

# UI

## *Interprovincial Labour Mobility in Canada: The Role of Unemployment Insurance and Social Assistance*

by Zhengxi Lin



Human Resources  
Development Canada

Développement des  
ressources humaines Canada

UI and  
Social Assistance



Canada

August 1995

Publication également disponible en français.

IN-AH-220E-08-95



Printed on recycled paper



*Interprovincial Labour  
Mobility in Canada:  
The Role of  
Unemployment Insurance  
and Social Assistance*

**by Zhengxi Lin**

Human Resources Development Canada

UI and Social Assistance

## **Acknowledgements**

This is the twenty-first in a series of papers sponsored by Human Resources Development Canada (HRDC). The author would like to thank Ging Wong and Tom Siedule for many helpful discussions, suggestions and comments. The paper is written in a personal capacity and does not necessarily represent the views of HRDC.

## **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.

To ensure that public money is well spent in pursuit of this mission, HRDC rigorously evaluates the extent to which its programs are achieving their objectives. To do this, the Department systematically collects information to evaluate the continuing rationale, net impacts and effects, and alternatives for publicly-funded activities. Such knowledge provides a basis for measuring performance and the retrospective lessons learned for strategic policy and planning purposes.

As part of this program of evaluative research, the Department has developed a major series of studies contributing to an overall evaluation of UI Regular Benefits. These studies involved the best available subject-matter experts from seven Canadian universities, the private sector and Departmental evaluation staff. Although each study represented a stand alone analysis examining specific UI topics, they are all rooted in a common analytical framework. The collective wisdom provides the single most important source of evaluation research on unemployment insurance ever undertaken in Canada and constitutes a major reference.

The Unemployment Insurance Evaluation Series makes the findings of these studies available to inform public discussion on an important part of Canada's social security system.

I.H. Midgley  
*Director General*  
*Evaluation Branch*

Ging Wong  
*Director*  
*Insurance Programs*



## *Table of Contents*

Abstract .....	7
Introduction .....	9
1. Inter-Provincial Labour Mobility: Facts and Patterns .....	11
2. Characteristics of Movers, Policy Interventions and Economic Returns .....	18
3. Return Mobility: Facts and Characteristics .....	26
4. Determinants of Inter-Provincial Labour Mobility .....	29
5. Conclusion .....	35
Appendix A: Logit Model Analysis .....	39
Appendix B: Variable Definitions .....	40
Appendix C: Sample Means and Standard Deviations .....	41
Bibliography .....	42
List of UI Evaluation Technical Reports.....	43

## List of Tables

Table 1	Interprovincial Migration by Province of Origin .....	11
Table 2	Provincial Distribution of Interprovincial Migrants and the Adult Population .....	12
Table 3	Interprovincial Migration Flows in Canada, 1989 .....	13
Table 4	Interprovincial Migration Flows in Canada, 1990 .....	14
Table 5	Destinations of Interprovincial Migrants by Province of Origin, Canada, 1989 .....	15
Table 6	Destinations of Interprovincial Migrants by Province of Origin, Canada, 1990 .....	16
Table 7	Reason for Moving to Another Province by Gender .....	17
Table 8	Mobility Rates and the Distribution of Interprovincial Migrants and the Adult Population .....	18
Table 9	Receipt of UI, Social Assistance and Training by Province .....	19
Table 10	Provincial Distribution of UI, Social Assistance and Training Recipients, and the Adult Population by Province .....	20
Table 11	Mobility Rates of Recipients of UI, Social Assistance and Training by Province of Origin .....	21
Table 12	Average Economic Returns to Interprovincial Labour Mobility .....	23
Table 13	Return Mobility by Province .....	26
Table 14	Return Mobility by Original Reason for Leaving the Province .....	26
Table 15	Reason for Returning to 1988 Home Province in 1990 .....	27
Table 16	Return Mobility by Demographic and Social Characteristics .....	28



## *Abstract*

This study is one component of a major evaluation of the UI regular benefits program in Canada. Its objective is to investigate the effects on interprovincial labour mobility of labour market policy interventions such as Unemployment Insurance and Social Assistance benefits and various federal government sponsored, job-related training programs. The data used is extracted from the 1988-90 longitudinal wave person-file of Statistics Canada's Labour Market Activity Survey (LMAS).

This paper breaks down interprovincial labour mobility into the following categories: Population Gains and Losses, Landing Patterns, Reasons for Moving, Economic Returns to Mobility, Return to Mobility, Mobility and the Receipt of UI, and the Determinants of Mobility.

Based on these analyses, I concluded that most of the statistically significant determinants of interprovincial labour mobility are beyond the control of government and that direct labour market policy interventions do not significantly influence the probability of interprovincial labour mobility. However, a number of qualifications must be kept in mind regarding these results. First, general economic conditions vary with the business cycle and so must labour market adjustment strategies. The data used in this study cover 1988-90, which was the peak period between the 1981-83 and 1991-93 recessions. Findings in this study should not be generalized to labour mobility in other periods. To examine the determinants of labour mobility and assess the impact of policy interventions in other phases of the business cycle, data covering the relevant periods should be analyzed. (Statistics Canada's Survey of Labour and Income Dynamics is one source.)

Second, the LMAS probably does not capture all influences of the Unemployment Insurance system. In particular, system parameters other than the receipt of benefits that may favourably affect labour mobility cannot be captured by the data. Therefore, although UI receipt does not statistically significantly influence interprovincial mobility, it is possible that specific parameters of the UI system do positively affect mobility.

