78	20.26	20.94	21.35
% of 1986	100.00	111.63	112.22	115.66	115.97
Coverage Included	11,395,038	11,625,391	12,063,589	11,928,867	11,668,897
% of All Jobs	80.67	79.22	79.74	79.06	78.65
% of 1986	100.00	102.02	105.87	104.68	102.40
Total	14,126,118	14,674,058	15,128,364	15,087,594	14,836,138
% of 1986	100.00	103.88	107.10	106.81	105.03

* Excluding 12,681 paid jobs with missing hours of work to determine UI coverage.

Components of Jobs Excluded from UI Coverage

Table 2 shows the components of UI-excluded jobs in Canada in 1986-90. The number of paid jobs with 15 hours of work or less per week grew by over 12 percent, from nearly 0.9 million to almost 1 million. Their proportion of all jobs increased from 6.3 percent to 6.7 percent. However, they grew at a slower rate than all UI-excluded jobs. As a result, their share of all UI-excluded jobs dropped from 32.6 percent to 31.5 percent. In comparison, the number of self-employed jobs grew by almost 18 percent, from a little over 1.8 million to nearly 2.2 million. Consequently, their proportion of all jobs increased from 13 percent in 1986 to 14.6 percent in 1990. And their share of UI-excluded jobs increased from 67.4 percent to 68.5 percent.

Table 2
Composition of Jobs Excluded from UI Coverage, Canada, 1986-1990

	1986	1987	1988	1989	1990
Paid Jobs	891,481	1,014,418	988,010	1,014,439	998,538
% of All Jobs	6.31	6.91	6.53	6.72	6.73
% of Coverage Excluded	32.64	33.27	32.24	32.12	31.53
% of 1986	100.00	113.79	110.83	113.79	112.01
Self-Employed Jobs	1,839,599	2,034,249	2,076,765	2,144,288	2,168,703
% of All Jobs	13.02	13.86	13.73	14.21	14.62
% of Coverage Excluded	67.36	66.73	67.76	67.88	68.47
% of 1986	100.00	110.58	112.89	116.56	117.89
Total	2,731,080	3,048,667	3,064,775	3,158,727	3,167,241
% of All Jobs	19.33	20.78	20.26	20.94	21.35
% of 1986	100.00	111.63	112.22	115.66	115.97

Distribution of All Jobs and UI-Excluded Jobs

Table 3 presents the distribution of all jobs and UI-excluded jobs by province, age, educational attainment, and industry in 1986-90. The provincial breakdown of all jobs shows that the relative positions of Atlantic Canada and Alberta in the labour market remained stable throughout the period. Their shares of all jobs changed very little, if at all. The importance of the two biggest provinces, Quebec and Ontario, decreased. Each of their shares of all jobs declined by half a percentage point. Manitoba and Saskatchewan's shares of all jobs also declined, to a lesser degree. Only British Columbia's role in the Canadian economy was strengthened; it accounted for 11.3 percent of all jobs in 1986 and 12.5 percent in 1990, a gain of 1.2 percentage points.

The age distribution of all jobs reveals that the second half of the 1980's witnessed the age polarization of the Canadian labour market. The role of young (16-24) and older workers (55 and over) steadily weakened and that of prime-age workers (25-54) strengthened. Young workers' share of all jobs declined by 3.8 percentage points and older workers' share declined by 0.8 percentage points. Prime-age workers' share of all jobs, on the other hand, increased by 4.6 percentage points.

The second half of the 1980's has also seen an increase in the importance of education in the Canadian labour market. The share of all jobs held by workers with no formal or with only elementary education decreased from nearly 11 percent in 1986 to under 7 percent in 1990, and that of workers with some or complete high school education decreased from over 50 percent to 43 percent. On the other hand, the share of workers with some or complete post-secondary education increased from 24.4 percent to 34.4 percent over the period, and that of workers with university education or beyond increased from 14.5 percent to 15.8 percent.

Table 3
Distribution of All Jobs and UI-Excluded Jobs, Canada, 1986-1990

	All Jobs					UI-Excluded Jobs				
	1986	1987	1988	1989	1990	1986	1987	1988	1989	1990
Province										
Newfoundland	1.9	1.8	1.9	1.9	1.9	1.3	1.4	1.4	1.4	1.5
Prince Edward Island	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5
Nova Scotia	3.0	3.0	3.1	3.1	3.0	2.9	3.0	3.0	2.8	2.7
New Brunswick	2.5	2.5	2.6	2.5	2.5	2.2	2.2	2.1	2.1	2.1
Quebec	23.9	24.0	24.6	24.2	23.4	20.7	21.1	21.4	21.1	19.2
Ontario	38.6	38.6	37.6	37.9	38.1	35.3	34.9	35.7	36.1	36.1
Manitoba	4.3	4.2	4.2	4.0	4.2	5.6	5.4	5.1	4.9	5.5
Saskatchewan	3.9	3.7	3.7	3.6	3.7	6.9	6.3	6.5	5.7	5.9
Alberta	10.2	10.0	10.4	10.1	10.2	11.5	11.3	12.0	11.7	12.6
British Columbia	11.3	11.6	11.4	12.1	12.5	13.1	13.9	12.3	13.6	13.8
Age										
16-24	15.9	15.4	15.2	13.3	12.1	10.1	10.0	9.2	7.7	7.0
25-34	32.5	32.5	33.0	32.8	32.1	27.5	27.1	27.1	26.6	25.6
35-44	25.2	25.8	26.1	27.5	28.4	27.0	27.7	29.7	3.5	30.8
45-54	15.6	15.7	16.0	16.7	17.4	19.0	19.0	19.5	20.6	21.2
55-69	10.8	10.6	9.7	9.7	10.0	16.4	16.2	16.6	14.7	15.3
Education										
Elementary	10.9	10.3	9.6	8.4	6.9	13.9	12.8	11.9	10.4	7.8
High School	50.3	49.7	48.1	41.2	43.0	47.6	46.7	45.4	39.4	40.9
Post-secondary	24.4	25.3	27.0	34.0	34.4	22.8	24.0	24.9	31.9	32.2
University	14.5	14.7	15.2	16.3	15.8	15.7	16.5	17.8	18.4	19.2
Industry										
Primary	6.8	6.6	6.4	6.0	5.8	15.9	14.6	13.9	13.1	13.1
Manufacturing	17.2	17.0	17.2	16.9	16.4	5.1	5.2	5.3	5.3	5.3
Construction	6.8	7.1	7.2	7.5	7.5	9.1	9.1	9.4	9.4	8.9
Transportation	4.5	4.3	4.0	4.3	4.3	3.8	3.8	3.7	3.8	3.9
Communication	2.2	2.2	2.2	2.3	2.2	1.0	1.1	0.8	1.1	1.1
Utilities	0.9	0.9	10.1	10.0	10.0	0.1	0.1	0.2	0.2	0.2
Sales	16.7	16.9	16.6	16.7	16.7	19.8	19.5	19.1	18.5	18.4
Finance & real estate	5.4	5.6	5.5	5.4	5.5	4.1	4.4	3.6	4.2	4.2
Education	6.3	6.3	6.3	6.7	6.5	5.1	5.3	5.6	5.9	5.6
Health	8.2	8.2	8.4	8.5	8.8	7.0	7.2	7.9	8.3	8.3
Service	17.9	18.2	18.3	18.2	18.8	26.8	27.6	28.0	28.2	29.0
Government	7.2	6.7	6.7	6.5	6.4	2.3	2.2	2.4	2.0	2.0

Note: Each category may not sum exactly up to 100 percent due to rounding. Industries are aggregated from LMAS SICs, see Appendix B for details.

Finally, the industrial distribution of all jobs shows that the decline of the primary industry and manufacturing sectors and the growth of the service sector has continued.² The share of primary industries declined from 6.8 percent in 1986 to 5.8 percent in 1990, that of the manufacturing sector declined from 17.2 percent to 16.4 percent, and that of the government sector fell from 7.2 percent to 6.4 percent. On the other hand, the shares of all other sectors either increased or remained

2 The narrower aggregation of services, as in this study, includes religious organizations, amusement and recreation services, services to business management, personal services, accommodation and food services, and miscellaneous services (i.e., SIC 42-47). An alternative, broader aggregation of services, as found in some other works, includes transportation, communication, utilities, sales, finance and real estate, education, health, and welfare services (i.e., from LMAS SIC 31 to 47; see Appendix B). Whichever aggregation is considered, the service sector has grown.

unchanged. Most noticeably, the share of the service sector rose by nearly one full percentage point, from 17.9 percent in 1986 to 18.8 percent in 1990.

Turning to the provincial distribution of UI-excluded jobs, PEI's share remained unchanged throughout the period, and those of Nova Scotia, New Brunswick, Quebec, Manitoba, and Saskatchewan declined. Those of Newfoundland, Ontario, Alberta, and British Columbia, however, increased.

The age distribution of UI-excluded jobs shows a pattern similar to that of all jobs. Between 1986 and 1990, young workers' share of UI-excluded jobs declined by 3.0 percentage points. That of older workers also declined, by 1.1 percentage points. The share of prime-age workers, on the other hand, increased by 4.1 percentage points.

The breakdown of UI-excluded jobs among education groups also shows a pattern similar to that of all jobs. Between 1986 and 1990, the share of workers with no formal or elementary education only decreased by 6.1 percentage points, and that of workers with some or complete high school education decreased by 6.7 percentage points. On the other hand, the share of workers with some or complete post-secondary education increased by 9.4 percentage points and that of workers with university education or beyond increased by 3.5 percentage points.

The industrial distribution of UI-excluded jobs reveals a somewhat different picture from that of all jobs. Between 1986 and 1990, the shares of the primary industry and sales sectors declined by 2.8 and 1.4 percentage points, respectively. The construction and government sectors also declined slightly. On the other hand, the shares of the manufacturing, transportation, communication, utilities, finance and real estate, and education sectors all increased slightly. And the shares of the service and health sectors increased considerably, the former by 2.2 and the latter by 1.3 percentage points.

Characteristics of UI-Excluded, Paid Jobs

Table 4 reports unionization, job-related pension coverage (in addition to CPP or QPP), average hourly wages, and the hourly wage distribution of paid jobs by UI coverage in Canada in 1986-1990. The proportion of unionization among UI-excluded, paid jobs was substantially lower than among those covered by the UI system. However, it grew by over 8 percentage points among those without UI coverage, but there was no growth among those with UI coverage. Consequently, the difference narrowed from 17.9 percentage points in 1986 to 9.7 percentage points in 1990.

The proportion covered by job-related pension plans was also substantially lower among those without UI coverage than among those with it. But it increased faster among those without UI coverage than among those with it, and the difference fell from over 33 percentage points in 1986 to under 29 percentage points in 1990.

On average, paid jobs without UI coverage paid an hourly wage of \$10.45 in 1986 and those with UI coverage paid \$11.11, a difference of 66 cents. Over the period, the average hourly wage rate rose for both types of jobs. However, the

The proportion of unionization among UI-excluded, paid jobs was substantially lower than among those covered by the UI system.

rise was faster among those with UI coverage than those without it; the difference increased to \$1.49 in 1990.

Table 4
Characteristics of Paid Jobs by UI Coverage, Canada, 1986-1990

	1986	1987	1988	1989	1990
% Unionization					
Coverage Excluded	21.0	22.7	25.3	27.2	29.2
Coverage Included	38.9	37.4	38.4	39.2	38.9
Difference	-17.9	-14.7	-13.1	-12.0	-9.7
% Job Pension Covered					
Coverage Excluded	11.2	10.9	12.1	15.2	18.4
Coverage Included	44.5	44.3	45.0	46.9	47.0
Difference	-33.3	-33.4	-32.9	-31.7	-28.6
Mean Hourly Wages (\$)					
Coverage Excluded	10.45	10.43	10.94	11.84	11.92
Coverage Included	11.11	11.62	12.13	12.79	13.41
Difference	-0.66	-1.19	-1.19	-0.95	-1.49
Hourly Wage Distribution (%)					
< \$5.00					
Coverage Excluded	19.6	18.1	12.5	8.1	5.6
Coverage Included	9.4	7.6	6.2	4.3	3.3
\$5.00-9.99					
Coverage Excluded	47.3	44.1	45.7	46.2	43.8
Coverage Included	38.8	37.1	35.0	32.7	30.7
\$10.00-14.99					
Coverage Excluded	18.0	20.1	22.0	22.1	26.0
Coverage Included	30.7	31.7	31.6	32.4	31.4
\$15.00-19.99					
Coverage Excluded	7.1	8.8	9.1	11.4	12.3
Coverage Included	14.0	15.6	17.3	18.3	19.1
\$20.00-24.99					
Coverage Excluded	3.4	3.9	4.3	4.4	5.6
Coverage Included	4.5	5.0	6.0	7.5	9.5
> \$25.00					
Coverage Excluded	4.6	4.9	6.4	7.9	6.7
Coverage Included	2.6	3.0	3.9	4.7	5.9

In terms of hourly wages, paid jobs without UI coverage were more polarized than those with it. In 1986, nearly 67 percent of those without UI coverage paid under \$10, 28 percent paid \$10-25, and almost 5 percent paid over \$25. In contrast, 48 percent of those jobs with UI coverage paid under \$10, 49 percent paid \$10-25, and only 2.6 percent paid over \$25. In 1990, the proportion of jobs without UI coverage paying under \$10 dropped to 49 percent, and the proportion paying over \$25 increased to 6.7 percent. The corresponding proportions of those with UI coverage were 34 and 5.9 percent, respectively.