Third, it has been argued by many that respondents of the Labour Market Activity Survey cannot accurately distinguish among the great number of job-related training programs sponsored by the federal government. In other words, the variable *TRAINING* measures participation in any one of them but does not distinguish one from another, and so it represents the average influence of all government training programs instead of any particular one.

Finally, interprovincial migration is only one aspect of geographic labour mobility, and *intraprovincial* migration may be an even more important labour market adjustment mechanism. There is a paucity of studies on this subject in the literature, largely due to the lack of data. Future research should focus on this area.





## Introduction

Canada is a large country composed of economically diverse regions. The entailed regional economic disparities mean that labour markets are continually adjusting to local economic conditions. In prosperous areas the supply of workers may be inadequate or inappropriate for the available jobs, and there may therefore be a need for workers to be redistributed from the less prosperous areas. On the other hand, in economically depressed areas, the scarcity of employment opportunities may prompt workers to look elsewhere.

In theory, geographic labour mobility is a labour market adjustment mechanism that does just that: redistributes workers from areas of low demand to areas of high demand. In practice, however, there are several reasons why workers might not move from one area to another. They might lack information about opportunities in other regions; they might not have the right skills; they might not have the resources to relocate; or they might have cultural, personal, or family reasons for not moving. This is where policy interventions such as Unemployment Insurance (UI), Social Assistance, and the various federal government sponsored training programs come into play. But do these policy interventions actually increase geographic labour mobility?

Economic theory is inconclusive on this question. For example, Unemployment Insurance appears to affect the mobility of workers in contradictory ways. On the one hand, it is regionally portable and may be used to finance job searches in, or relocation to areas where there are better employment opportunities. In this respect, it promotes mobility. On the other hand, regional extended benefits imply that UI is more generous in less economically favourable areas and subsidizes seasonal industries by tiding workers over in the off-season. In this respect, it reduces the incentive for them to move. The net effect of these offsetting components is not known.

The empirical evidence is equally inconclusive. A number of studies have used aggregate data and flows methodology to investigate the effects of Unemployment Insurance on labour mobility, but their findings are contradictory. For example, Winer and Gauthier (1982) examined migration flows between provinces and found that UI inhibits mobility, but commentators argued that their results are inconclusive. In a study of migration between cities, Shaw (1985) found evidence that relatively generous UI attracts in-migrants, but found none that less generous UI affected out-migration. Nor do studies using microdata offer conclusive answers. While Osberg and Gordon (1991) and Osberg, Gordon, and Lin (1994) examined the simultaneous determination of interregional migration and interindustry labour mobility and found that receipt of UI is not a statistically significant determinant of interregional mobility, Cahill (1993) used the same data and concluded that it increases mobility. Goss and Paul (1990) used data from the Panel Study of Income Dynamics to examine the probability of migration among American household heads and found that UI affects mobility positively for the voluntarily unemployed and negatively for the involuntarily unemployed.

*Geographic labour mobility is a labour market adjustment mechanism that does just that: redistributes workers from areas of low demand to areas of high demand.*

The purpose of the current study is to empirically investigate the effects of UI, Social Assistance, and federal government funded training on interprovincial labour mobility, using microdata from the longitudinal person-file from Statistics Canada's Labour Market Activity Survey (LMAS) for 1988-90.

In Section 1 an overview of interprovincial labour mobility in Canada is presented. In Section 2, a report on demographic and socio-economic characteristics of interprovincial migrants, the relationship between labour mobility and policy interventions, and the labour market performance of migrants in comparison with non-migrants is included. In Section 3, I explore return mobility patterns. In Section 4, I empirically investigate the effects of Unemployment Insurance, Social Assistance, and training on interprovincial labour mobility by econometrically modelling the determinants of interprovincial migration through nonlinear maximum-likelihood regressions. Finally, in Section 5, I conclude with some remarks on the merits and limitations of the study and on some areas of future research.

# 1. Patterns of Interprovincial Labour Mobility



In 1989, some 120,000 adult Canadians (aged 16-69), or 0.7 percent of the adult population, moved from one province to another (Table 1). In 1990, the number increased to about 170,000, or 1.0 percent of the population.<sup>1</sup> When I break this figure down by province, there is considerable variation. While residents of Quebec, Ontario, and British Columbia were relatively immobile, there was more out-migration from the Atlantic and Prairie provinces. In 1989, Prince Edward Island led the country, with 2.0 percent of its adult population moving to another province. By 1990 Saskatchewan was ahead, with 2.3 percent of its adult population moving to another province. Mobility rates in Quebec and Ontario, on the other hand, were only 0.4 and 0.7 percent, respectively, in 1989, and 0.7 percent in 1990, which is much lower than the national average.

**Table 1**  
Interprovincial Migration by Province of Origin, Canada, 1989 and 1990

	1989	1990
Newfoundland	4,102 (1.1)	6,197 (1.6)
Prince Edward Island	1,694 (2.0)	1,721 (2.0)
Nova Scotia	6,533 (1.1)	9,035 (1.5)
New Brunswick	6,087 (1.3)	6,916 (1.4)
Quebec	19,652 (0.4)	31,392 (0.7)
Ontario	31,282 (0.5)	43,237 (0.7)
Manitoba	9,076 (1.3)	8,494 (1.2)
Saskatchewan	11,764 (1.9)	14,265 (2.3)
Alberta	15,350 (0.9)	33,047 (2.0)
British Columbia	15,247 (0.7)	17,035 (0.8)
Not stated	n.a.	670 (6.1)
Canada	120,789 (0.7)	172,010 (1.0)

*Figures in parentheses are mobility rates — migrants as a proportion (%) of the adult population.*

<sup>1</sup> Mobility is somewhat underestimated because those who moved out and back within the same survey period are not identified as movers because their province of residence was the same in the two survey periods.