Types of Self-Employed Jobs

Table 5 reports self-employed jobs by major types of business in Canada in 1986-1990. The total number of self-employed jobs grew from 1.84 million to 2.17 million in the period, an increase of almost 18 percent.

By type of business, nearly 22 percent of self-employed jobs in 1990 were incorporated and had paid help, 6 percent were incorporated and did not have paid help, 16 percent were unincorporated and had paid help, 51 percent were unincorporated and did not have paid help, and the remaining 4 percent had either unpaid family workers or were unspecified. In terms of growth over the period, those that were incorporated and did not have paid help experienced the fastest growth at 44 percent, those that were incorporated and had paid help grew by 16.5 percent, those that were unincorporated and had paid help grew by 14 percent, those that were unincorporated and did not have paid help grew by 5 percent, and those that had unpaid family workers declined by almost 25 percent.

Table 5
Self-Employed Jobs by Type of Job, Canada, 1986-1990

	1986	1987	1988	1989	1990
Unpaid Family Work	105,452	105,281	84,966	89,689	80,548
% of SE Jobs	5.7	5.2	4.1	4.2	3.7
% of 1986	100.00	99.84	80.57	85.05	76.38
Incorporated: Paid Help	405,878	455,425	472,847	477,207	472,597
% of SE Jobs	22.1	22.4	22.8	22.3	21.8
% of 1986	100.00	112.21	116.50	117.57	116.44
Incorporated: No Paid Help	92,645	121,767	122,553	135,257	133,196
% of SE Jobs	5.0	6.0	5.9	6.3	6.1
% of 1986	100.0	131.43	132.28	145.99	143.77
Unincorporated: Paid Help	311,788	336,227	345,769	355,450	354,653
% of SE Jobs	16.9	16.5	16.6	16.6	16.4
% of 1986	100.00	107.84	110.90	114.00	113.75
Unincorporated: No Paid Help	923,836	1,010,427	1,015,750	1,062,585	1,115,051
% of SE Jobs	50.2	49.7	48.9	49.6	51.4
% of 1986	100.00	109.37	109.95	115.02	104.94
Unspecified	n.a.	5,122	34,880	24,099	12,657
% of SE Jobs	n.a.	0.3	1.7	1.1	0.6
% of 1986	n.a.	n.a.	n.a.	n.a.	n.a.
Total	1,839,599	2,034,294	2,076,765	2,144,288	2,168,703
% of 1986	100.00	110.58	112.89	116.56	117.89



2. Determinants of Jobs Excluded from UI Coverage

The highest estimated probability of jobs being excluded from UI coverage is observed in Saskatchewan; it is over twice that of the lowest, observed in Newfoundland.

In this section we empirically investigate the determinants of jobs excluded from UI coverage by estimating the probability of UI-exclusion through non-linear maximum-likelihood logistic regressions.

Let X_{it} denote a vector of explanatory variables and define $Y_{it}=1$ if job i in period t is excluded from UI coverage, and $Y_{it}=0$ otherwise. In the logistic model, the probability of UI-exclusion is given by:

$$\ln\{\Pr(Y_{it}=1)/[1-\Pr(Y_{it}=1)]\} = \beta X_{it}, \text{ or} \quad (1)$$

$$\Pr(Y_{it}=1) = 1/[1+\exp(-\beta X_{it})]. \quad (2)$$

The model is estimated on the full LMAS samples excluding jobs held by full-time students. The vector of explanatory variables X_{it} includes dummy variables on province, workers' age, educational attainment, gender, marital status, and industry. (The data and samples are briefly discussed in Appendix A; variable definitions are itemized in Appendix B; and sample means and standard deviations are presented in Appendix C.)

Estimated Results³

Table 6 reports the regression results of the logistic model. Unlike in OLS models, where the estimated coefficients are the effects of the explanatory variables on the dependent variable, the estimated coefficients of the logistic model cannot be directly interpreted as the effects of the explanatory variables on the probability. Therefore, Table 7 reports the estimated probability of UI-exclusion using these regression results. The dummy variables on the eastern provinces are generally negative and significant and on the western provinces positive and significant, suggesting that jobs in the eastern provinces are less likely and in the western provinces more likely to be excluded from UI coverage than in Ontario, other things being equal. More specifically, the highest estimated probability of jobs being excluded from UI coverage is observed in Saskatchewan; it is over twice that of the lowest, observed in Newfoundland.

The age dummy variables are all positive and significant, and the coefficients increase with age, suggesting that the likelihood of UI-exclusion increases with workers' age, holding other things constant. Indeed, the estimated probability of jobs held by older workers being excluded from UI coverage is more than three times as high as that of jobs held by youths.

³ The models are estimated in SPSS for Windows, Release 6.1.

Table 6
Estimated Logistic Model on the Probability of UI Coverage Exclusion, Canada, 1986-90
(Dependant Variable = 1 if a job is excluded from UI coverage; = 0 otherwise)