*In the Atlantic and Prairie provinces mobility was higher than the national average, and therefore their shares of migrants were higher than their shares of the adult population.*

This provincial variation in labour mobility is also evident when one compares the provincial distribution of total interprovincial migrants with the provincial distribution of the total population (Table 2). In the Atlantic and Prairie provinces mobility was higher than the national average, and therefore their shares of migrants were higher than their shares of the adult population. On the other hand, mobility rates in Quebec, Ontario, and British Columbia were lower than the national average, and their shares of interprovincial migrants were lower than their shares of the adult population.

**Table 2**  
Provincial Distribution of Interprovincial Migrants and the Adult Population, Canada, 1989 and 1990

	1989		1990	
	Migrants %	Population %	Migrants %	Population %
Newfoundland	3.4	2.1	3.6	2.1
Prince Edward Island	1.4	0.5	1.0	0.5
Nova Scotia	5.4	3.3	5.3	3.3
New Brunswick	5.0	2.7	4.0	2.7
Quebec	16.3	26.2	18.3	26.2
Ontario	25.9	37.1	25.1	37.0
Manitoba	7.5	3.9	4.9	3.9
Saskatchewan	9.7	3.5	8.3	3.5
Alberta	12.7	9.1	19.2	9.2
British Columbia	12.6	11.5	9.9	11.6
Not stated	n.a.	n.a.	0.4	0.1
Total	100.0	100.0	100.0	100.0

### Interprovincial Migration Flows

By itemizing interprovincial migration flows and thus identifying the provinces that lost and gained population, we get a more disaggregated picture of interprovincial labour mobility (Tables 3 and 4). Provinces that lost population in 1989 were Newfoundland (0.77 percent), Prince Edward Island (0.66 percent), New Brunswick (0.74 percent), Manitoba (0.86 percent), and Saskatchewan (1.15 percent). Although there was some in-migration into these provinces, out-migration from them was much higher.<sup>2</sup> Largely due to language barriers, migration flows into and out of Quebec were substantially lower than other provinces. In-migration almost matched out-migration, and its population experienced little change. Ontario's gross migration flows were identical to Quebec's. However, in Ontario out-migrants outnumbered in-migrants almost three to two, and the province lost nearly 0.2 percent of its adult population.<sup>3</sup> Provinces that gained population in 1989 were Nova Scotia (1.16 percent), Alberta (0.74 percent), and British Columbia (0.25 percent). Although there was significant out-migration from these provinces, there was more in-migration to them.

- 2 Although this population loss may not sound very large, it can grow quickly. For example, if this trend were to continue in Saskatchewan for five years, that province would lose almost 6 percent of its adult population.
- 3 This is contrary to historical trends of population movement in Canada. Ontario has long been a destination for migrants from the rest of the country.

**Table 3**  
**Interprovincial Migration Flows in Canada 1989**

	In (1)	Out (2)	Gross (3)=(1)+(2)	Net (4)=(1)-(2)
Newfoundland	1,139 (0.3)	4,102 (1.07)	5,242 (1.37)	-2,963 (-0.77)
Prince Edward Island	1,135 (1.34)	1,694 (2.0)	2,829 (3.35)	-559 (-0.66)
Nova Scotia	13,447 (2.27)	6,533 (1.1)	19,980 (3.37)	6,914 (1.16)
New Brunswick	2,542 (0.53)	6,087 (1.26)	8,629 (1.79)	-3,545 (-0.74)
Quebec	16,029 (0.34)	19,652 (0.42)	35,681 (0.76)	-3,623 (-0.08)
Ontario	20,120 (0.3)	31,282 (0.47)	51,402 (0.77)	-11,162 (-0.17)
Manitoba	3,071 (0.44)	9,076 (1.29)	12,147 (1.73)	-6,005 (-0.86)
Saskatchewan	4,456 (0.7)	11,764 (1.86)	16,220 (2.56)	-7,308 (-1.15)
Alberta	27,457 (1.67)	15,350 (0.93)	42,807 (2.61)	12,107 (0.74)
British Columbia	20,416 (0.99)	15,247 (0.74)	35,663 (1.72)	5,169 (0.25)
Not stated	10,977 (n.a.)	0 (n.a.)	10,977 (n.a.)	10,977 (n.a.)
Total	120,789 (0.67)	120,789 (0.67)		

Figures in parentheses are proportions (%) of the base adult population.  
Due to rounding, the percentages may not sum up exactly.

Interprovincial migration flows in 1990 were similar to those in 1989. Newfoundland, Prince Edward Island, New Brunswick, Manitoba, and Saskatchewan again experienced high levels of total migration. Out-migration was again higher than in-migration, and these provinces all lost population. Total migration flows into and out of Quebec remained low. But out-migrants substantially outnumbered in-migrants in 1990, and the province lost 0.5 percent of its adult population. Total migration flows into and out of Ontario also remained low. Out-migration was again higher than in-migration, and the province lost a further 0.3 percent of its adult population. Nova Scotia and Alberta again experienced high levels of total migration. But out-migrants outnumbered in-migrants in 1990, and both provinces lost population — Nova Scotia 0.12 percent and Alberta 0.48 percent. British Columbia again experienced considerable out-migration but higher in-migration, so that province was unique in gaining population — at 0.45 percent.<sup>4</sup>

4 It must be noted that the gains do not balance the losses across the 10 provinces in column 4 of Tables 3 and 4. This is because some migrants did not state their province of residence after moving and the data treated these cases as “not stated or other locations.” Adding the category “not stated” onto the provincial figures would balance gains over losses. Readers are further reminded that we are only considering the movement of the stock of the adult population here and that in-migration is not considered. Adding in-migration would definitely alter the picture of population gains and losses. Ontario and British Columbia have traditionally been “destinations,” absorbing most of new immigrants into Canada. If we included new in-migrants, Ontario’s population loss due to labour mobility would certainly be more than offset and British Columbia’s population gain would be much bigger.