Explanatory Variable	1986	1987	1988	1989	1990
Newfoundland	-0.4064* (0.059)	-0.3469* (0.055)	-0.3477* (0.056)	-0.4277* (0.058)	-0.3328* (0.055)
Prince Edward Island	-0.0093 (0.066)	0.0718 (0.062)	-0.0095 (0.067)	-0.0005 (0.067)	-0.1854* (0.071)
Nova Scotia	-0.1043* (0.051)	-0.0108 (0.046)	-0.1028* (0.05)	-0.83 (0.05)	-0.0324 (0.052)
New Brunswick	-0.1752* (0.052)	-0.1218* (0.048)	-0.2847* (0.051)	-0.2815* (0.051)	-0.3041* (0.052)
Quebec	-0.1055* (0.041)	-0.0703 (0.037)	-0.1008* (0.04)	-0.109* (0.041)	-0.174* (0.042)
Manitoba	0.4272* (0.045)	0.4198* (0.04)	0.3388* (0.045)	0.3491* (0.045)	0.4159* (0.046)
Saskatchewan	0.4961* (0.041)	0.5214* (0.038)	0.5975* (0.041)	0.4901* (0.041)	0.4606* (0.042)
Alberta	0.0321 (0.038)	0.068* (0.034)	0.1029* (0.038)	0.1226* (0.037)	0.2092* (0.037)
British Columbia	0.1472* (0.043)	0.1938* (0.038)	0.0498 (0.043)	0.1509* (0.041)	0.1218* (0.041)
Age 25-34	0.3661* (0.041)	0.32* (0.037)	0.3319* (0.041)	0.4051* (0.044)	0.3811* (0.046)
Age 35-44	0.6917* (0.044)	0.6846* (0.04)	0.6999* (0.043)	0.7856* (0.046)	0.776* (0.048)
Age 45-54	0.8995* (0.047)	0.8671* (0.043)	0.8467* (0.046)	0.9373* (0.048)	0.9374* (0.05)
Age 55-69	10.2191* (0.05)	10.2309* (0.045)	10.2553* (0.05)	10.3432* (0.052)	10.3295* (0.054)
High School	-0.0421 (0.036)	-0.0221 (0.033)	-0.0018 (0.03)	0.0293 (0.031)	0.039 (0.032)
Post-secondary	0.0425 (0.041)	0.0844* (0.037)	0.072* (0.03)	0.0643* (0.029)	0.0788* (0.029)
University	0.2556* (0.048)	0.3264* (0.043)	0.2714* (0.039)	0.2299* (0.039)	0.308* (0.04)
Male	-0.2449* (0.025)	-0.1727* (0.023)	-0.2267* (0.025)	-0.2053* (0.025)	-0.1172* (0.025)
Single	-0.3161* (0.034)	-0.2721* (0.03)	-0.3283* (0.034)	-0.3327* (0.035)	-0.3228* (0.035)
Other	-0.4311* (0.046)	-0.3632* (0.041)	-0.2907* (0.043)	-0.4229* (0.044)	-0.3814* (0.045)

Table 6 Continued

Explanatory Variable	1986	1987	1988	1989	1990
Primary	20.5054* (0.055)	20.3792* (0.049)	20.2282* (0.052)	20.3344* (0.053)	20.3562* (0.054)
Construction	10.6612* (0.061)	10.5562* (0.054)	10.4565* (0.057)	10.4815* (0.058)	10.4452* (0.059)
Transportation	10.0818* (0.072)	10.0552* (0.064)	10.0757* (0.069)	10.0762* (0.069)	10.0778* (0.07)
Communication	0.3333* (0.118)	0.3596* (0.099)	0.1425 (0.112)	0.2751* (0.108)	0.4783* (0.105)
Utilities	-0.8838* (0.257)	-10.025* (0.236)	-0.5236* (0.193)	-0.598* (0.203)	-0.6498* (0.203)
Sales	10.5284* (0.054)	10.437* (0.048)	10.3156* (0.05)	10.3624* (0.051)	10.3967* (0.053)
Finance & Real Estate	0.9116* (0.074)	0.864* (0.064)	0.7705* (0.07)	0.9192* (0.069)	0.9184* (0.071)
Education	0.6387* (0.07)	0.6525* (0.061)	0.6077* (0.065)	0.71* (0.065)	0.7139* (0.066)
Health	0.749* (0.065)	0.7995* (0.057)	0.7076* (0.06)	0.8456* (0.06)	0.8823* (0.061)
Service	10.842* (0.054)	10.8347* (0.047)	10.7576* (0.05)	10.8301* (0.051)	10.8716* (0.052)
Government	-0.0292 (0.077)	-0.1895* (0.072)	-0.1231 (0.074)	-0.0971 (0.075)	-0.2253* (0.081)
Constant	-30.0329* (0.073)	-30.0214* (0.066)	-20.9004* (0.065)	-30.0161* (0.068)	-30.0942* (0.071)
Statistics					
N	53,827.0	63,860.0	54,655.0	53,342.0	51,519.0
% Right Prediction	79.4	78.7	79.0	78.1	77.6
-2 LL (0)	572,180.4	690,230.9	584,220.3	583,490.5	568,910.3
-2 LL Function	500,750.7	610,370.9	518,150.3	515,900.7	502,320.5

Note: Standard errors are given in parentheses. * indicates significance at 5 percent.

Table 7
Estimated Probability of UI Coverage Exclusion, Canada, 1986-90

	1986	1987	1988	1989	1990
Province					
Newfoundland	0.0311	0.0333	0.0372	0.0310	0.0315
Prince Edward Island	0.0460	0.0465	0.0521	0.0467	0.0363
Nova Scotia	0.0461	0.0465	0.0473	0.0467	0.0433
New Brunswick	0.0389	0.0411	0.0397	0.0357	0.0323
Quebec	0.0416	0.0465	0.0474	0.0421	0.0367
Ontario	0.0460	0.0465	0.0521	0.0467	0.0433
Manitoba	0.0688	0.0690	0.0717	0.0649	0.0643
Saskatchewan	0.0733	0.0759	0.0909	0.0741	0.0670
Alberta	0.0460	0.0496	0.0575	0.0525	0.0529
British Columbia	0.0529	0.0559	0.0521	0.0539	0.0487
Age					
16-24	0.0460	0.0465	0.0521	0.0467	0.0433
25-34	0.0650	0.0625	0.0712	0.0684	0.0622
35-44	0.0878	0.0881	0.0997	0.0970	0.0896
45-54	0.1059	0.1039	0.1137	0.1112	0.1037
55-69	0.1398	0.1430	0.1618	0.1580	0.1462
Education					
Elementary	0.0460	0.0465	0.0521	0.0467	0.0433
High School	0.0460	0.0465	0.0521	0.0467	0.0433
Post-secondary	0.0460	0.0504	0.0558	0.0497	0.0467
University	0.0586	0.0633	0.0673	0.0581	0.0581
Gender					
Male	0.0363	0.0394	0.0420	0.0384	0.0387
Female	0.0460	0.0465	0.0521	0.0467	0.0433
Marital Status					
Married	0.0460	0.0465	0.0521	0.0467	0.0433
Single	0.0339	0.0358	0.0381	0.0339	0.0318
Other	0.0304	0.0328	0.0395	0.0311	0.0300
Industry					
Primary	0.0460	0.0465	0.0521	0.0467	0.0433
Manufacturing	0.3711	0.3447	0.3380	0.3359	0.3234
Construction	0.2023	0.1877	0.1909	0.1773	0.1612
Transportation	0.1244	0.1228	0.1389	0.1257	0.1175
Communication	0.0630	0.0653	0.0521	0.0606	0.0681
Utilities	0.0195	0.0172	0.0316	0.0262	0.0231
Sales	0.1818	0.1702	0.1701	0.1606	0.1548
Finance & real estate	0.1070	0.1036	0.1062	0.1094	0.1019
Education	0.0836	0.0856	0.9170	0.0906	0.0847
Health	0.0925	0.0978	0.1004	0.1024	0.0987
Service	0.2331	0.2338	0.2418	0.2340	0.2275
Government	0.0460	0.0388	0.0521	0.0467	0.0349

Note: Variables statistically insignificantly different from zero at the 5 percent level are treated the same as the control case. The probability for each category is calculated by holding all other categories constant. For example, the probability for each of the provinces is calculated for female workers who are married, 16-24 years old with elementary education, and in manufacturing. This is done to simplify the calculations. Readers should note that the probability of UI exclusion can vary across any other hypothetical combinations of attributes and be estimated using the regression results.