**Table 4**  
**Interprovincial Migration Flows in Canada, 1990**

	In (1)	Out (2)	Gross (3)=(1)+(2)	Net (4)=(1)-(2)
Newfoundland	1,705 (0.45)	6,197 (1.63)	7,902 (2.08)	-4,492 (-1.18)
Prince Edward Island	880 (1.05)	1,721 (2.05)	2,601 (3.1)	-841 (-1.0)
Nova Scotia	8,294 (1.38)	9,035 (1.5)	17,329 (2.89)	-741 (-0.12)
New Brunswick	5,681 (1.19)	6,916 (1.45)	12,597 (2.64)	-1,235 (-0.26)
Quebec	7,429 (0.16)	31,392 (0.67)	38,821 (0.82)	-23,963 (-0.51)
Ontario	23,326 (0.35)	43,237 (0.65)	66,563 (1.0)	-19,911 (-0.3)
Manitoba	4,653 (0.67)	8,494 (1.22)	13,147 (1.89)	-3,841 (-0.55)
Saskatchewan	5,394 (0.86)	14,265 (2.28)	19,659 (3.14)	-8,871 (-1.42)
Alberta	25,086 (1.52)	33,047 (2.0)	58,133 (3.51)	-7,961 (-0.48)
British Columbia	26,271 (1.27)	17,035 (0.82)	43,306 (2.09)	9,236 (0.45)
Not stated	63,290 (567.57)	670 (6.1)	63,960 (582.67)	62,620 (570.47)
Total	172,010 (0.96)	172,010 (0.96)		

*Figures in parentheses are proportions (%) of the base adult population.  
Due to rounding, the percentages may not sum up exactly.*

## Departing and Landing Patterns

In 1989 the main destinations for out-migrants from the Atlantic provinces were Ontario and Nova Scotia (Table 5). Out-migrants from Newfoundland moved mostly to either Ontario or Western Canada (nearly half to Ontario, 28 percent to Alberta and British Columbia, 12 percent to other Atlantic provinces, and 4 percent to Quebec). All those out-migrating from Prince Edward Island moved either to another Atlantic province or to Ontario (over half moved to Nova Scotia, 24 percent to New Brunswick and Newfoundland, and 22 percent to Ontario). None moved to Quebec or Western Canada. Although people out-migrating from Nova Scotia spread all over the country (except Saskatchewan), most of them either moved to other Atlantic provinces (34 percent) or to Ontario (46 percent), and only a small fraction moved to Quebec (9 percent) and Western Canada (9 percent). Those out-migrating from New Brunswick went mostly to Nova Scotia (44 percent), Quebec (23 percent), and Ontario (17 percent). For the rest, 3 percent went to Newfoundland and Prince Edward Island, and 8 percent went to Western Canada.

Out-migrants from Quebec spread out across the regions fairly evenly — 20 percent went to Atlantic Canada, mainly to Nova Scotia, 31 percent to Ontario, and 33 percent to Alberta and British Columbia. Out-migrants from Ontario also spread out across the regions fairly evenly — 15 percent went to Atlantic Canada,

again mainly to Nova Scotia, 36 percent to Quebec, and 31 percent to Western Canada.<sup>5</sup>

**Table 5**  
**Destinations of Interprovincial Migrants by Province of Origin, Canada, 1989**

Province of Origin	Province of Destination										
	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Not stated
Newfoundland			258 (6.3)	232 (5.7)	157 (3.8)	2,011 (49.0)			660 (16.1)	497 (12.1)	287 (7.0)
Prince Edward Island	191 (11.2)		917 (54.1)	220 (13.0)		367 (21.6)					
Nova Scotia	617 (9.4)	1,071 (16.4)		521 (8.0)	612 (9.4)	2,998 (45.9)	67 (1.0)		309 (4.7)	251 (3.8)	89 (1.4)
New Brunswick	116 (1.9)	64 (1.0)	2,678 (44.0)		1,406 (23.1)	1,045 (17.2)	220 (3.6)	75 (1.2)	178 (2.9)		305 (5.0)
Quebec	55 (0.3)		3,709 (18.9)	161 (0.8)		6,074 (30.9)			2,880 (14.7)	3,613 (18.4)	3,161 (16.1)
Ontario			4,246 (13.6)	471 (1.5)	11,368 (36.3)		990 (3.2)		5,181 (16.6)	3,488 (11.1)	5,539 (17.7)
Manitoba	139 (1.5)				377 (4.2)	1,919 (21.1)		1,378 (15.2)	2,573 (28.3)	2,142 (23.6)	548 (6.0)
Saskatchewan			175 (1.5)	114 (1.0)	907 (7.7)	1,433 (12.2)	1,155 (9.8)		5,346 (45.4)	2,536 (21.6)	99 (0.8)
Alberta	23 (0.1)		148 (1.0)	824 (5.4)	1,202 (7.8)	2,608 (17.0)	446 (2.9)	2,104 (13.7)		7,889 (51.4)	108 (0.7)
British Columbia			1,317 (8.6)			1,665 (10.9)	194 (1.3)	899 (5.9)	10,329 (67.7)		841 (5.5)

*Figures in parentheses are proportions (%) of interprovincial migrants from the province of origin.*

Of people out-migrating from the Prairie provinces, the majority stayed in Western Canada. Those out-migrating from Manitoba mainly moved to other western provinces or to Ontario (over two-thirds went to Saskatchewan, Alberta, and British Columbia; 21 percent to Ontario; only 4 percent to Quebec; and 1.5 percent to Newfoundland). The majority of out-migrants from Saskatchewan also stayed in Western Canada (over three-quarters went to Manitoba, Alberta, and British Columbia; 12 percent to Ontario; 8 percent to Quebec; and 2.5 percent to Nova Scotia and New Brunswick). Of those out-migrating from Alberta, over half went to British Columbia, 17 percent to Ontario, 17 percent to Manitoba and Saskatchewan, 8 percent to Quebec, and 6.5 percent to Atlantic Canada. Over two-thirds of out-migrants from British Columbia went to Alberta, 11 percent to Ontario, 9 percent to Nova Scotia, and 7 percent to Manitoba and Saskatchewan.

5 The LMAS recorded no destinations for a significant fraction of out-migrants from Quebec and Ontario — 16 and 18 percent, respectively. Missing destinations for out-migrants from other provinces were much less significant, ranging from 0.7 percent for Alberta to 7 percent for Newfoundland.

The landing patterns of interprovincial migrants in 1990 were similar to those in 1989. Ontario and Nova Scotia remained the main destinations for out-migrants from the Atlantic provinces. Ontario became home to 35 percent of out-migrants from Newfoundland, 27 percent from Nova Scotia, and 32 percent from New Brunswick. Nova Scotia absorbed 20 percent of out-migrants from Newfoundland, 59 percent from Prince Edward Island, and 15 percent from New Brunswick (Table 6).

**Table 6**  
**Destinations of Interprovincial Migrants by Province of Origin, Canada, 1990**

Province of Origin	Province of Destination										
	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Not stated
Newfoundland		86 (1.4)	1,266 (20.4)	896 (14.5)		2,183 (35.2)			764 (12.3)	392 (6.3)	611 (9.9)
Prince Edward Island	51 (3.0)		1,009 (58.6)	51 (3.0)		43 (2.5)				73 (4.3)	493 (28.6)
Nova Scotia	732 (8.1)	63 (0.7)		1,225 (13.6)	1,181 (13.1)	2,449 (27.1)			732 (8.1)	1,069 (11.8)	1,585 (17.5)
New Brunswick	70 (1.0)	350 (5.1)	1,004 (14.5)		432 (6.2)	2,194 (31.7)	183 (2.7)	317 (4.6)	570 (8.2)	609 (8.8)	1,187 (17.2)
Quebec		339 (1.1)	2,332 (7.4)	645 (2.1)		6,504 (20.7)	1,076 (3.4)	397 (1.3)	4,008 (12.8)	1,092 (3.5)	14,998 (47.8)
Ontario	748 (1.7)	41 (0.1)	220 (0.5)	1,954 (4.5)	5,392 (12.5)		736 (1.7)	342 (0.8)	6,177 (14.3)	5,032 (11.6)	22,595 (52.3)
Manitoba				262 (3.1)	247 (2.9)	2,544 (29.9)		485 (5.4)	1,285 (15.1)	1,439 (16.9)	2,259 (26.6)
Saskatchewan						1,338 (9.4)	1,327 (9.3)		5,435 (38.1)	3,163 (22.2)	3,002 (21.0)
Alberta	105 (0.3)		1,052 (3.2)	74 (0.2)		3,447 (10.4)	391 (1.2)	3,482 (10.5)		13,402 (40.6)	11,094 (33.6)
British Columbia			1,323 (7.8)	373 (2.2)		2,623 (15.4)	940 (5.5)	299 (1.8)	6,012 (35.3)		5,464 (32.1)
Not stated			89 (13.3)	201 (30.1)	178 (26.5)			99 (14.7)	104 (15.5)		

Figures in parentheses are proportions (%) of interprovincial migrants from the province of origin.

As in 1989, people out-migrating from Quebec in 1990 spread out across the provinces.<sup>6</sup> Alberta and British Columbia remained the most popular destinations for out-migrants from the Western Provinces. Alberta absorbed 15 percent of Manitoba's out-migrants, 38 percent of Saskatchewan's, and 35 percent of British Columbia's. British Columbia received 17 percent of out-migrants from Manitoba, 22 percent from Saskatchewan, and 41 percent from Alberta.

<sup>6</sup> Missing destinations for out-migrants out of every province substantially increased in 1990. The LMAS recorded no destinations for over half of Ontario's out-migrants and 48 percent of Quebec's. Missing destinations for out-migrants out of other provinces also increased noticeably, ranging from 10 percent for Newfoundland to 34 percent for Alberta.



## Reasons for Moving

In 1989, over one-third of interprovincial migrants were motivated by economic reasons (7.5 percent were transferred by their employers, 20 percent moved to accept job offers, and 7.1 percent moved to look for work), 27 percent reported moving for family reasons (15.3 percent because their spouses or parents moved and 11.6 percent to live with or to be closer to family members/friends), 3 percent moved to go to school, 2.2 percent moved after retiring, and about one-third reported no specific reason for moving (Table 4). In 1990, while those moving without a specific reason increased to over 50 percent, those who moved for economic reasons decreased to 26.5 percent, and those who moved for family reasons decreased to 16.5 percent. People moving to go to school increased to 5 percent, and those moving after retiring declined to 1.6 percent.