... jobs held by male workers are less likely to be excluded from UI coverage than those held by female workers

The dummy variable on “high school” is not significant, but those on “post-secondary” and “university” are positive and significant, indicating that jobs held by better educated workers are more likely to be excluded from UI coverage than those held by less educated workers, other things being equal. For example, the estimated probability of jobs being excluded from UI coverage among workers with university education was 5.8 percent in 1990, about 1.5 percentage points higher than among workers with elementary or high school education. At first this sounds counter-intuitive, as more education usually results in better labour market outcomes. However, it can be explained by the fact that over two-thirds of the UI-excluded jobs are self-employed jobs (see Table 2), and there is a positive relationship between self employment and education (see for example, Lin, 1993; Rees and Shah, 1986).

The dummy variable on “male” is negative and significant, suggesting that jobs held by male workers are less likely to be excluded from UI coverage than those held by female workers, other things being held constant. The dummy variables on “single” and “other marital status” are both negative and significant, indicating that jobs held by unmarried workers are less likely to be excluded from UI coverage than those held by married workers, other things being equal.

The industry dummy variables are all positive and significant except “utilities,” which is negative and significant, and “government,” which is negative and mostly insignificant. This suggests that compared with the manufacturing sector, jobs in the utilities and government sectors are less likely and in all other sectors more likely to be excluded from UI coverage, other things being equal. As can be seen in Table 6, the estimated probability of jobs being excluded from UI coverage varies greatly across industries, ranging from as high as over 32 and 22 percent in the primary industries and service sectors to as low as around 2.3 and 4.3 percent in the utilities and manufacturing sectors.

Best and Worst Scenarios

Table 8 shows the estimated probability of jobs being excluded from UI coverage under two extreme cases — the best scenario, which associates the hypothetical combination of characteristics with the lowest estimated probability of UI-exclusion, and the worst scenario, which associates the hypothetical combination of characteristics with the highest estimated probability of UI-exclusion.⁴ A job under the best scenario has almost no chance of being excluded from UI coverage; the probability valued under 0.7 percent in 1986. On the other hand, a job under the worst scenario is almost certain to be excluded from UI coverage; its probability valued nearly 81 percent in the same year.

Although the estimated probabilities varied over time and the gap narrowed somewhat over the period, the difference between the two extreme scenarios remained remarkably large. In 1990, the estimated probability of UI-exclusion was just a little over 1 percent under the best scenario compared with 72.5 percent under the worst scenario.

⁴ These extreme cases are purely hypothetical. They are presented as examples only. In reality, these combinations of characteristics may not exist.

Table 8
Estimated Probability of UI-Exclusion: Best and Worst Scenarios, Canada, 1986-1990

Scenario	1986	1987	1988	1989	1990
Best	0.0067	0.0072	0.0135	0.0093	0.0102
Worst	0.8085	0.8079	0.8103	0.7992	0.7247

Note: These scenarios are constructed based on the logistic regression results. The best scenario consists of the following hypothetical combination of characteristics: the job is in the utilities sector in Newfoundland, held by an unmarried male who is 16-24 years old and has an elementary or high school education. The worst scenario consists of the following hypothetical combination of characteristics: the job is in the primary sector in Saskatchewan, held by a married female who is 55-69 years old and has a university education.



The likelihood of a job being excluded from UI coverage varies significantly across provinces; increases with workers' age; is more prevalent among better educated workers, females, and married workers; and varies substantially across industries.

3. Conclusion

Contrary to the conventional wisdom, our data show that UI coverage in Canada is far from universal. In 1986, close to 0.9 million paid jobs with 15 or fewer hours of work per week and over 1.8 million self-employed jobs — amounting to 19.3 percent of all jobs in the economy — were excluded from unemployment insurance coverage. By 1990, almost 3.2 million jobs (1 million paid jobs with 15 or fewer hours of work per week and 2.2 million self-employed jobs), or 21.4 percent of all jobs in the economy, were excluded.

Given the magnitude of UI-exclusion,⁵ extending coverage to jobs that are currently excluded as part of the reform of the UI system would have a far-reaching impact on the Canadian economy and society. While this impact is an important and interesting topic for future research, it is beyond the scope of the present investigation. Our conclusions on UI-excluded jobs may be summarized as follows.

Patterns of UI-Excluded Jobs

UI-excluded jobs grew by nearly 16 percent in 1986-90, from 2.7 million to 3.15 million. And the proportion of all jobs increased from 19.3 percent to 21.4 percent. Broken down by components, part-time, paid jobs with 15 or fewer hours of work per week grew by 12 percent, from 0.89 million to nearly 1 million over the period. Self-employed jobs grew by almost 18 percent, from a little over 1.8 million in 1986 to nearly 2.2 million in 1990.

The provincial distribution of UI-excluded jobs in this period shows that while Prince Edward Island's share remained unchanged, those of Nova Scotia, New Brunswick, Quebec, Manitoba, and Saskatchewan declined, and those of Newfoundland, Ontario, Alberta, and British Columbia increased. The age distribution reveals that the shares of young and older workers declined, but that of prime-age workers increased. The education distribution shows that the share of less educated workers decreased, but that of better educated workers increased. The industrial distribution reveals that while the shares of the primary industries, sales, construction, and government sectors declined, those of the manufacturing, transportation, communication, utilities, finance and real estate, and education sectors all increased slightly, and those of the service and health sectors of UI-excluded jobs increased considerably.

As compared with paid jobs covered by UI, part-time, paid, UI-excluded jobs are more likely to be in smaller outfits, less likely to be unionized and covered by job-related pension plans, and less well-paid. However, there were changes over the period. The gap in the degree of unionization narrowed appreciably, and the discrepancy in job-related pension-plan coverage also improved remarkably. But the difference in average hourly wage rates widened substantially.

⁵ The total number of workers excluded from UI coverage is probably somewhat smaller because i) some workers hold more than one job at the same time, and ii) some of those holding multiple jobs are covered by the UI system through their principal job. To determine the exact number of workers excluded from UI coverage one would have to match jobs with workers using the LMAS person files.

Breaking down self-employed jobs in 1990 by type of business, nearly 22 percent were incorporated and had paid help, 6 percent were incorporated and did not have paid help, 16 percent were unincorporated and had paid help, and 51 percent were unincorporated and did not have paid help. In terms of growth in 1986-90, those that were incorporated and did not have paid help experienced the fastest growth at 44 percent, those that were incorporated and had paid help grew by 16.5 percent, those that were unincorporated and had paid help grew by 14 percent, and those that were unincorporated and did not have paid help grew by 5 percent.

Determinants of UI-Excluded Jobs

Logistic regression results on the determinants of UI-exclusion indicate that the likelihood of a job being excluded from UI coverage varies significantly across provinces; increases with workers' age; is more prevalent among better educated workers, females, and married workers; and varies substantially across industries.

Based on the impact of the probability of a job being excluded from UI coverage, the following ranks the explanatory variables from the highest to the lowest: province — Saskatchewan, Manitoba, Alberta, British Columbia, Ontario, Nova Scotia, Quebec, Prince Edward Island, New Brunswick, Newfoundland; age — 55 and over, 45-54, 35-44, 25-34, 16-24; education — university, post-secondary, high school, elementary; gender — female, male; marital status — married, single, unspecified; industry — primary, service, construction, sales, transportation, finance and real estate, health, education, communication, manufacturing, government, utilities.



Appendix A: Data and Sample

The data employed in this study are extracted from the annual job files of Statistics Canada's Labour Market Activity Survey (LMAS). The LMAS is an annual survey, administered to five of the six rotation groups interviewed for the Statistics Canada's monthly Labour Force Survey (LFS). It is, therefore, a stratified random sample of Canadian individuals. For each relevant year, the LMAS covers all people who are civilian, noninstitutionalized, 16-69 years of age (inclusive), and who are residents of Canada's 10 provinces but not living on an Indian reserve. Respondents are interviewed in January/February of each year on various demographic and household characteristics as they applied to the previous year: school attendance and training, labour market participation, employment, earnings, work patterns, characteristics of up to five jobs, and job search activities are some of the areas covered. (For further details on the LMAS, see *The Labour Market Activity Survey: Microdata Users Guide*, Statistics Canada.)

The data cover the period 1986-90. Since full-time students are not regular labour market participants, jobs held by full-time students were excluded.

Appendix B: Variable Definitions



Table B.1
Variable Definitions

Newfoundland	= 1 if the job was in Newfoundland
Prince Edward Island	= 1 if the job was in Prince Edward Island
Nova Scotia	= 1 if the job was in Nova Scotia
New Brunswick	= 1 if the job was in New Brunswick
Quebec	= 1 if the job was in Quebec
Ontario	= 1 if the job was in Ontario
Manitoba	= 1 if the job was in Manitoba
Saskatchewan	= 1 if the job was in Saskatchewan
Alberta	= 1 if the job was in Alberta
British Columbia	= 1 if the job was in British Columbia
Age 16-24	= 1 if the worker was 16 to 24 years of age
Age 25-34	= 1 if the worker was 25 to 34 years of age
Age 35-44	= 1 if the worker was 35 to 44 years of age
Age 45-54	= 1 if the worker was 45 to 54 years of age
Age 55-69	= 1 if the worker was 55 to 69 years of age
Elementary	= 1 if the worker had elementary education
High School	= 1 if the worker had high school education
Post-secondary	= 1 if the worker had post-secondary education
University	= 1 if the worker had university education
Male	= 1 if the worker was male
Female	= 1 if the worker was female
Married	= 1 if the worker was married
Single	= 1 if the worker was single
Other	= 1 if the worker's marital status was not specified
Primary	= 1 if the job's SIC = 1 to 8
Manufacturing	= 1 if the job's SIC = 9 to 28
Construction	= 1 if the job's SIC = 29, 30, 52
Transportation	= 1 if the job's SIC = 31, 32
Communication	= 1 if the job's SIC = 33
Utilities	= 1 if the job's SIC = 34
Sales	= 1 if the job's SIC = 35, 36
Finance & real estate	= 1 if the job's SIC = 37 to 39
Education	= 1 if the job's SIC = 40
Health	= 1 if the job's SIC = 41
Services	= 1 if the job's SIC = 42 to 47
Government	= 1 if the job's SIC = 48 to 51

Table B.2
LMAS Industry Coding

1 Agriculture	27 Chemical and chemical products
2 Forestry	28 Miscellaneous manufacturing
3 Fishing and trapping	29 General contractors
4 Metal mines	30 Special-trades contractors
5 Mineral fuels	31 Transportation
6 Non-metal mines	32 Storage
7 Quarries and sand pits	33 Communication
8 Services incidental to mining	34 Electric power, gas and water utilities
9 Food and beverage	35 Wholesale trade
10 Tobacco products	36 Retail trade
11 Rubber and plastic products	37 Finance
12 Leather	38 Insurance carriers
13 Textile	39 Insurance agencies and real estate
14 Knitting mills	40 Education and related
15 Clothing	41 Health and welfare services
16 Wood	42 Religious organizations
17 Furniture and fixture	43 Amusement and recreation services
18 Paper and allied	44 Services to business management
19 Printing-publishing and allied	45 Personal services
20 Primary metal	46 Accommodation and food services
21 Metal fabricating	47 Miscellaneous services
22 Machinery	48 Federal administration
23 Transportation equipment	49 Provincial administration
24 Electrical products	50 Local administration
25 Non-metallic mineral products	51 Other government offices
26 Petroleum and coal products	52 Services incidental to construction