There were striking gender differences in the reasons for moving (Table 7). Although a very substantial proportion of male and female migrants reported no specific reason for moving, it appears that male mobility is more often economically motivated while female mobility is more often related to family responsibilities. In 1989, economic reasons were behind almost 46 percent of male but only 25.7 percent of female migrants. On the other hand, family responsibilities drove nearly 39 percent of female but only 12 percent of male migrants. In 1990, nearly 34 percent of male but under 20 percent of female migrants reported moving for economic reasons. In contrast, over 27 percent of female but less than 6 percent of male migrants moved because of family responsibilities.

*Over one-third of interprovincial migrants were motivated by economic reasons, 27 percent reported moving for family reasons, 3 percent moved to go to school, 2.2 percent moved after retiring, and about one-third reported no specific reason for moving.*

**Table 7**  
Reason for Moving to Another Province by Gender, Canada, 1989 and 1990

	1989 %	1990 %
Transferred by employer	7.5	5.6
Males	11.3	8.2
Females	4.5	3.0
To accept a job	20.0	15.6
Males	24.4	19.6
Females	16.4	11.6
To look for a job	7.1	5.3
Males	10.0	5.7
Females	4.8	5.0
Spouse/parent moved	15.3	9.9
Males	3.2	1.7
Females	25.1	18.0
To live with/close to family/friends	11.6	6.6
Males	8.9	4.0
Females	13.8	9.2
To go to school	3.0	5.0
Males	3.2	3.2
Females	2.8	6.9
Retirement	2.2	1.6
Males	2.3	2.1
Females	2.0	1.1
Other	17.9	11.6
Males	18.4	10.2
Females	17.5	12.9
Not stated	15.4	38.7
Males	18.3	45.2
Females	13.1	32.4



## 2. Characteristics of Migrants, Policy Interventions, and Economic Returns to Mobility

*Interprovincial mobility was mainly a labour market adjustment among the younger population. Over 90 percent of migrants in 1989 and 86 percent in 1990 were between 16 and 44 years of age, although that age group accounted for only about two-thirds of the total adult population.*

### Characteristics of Migrants

Interprovincial mobility was mainly a labour market adjustment among the younger population. Over 90 percent of migrants in 1989 and 86 percent in 1990 were between 16 and 44 years of age, although that age group accounted for only about two-thirds of the total adult population (Table 8).<sup>7</sup> Better-educated people were more likely than less-educated people to move to another province. The share of migrants in each education category above high school was consistently higher than that of the total adult population, and for each education category from high school and below it was consistently lower.

**Table 8**  
Mobility Rates and the Distribution of Interprovincial Migrants and the Adult Population, by Selected Demographic Characteristics, Canada, 1989 and 1990

	1989			1990		
	Mobility Rate	Distribution		Mobility Rate	Distribution	
	(%)	Movers (%)	Population (%)	(%)	Movers (%)	Population (%)
<b>Age</b>						
16	1.0	3.2	2.1	1.4	3.1	2.1
17-19	1.2	11.2	6.2	2.0	12.6	6.2
20-24	1.7	28.1	11.1	2.1	24.8	11.1
25-34	0.7	27.7	25.5	1.2	31.4	25.5
35-44	0.6	20.5	21.7	0.7	14.8	21.7
45-54	0.2	4.8	14.8	0.4	7.0	14.8
55-64	0.2	3.7	12.9	0.3	4.1	12.9
65-59	0.1	1.0	5.5	0.4	2.3	5.5
<b>Education</b>						
0-8 years	0.2	4.9	13.5	0.5	7.1	12.5
Some secondary	0.6	21.9	24.9	0.9	17.1	18.3
High school	0.6	22.4	23.3	0.8	18.9	23.3
Some post-secondary	0.9	14.8	10.5	1.4	17.0	12.0
Post-secondary	0.8	16.9	14.9	1.0	15.2	15.3
University	1.0	19.1	12.9	1.4	20.8	13.8
Trades	n.a.	n.a.	n.a.	0.8	4.0	4.8
<b>Gender</b>						
Male	0.6	44.8	49.4	1.0	49.8	49.4
Female	0.7	55.2	50.6	1.0	50.2	50.6
<b>Visible minority</b>						
Yes	0.4	3.8	6.6	0.9	5.9	6.6
No	0.7	96.2	93.4	1.0	94.1	93.4
<b>First language</b>						
English	0.9	74.5	57.4	1.2	73.5	57.4
French	0.4	15.6	24.6	0.5	13.7	24.6
Other	0.3	6.9	13.7	0.5	7.8	13.7
Not stated	0.5	3.0	4.2	1.1	4.9	4.2
<b>Country of birth</b>						
Canada	0.7	86.9	82.6	1.0	87.9	82.6
Outside Canada	0.4	10.7	16.7	0.5	9.4	16.7
Not stated	2.2	2.4	0.7	3.5	2.7	0.7
<b>Marital status</b>						
Married	0.5	53.0	65.9	0.7	51.5	66.8
Single	1.1	42.4	25.8	1.7	42.6	24.4
Other	0.4	4.5	8.3	0.6	5.9	
<b>Family size</b>						
1	1.0	17.6	11.9	1.6	22.0	
2	0.7	27.6	25.7	0.9	24.4	
3	0.6	19.8	21.8	0.9	19.8	
4 or over	0.6	35.1	40.6	0.8	33.8	

<sup>7</sup> The age intervals are referred to the 1988 LMAS survey. The actual age categories should hence move up by 1 for 1989 and by 2 for 1990.