* SIC : Standard Industrial Classification

Appendix C Sample Means and Standard Deviations



**Table C.1
Sample Means and Standard Deviations**

	1986	1987	1988	1989	1990
Dependent Variable	0.22 (0.42)	0.23 (0.42)	0.23 (0.42)	0.24 (0.42)	0.24 (0.43)
Newfoundland	0.06 (0.24)	0.05 (0.22)	0.06 (0.24)	0.06 (0.24)	0.06 (0.24)
Prince Edward Island	0.03 (0.18)	0.03 (0.17)	0.03 (0.17)	0.03 (0.17)	0.03 (0.17)
Nova Scotia	0.07 (0.25)	0.07 (0.25)	0.07 (0.26)	0.07 (0.26)	0.07 (0.25)
New Brunswick	0.07 (0.26)	0.07 (0.25)	0.08 (0.27)	0.08 (0.26)	0.07 (0.26)
Quebec	0.14 (0.35)	0.14 (0.35)	0.14 (0.35)	0.14 (0.35)	0.13 (0.34)
Ontario	0.20 (0.40)	0.20 (0.40)	0.19 (0.39)	0.19 (0.39)	0.19 (0.39)
Manitoba	0.08 (0.27)	0.08 (0.28)	0.07 (0.26)	0.08 (0.27)	0.08 (0.26)
Saskatchewan	0.10 (0.30)	0.09 (0.29)	0.09 (0.29)	0.10 (0.29)	0.10 (0.30)
Alberta	0.15 (0.36)	0.16 (0.37)	0.15 (0.36)	0.16 (0.36)	0.16 (0.36)
British Columbia	0.10 (0.30)	0.10 (0.30)	0.10 (0.30)	0.10 (0.31)	0.11 (0.31)
Age 16-24	0.16 (0.36)	0.15 (0.36)	0.15 (0.36)	0.13 (0.33)	0.12 (0.32)
Age 25-34	0.32 (0.47)	0.32 (0.47)	0.32 (0.47)	0.32 (0.47)	0.30 (0.46)
Age 35-44	0.26 (0.44)	0.26 (0.44)	0.27 (0.44)	0.28 (0.45)	0.29 (0.46)
Age 45-54	0.16 (0.36)	0.16 (0.36)	0.16 (0.37)	0.17 (0.38)	0.18 (0.38)
Age 55-69	0.11 (0.31)	0.11 (0.31)	0.10 (0.30)	0.10 (0.30)	0.10 (0.30)
Elementary	0.13 (0.33)	0.12 (0.32)	0.11 (0.31)	0.10 (0.30)	0.08 (0.27)
High School	0.52 (0.50)	0.51 (0.50)	0.51 (0.50)	0.44 (0.50)	0.45 (0.50)
Post-secondary	0.23 (0.42)	0.24 (0.43)	0.26 (0.44)	0.33 (0.47)	0.34 (0.47)
University	0.12 (0.32)	0.13 (0.33)	0.12 (0.33)	0.13 (0.34)	0.13 (0.34)

Table C.1 Continued

	1986	1987	1988	1989	1990
Male	0.57 (0.50)	0.56 (0.50)	0.56 (0.50)	0.55 (0.50)	0.55 (0.50)
Female	0.43 (0.50)	0.44 (0.50)	0.44 (0.50)	0.45 (0.50)	0.45 (0.50)
Married	0.72 (0.45)	0.71 (0.45)	0.73 (0.45)	0.74 (0.44)	0.74 (0.44)
Single	0.21 (0.40)	0.22 (0.41)	0.20 (0.40)	0.19 (0.39)	0.19 (0.39)
Other	0.07 (0.26)	0.07 (0.26)	0.07 (0.26)	0.07 (0.26)	0.07 (0.26)
Primary	0.12 (0.32)	0.11 (0.31)	0.11 (0.31)	0.11 (0.31)	0.11 (0.31)
Manufacturing	0.14 (0.35)	0.14 (0.35)	0.14 (0.35)	0.14 (0.35)	0.14 (0.34)
Construction	0.07 (0.26)	0.07 (0.26)	0.08 (0.26)	0.08 (0.27)	0.08 (0.27)
Transportation	0.05 (0.21)	0.04 (0.21)	0.04 (0.20)	0.04 (0.20)	0.04 (0.21)
Communication	0.02 (0.13)	0.02 (0.14)	0.02 (0.14)	0.02 (0.14)	0.02 (0.14)
Utilities	0.01 (0.10)	0.01 (0.10)	0.01 (0.10)	0.01 (0.10)	0.01 (0.10)
Sales	0.17 (0.37)	0.17 (0.37)	0.16 (0.37)	0.16 (0.37)	0.16 (0.37)
Finance & Real Estate	0.04 (0.20)	0.05 (0.21)	0.04 (0.21)	0.05 (0.21)	0.05 (0.21)
Education	0.07 (0.25)	0.07 (0.25)	0.07 (0.25)	0.07 (0.25)	0.07 (0.25)
Health	0.08 (0.28)	0.08 (0.28)	0.08 (0.28)	0.09 (0.28)	0.09 (0.29)
Service	0.16 (0.37)	0.17 (0.38)	0.17 (0.37)	0.17 (0.37)	0.17 (0.38)
Government	0.08 (0.27)	0.07 (0.26)	0.07 (0.26)	0.07 (0.25)	0.07 (0.25)
Sample Size	53,827	63,860	54,655	53,342	51,519

Appendix D: Proportion of Jobs Excluded from UI Coverage



**Table D.1
Proportion of Jobs Excluded from UI Coverage, Canada, 1986-1990**

	1986	1987	1988 Percent	1989	1990
Province					
Newfoundland	14.0	15.4	14.8	15.6	17.1
Prince Edward Island	22.3	24.2	23.2	25.3	21.4
Nova Scotia	18.3	20.4	19.1	19.3	19.4
New Brunswick	17.0	18.2	16.8	17.2	17.6
Quebec	16.7	18.3	17.6	18.3	17.5
Ontario	17.7	18.8	19.3	19.9	20.2
Manitoba	25.2	26.6	24.7	25.8	28.2
Saskatchewan	33.8	35.2	35.2	33.0	34.3
Alberta	21.7	23.5	23.3	24.3	26.4
British Columbia	22.5	24.9	22.0	23.4	23.6
Age					
16-24	12.1	13.5	12.3	12.1	12.4
25-34	16.4	17.3	16.6	17.0	17.0
35-44	20.8	22.4	23.1	23.3	23.2
45-54	23.5	25.1	24.6	25.7	26.0
55-69	29.5	31.8	30.4	31.6	32.6
Education					
Elementary	24.7	25.7	25.0	25.7	24.2
High School	18.3	19.5	19.1	20.0	20.3
Post-secondary	18.1	19.7	18.7	19.6	20.0
University	20.9	23.4	23.7	23.6	26.0
Gender					
Male	19.0	20.7	19.9	20.4	21.6
Female	19.8	20.9	20.8	21.5	21.0
Marital Status					
Married	21.4	22.8	22.1	23.0	23.4
Single	13.3	15.2	14.7	14.9	15.2
Other	18.3	19.5	20.8	20.5	21.5
Industry					
Primary	45.0	46.1	43.9	46.1	48.0
Manufacturing	5.7	6.3	6.3	6.6	7.0
Construction	26.0	26.5	26.4	26.1	25.3
Transportation	16.2	18.6	18.8	18.6	19.2
Communication	9.0	10.1	7.7	9.7	10.7
Utilities	2.1	2.7	4.2	4.1	3.9
Sales	23.0	24.0	23.2	23.3	23.5
Finance & real estate	14.7	16.3	13.4	16.0	16.2
Education	15.5	17.3	17.8	18.4	18.3
Health	16.4	18.1	19.1	20.3	20.2
Service	28.9	31.4	30.9	32.5	33.0
Government	6.2	6.8	7.3	6.5	6.5



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List of UI Evaluation Technical Reports



Unemployment Insurance Evaluation

In the spring of 1993, a major evaluation of UI Regular Benefits was initiated. This evaluation consists of a number of separate studies, conducted by academics, departmental evaluators, and outside agencies such as Statistics Canada. Many of these studies are now completed and the Department is in the process of preparing a comprehensive evaluation report.

Listed below are the full technical reports. Briefs of the full reports are also available separately. Copies can be obtained from:

Human Resources Development Canada
Enquiries Centre
140 Promenade du Portage
Phase IV, Level 0
Hull, Quebec
K1A 0J9

Fax: (819) 953-7260

UI Impacts on Employer Behaviour

- **Unemployment Insurance, Temporary Layoffs and Recall Expectations**
M. Corak, Business and Labour Market Analysis Division, Statistics Canada, 1995. (*Evaluation Brief #8*).
- **Firms, Industries, and Cross-Subsidies: Patterns in the Distribution of UI Benefits and Taxes**
M. Corak and W. Pyper, Business and Labour Market Analysis Division, Statistics Canada, 1995. (*Evaluation Brief #16*)
- **Employer Responses to UI Experience Rating: Evidence from Canadian and American Establishments**
G. Betcherman and N. Leckie, Ekos Research Associates, 1995. (*Evaluation Brief #21*)

UI Impacts on Worker Behaviour

- **Qualifying for Unemployment Insurance: An Empirical Analysis of Canada**
D. Green and C. Riddell, Economics Department, University of British Columbia, 1995. (*Evaluation Brief #1*)
- **Unemployment Insurance and Employment Durations: Seasonal and Non-Seasonal Jobs**
D. Green and T. Sargent, Economics Department, University of British Columbia, 1995. (*Evaluation Brief #19*)
- **Employment Patterns and Unemployment Insurance**
L. Christofides and C. McKenna, Economics Department, University of Guelph, 1995. (*Evaluation Brief #7*)

- **State Dependence and Unemployment Insurance**
T. Lemieux and B. MacLeod, Centre de recherche et développement en économique, Université de Montréal, 1995. (*Evaluation Brief #4*)
- **Unemployment Insurance Regional Extended Benefits and Employment Duration**
C. Riddell and D. Green, Economics Department, University of British Columbia, 1995. (*Evaluation Brief #24*)
- **Seasonal Employment and the Repeat Use of Unemployment Insurance**
L. Wesa, Insurance Programs Directorate, HRDC, 1995. (*Evaluation Brief #24*)

UI Macroeconomic Stabilization

- **The UI System as an Automatic Stabilizer in Canada**
P. Dungan and S. Murphy, Policy and Economic Analysis Program, University of Toronto, 1995. (*Evaluation Brief #5*)
- **Canada's Unemployment Insurance Program as an Economic Stabilizer**
E. Stokes, WEFA Canada, 1995. (*Evaluation Brief #6*)

UI and the Labour Market

- **Unemployment Insurance and Labour Market Transitions**
S. Jones, Economics Department, McMaster University, 1995. (*Evaluation Brief #22*)
- **Unemployment Insurance and Job Search Productivity**
P.-Y. Crémieux, P. Fortin, P. Storer and M. Van Audenrode, Département des Sciences économiques, Université du Québec à Montréal, 1995. (*Evaluation Brief #3*)
- **Effects of Benefit Rate Reduction and Changes in Entitlement (Bill C-113) on Unemployment, Job Search Behaviour and New Job Quality**
S. Jones, Economics Department, McMaster University, 1995. (*Evaluation Brief #20*)
- **Jobs Excluded from the Unemployment Insurance System in Canada: An Empirical Investigation**
Z. Lin, Insurance Programs Directorate, HRDC, 1995. (*Evaluation Brief #15*)
- **Effects of Bill C-113 on UI Take-up Rates**
P. Kuhn, Economics Department, McMaster University, 1995. (*Evaluation Brief #17*)
- **Implication of Extending Unemployment Insurance Coverage to Self-Employment and Short Hours Work Week: A Micro-Simulation Approach**
L. Osberg, S. Phipps and S. Erksoy, Economics Department, Dalhousie University, 1995. (*Evaluation Brief #25*)

- **The Impact of Unemployment Insurance on Wages, Search Intensity and the Probability of Re-employment**
P.-Y. Crémieux, P. Fortin, P. Storer and M. Van Audenrode, Département des Sciences économiques, Université du Québec à Montréal, 1995. (*Evaluation Brief #27*)

UI and Social Assistance

- **The Interaction of Unemployment Insurance and Social Assistance**
G. Barrett, D. Doiron, D. Green and C. Riddell, Economics Department, University of British Columbia, 1995. (*Evaluation Brief #18*)
- **Job Separations and the Passage to Unemployment and Welfare Benefits**
G. Wong, Insurance Programs Directorate, HRDC, 1995. (*Evaluation Brief #9*)
- **Interprovincial Labour Mobility in Canada: The Role of Unemployment Insurance, Social Assistance and Training**
Z. Lin, Insurance Programs Directorate, HRDC, 1995. (*Evaluation Brief #26*)

UI, Income Distribution and Living Standards

- **The Distributional Implications of Unemployment Insurance: A Micro-Simulation Analysis**
S. Erksoy, L. Osberg and S. Phipps, Economics Department, Dalhousie University, 1995. (*Evaluation Brief #2*)
- **Income and Living Standards During Unemployment**
M. Browning, Economics Department, McMaster University, 1995. (*Evaluation Brief #14*)
- **Income Distributional Implications of Unemployment Insurance and Social Assistance in the 1990s: A Micro-Simulation Approach**
L. Osberg and S. Phipps, Economics Department, Dalhousie University, 1995. (*Evaluation Brief #28*)
- **Studies of the Interaction of UI and Welfare using the COEP Dataset**
M. Browning, P. Kuhn and S. Jones, Economics Department, McMaster University, 1995.

Final Report

- **Evaluation of Canada's Unemployment Insurance System: Final Report**
G. Wong, Insurance Programs Directorate, HRDC, 1995.