Interprovincial mobility was slightly higher among women in 1989 but there was little gender difference in 1990. It was higher among Canadians who do not belong to a visible minority, whose first language is English, who were born in Canada, who were single, and who were the only member of their family. Of 1989 migrants, 55 percent were women, 93 percent did not belong to a visible minority, three-quarters spoke English as their first language, 87 percent were born in Canada, 42 percent were single, and 18 percent were the only member of their family. The pattern was similar in 1990.

## Policy Interventions and Labour Mobility

Table 9 shows the proportion of the adult population who received Unemployment Insurance or Social Assistance benefits or participated in a training program sponsored by the federal government in 1988-90. In Canada as a whole, 11.9 percent received Unemployment Insurance benefits at some point during 1988. That proportion declined to 11.4 percent in 1989 and increased to 12.4 percent in 1990. However, as dictated by the general economic conditions, UI receipt varied substantially among the provinces — it was much higher in Atlantic Canada and Quebec, and much lower in Ontario and Western Canada. In 1990, the rate was 16.1 percent in Quebec, and in Atlantic Canada it ranged from a low of 17.1 percent in Nova Scotia to a high of 33.1 percent in Newfoundland. In comparison, in the rest of the country it was much lower — only 8.5 percent in Ontario, and in Western Canada it ranged from a low of 9.7 percent in Alberta to a high of 11.6 percent in British Columbia.

**Table 9**  
Receipt of UI, Social Assistance and Training, by Province, Canada, 1988-90

	1988			1989			1990		
	UI (%)	Social Assistance (%)	Training (%)	UI (%)	Social Assistance (%)	Training (%)	UI (%)	Social Assistance (%)	Training (%)
Newfoundland	30.9	5.5	1.7	30.3	5.7	1.8	33.1	6.0	1.6
Prince Edward Island	26.1	4.0	1.9	25.8	3.0	1.4	27.5	3.3	2.6
Nova Scotia	16.2	3.5	1.0	17.7	3.9	0.9	17.1	3.3	1.1
New Brunswick	22.1	6.7	1.6	21.0	5.7	1.1	22.0	5.4	1.2
Quebec	14.1	6.5	0.9	14.3	5.8	0.6	16.1	6.3	1.0
Ontario	7.7	2.4	0.6	7.6	2.2	0.5	8.5	3.0	0.7
Manitoba	11.0	4.2	1.4	11.0	3.6	1.0	11.0	3.8	0.9
Saskatchewan	10.5	3.0	0.7	9.9	2.8	0.4	10.1	2.8	0.8
Alberta	11.5	4.1	0.9	9.5	3.4	0.6	9.7	3.2	0.8
British Columbia	13.6	3.9	1.0	11.2	3.5	0.8	11.6	3.4	0.5
Not Stated		n.a.		17.3	4.0	0.0	15.1	9.0	0.0
Canada	11.9	4.1	0.9	11.4	3.7	0.7	12.4	4.1	0.8

*Participation in various federal government sponsored training programs is generally higher in the Atlantic provinces and Quebec and lower in Ontario and the western provinces.*

When those receiving UI are distributed by province, in 1990 Atlantic Canada accounted for under 10 percent of the adult population but nearly 16 percent of UI recipients, and Quebec accounted for only 26.1 percent of the population but 34 percent of UI recipients (Table 10). In contrast, Ontario accounted almost 37 percent of the population but only 25.3 percent of UI recipients, and western Canada accounted for 28.1 percent of the population but only 24.2 percent of UI recipients.

The proportion of the adult population receiving Social Assistance benefits also varied by province (Table 9). It was above the national average in Newfoundland, New Brunswick, and Quebec, and below the national average in the rest of the country. For example, 4.1 percent of the adult population nationally received Social Assistance benefits at some point during 1990. It ranged from as high as 6.3 percent in Quebec, 6.0 percent in Newfoundland, and 5.4 percent in New Brunswick, to as low as 2.8 percent in Saskatchewan and 3.0 percent in Ontario. Turning to the provincial distribution of Social Assistance, the shares of Quebec, Newfoundland, and New Brunswick were higher, and of the rest of the country lower, than that of the total adult population (Table 10).

**Table 10**  
**Provincial Distribution of UI, Social Assistance and Training Recipients and the Adult Population, by Province, Canada, 1988-90**

	1988				1989				1990			
	Recipients			Population	Recipients			Population	Recipients			Population
	UI	Social Assistance	Training		UI	Social Assistance	Training		UI	Social Assistance	Training	
(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
Newfoundland	5.5	2.8	4.3	2.1	5.6	3.2	5.8	2.1	5.6	3.1	4.1	2.1
Prince Edward Island	1.0	0.5	1.0	0.5	1.1	0.4	1.0	0.5	1.0	0.4	1.4	0.5
Nova Scotia	4.5	2.8	3.9	3.3	5.2	3.5	4.8	3.3	4.6	2.7	4.3	3.3
New Brunswick	5.0	4.4	5.0	2.7	4.9	4.1	4.5	2.7	4.7	3.5	3.7	2.7
Quebec	31.1	41.4	26.3	26.2	32.7	41.1	24.7	26.2	34.0	39.8	32.4	26.1
Ontario	24.2	21.4	27.3	37.1	24.6	21.9	27.4	37.0	25.3	27.2	30.7	36.9
Manitoba	3.6	4.0	6.3	3.9	3.8	3.8	6.1	3.9	3.4	3.6	4.4	3.9
Saskatchewan	3.1	2.6	3.0	3.5	3.0	2.6	2.1	3.5	2.8	2.3	3.2	3.4
Alberta	8.9	9.1	9.4	9.1	7.6	8.5	9.0	9.2	7.2	7.1	8.4	9.2
British Columbia	13.1	11.0	13.4	11.5	11.4	10.9	14.5	11.6	10.8	9.5	7.4	11.6
Not Stated			n.a.		0.1	0.1	0.0	0.1	0.4	0.8	0.0	0.4

Participation in various federal government sponsored training programs is generally higher in the Atlantic provinces and Quebec and lower in Ontario and the Western Provinces (Table 9). In 1990, 0.8 percent of the adult population participated in various federal government sponsored training programs. But the training take-up rate was as high as 2.6 percent in Prince Edward Island and as low as 0.5 percent in British Columbia. For the provincial distribution of training participants, the shares of Atlantic Canada and Quebec were higher, and of Ontario and Western Canada lower, than that of the adult population as a whole (Table 10).

Interprovincial mobility in 1988-90 among those who received benefits in the previous year was generally higher among those who did than those who did not receive UI, lower among those who did than those who did not receive Social Assistance, and higher among those who did than those who did not participate in a federal government sponsored training program.<sup>8</sup>

**Table 11**  
**Mobility Rates of Recipients of UI, Social Assistance, and Training,**  
**by Province of Origin, Canada, 1989 and 1990**

	1989			1990		
	UI (%)	Social Assistance (%)	Training (%)	UI (%)	Social Assistance (%)	Training (%)
Newfoundland						
Yes	1.6	0.7	1.1	1.8	1.6	0.0
No	0.8	1.1	1.1	1.6	1.6	1.7
Prince Edward Island						
Yes	1.2	2.6	0.0	1.6	1.5	0.0
No	2.3	2.0	2.0	2.2	2.1	2.1
Nova Scotia						
Yes	0.5	1.6	3.8	1.7	1.1	0.0
No	1.2	1.1	1.1	1.5	1.5	1.5
New Brunswick						
Yes	0.6	0.9	2.1	1.8	2.2	2.9
No	1.5	1.3	1.3	1.3	1.4	1.4
Quebec						
Yes	0.2	0.3	0.1	0.4	1.1	0.0
No	0.5	0.4	0.4	0.7	0.6	0.7
Ontario						
Yes	1.3	0.3	0.0	0.8	0.0	0.0
No	0.4	0.5	0.5	0.6	0.7	0.7
Manitoba						
Yes	2.3	0.0	4.6	2.5	0.3	0.0
No	1.2	1.3	1.2	1.1	1.3	1.2
Saskatchewan						
Yes	2.2	3.1	2.2	4.2	3.1	4.6
No	1.8	1.8	1.9	2.1	2.3	2.3
Alberta						
Yes	1.6	0.3	0.0	1.1	2.2	0.6
No	0.8	1.0	0.9	2.1	2.0	2.0
British Columbia						
Yes	0.9	0.9	1.7	2.1	0.5	0.0
No	0.7	0.7	0.7	0.7	0.8	0.8
Not stated						
Yes		n.a.		5.6	0.0	0.0
No				6.2	6.4	6.1
Canada						
Yes	0.9	0.5	0.9	1.2	1.0	0.3
No	0.6	0.7	0.7	0.4	1.0	1.0

<sup>8</sup> These observations cannot, however, be interpreted as meaning that receiving UI benefits and participation in training promotes mobility or that receiving Social Assistance benefits discourages mobility, because other factors affect labour mobility which are not controlled for. In Section 4 we empirically investigate the effects of these government programs on geographic labour mobility after controlling for other factors through econometric modelling.

*The higher increase in male migrants' earnings results in a net earnings return to interprovincial labour mobility of \$5,520, which amounts to 26 percent of their pre-move earnings.*

## **Economic Returns to Interprovincial Labour Mobility**

Since the 1988-90 longitudinal wave of the LMAS used here includes data on individuals for three consecutive years, it is possible to apply the “difference-in-difference” methodology to estimate economic returns to labour mobility.<sup>9</sup> Table 12 reports the “difference-in-difference” estimates of average economic returns to interprovincial labour mobility in Canada in 1989 for those who had some paid employment in both 1988 and 1990, by a number of labour-market performance measures.<sup>10</sup> Men and women are considered separately, primarily because they moved for different reasons (see Table 7).

Moving from one province to another pays off greatly for males. On average, male migrants' nominal annual earnings from paid employment increased by \$7,682, which is 36.3 percent of their pre-move level. Due to wage inflation and real improvements in the labour market, non-migrants' earnings also increased, but only by \$2,162, or 8 percent of their pre-move level. The higher increase in male migrants' earnings results in a net earnings return to interprovincial labour mobility of \$5,520, which amounts to 26 percent of their pre-move earnings.

When one disaggregates annual earnings from paid employment into hourly wage rates and annual hours of work,<sup>11</sup> it is clear that the relative earnings gain to mobility is due to both increased wages and longer hours of work. On average, male migrants' hourly wage rate increased by \$1.92 or 15.3 percent, and that of non-migrants increased by \$1.53 or 11.3 percent. This resulted in a net wage gain to mobility of \$0.39 per hour or 3.1 percent of migrants' pre-move level. While migrants' average annual hours of work increased by 290 hours or 18.5 percent, those of non-migrants decreased by 18.7 hours or 1 percent. Consequently, the net return to mobility is 308 hours a year or nearly 20 percent of migrants' pre-move level.

Measured by the number of weeks of unemployment and the proportion of workers receiving Unemployment Insurance and Social Assistance benefits, the returns to male mobility are negative. On average, migrants' duration of unemployment increased by 0.48 weeks or 14.2 percent while that of non-migrants

9 In general, this method estimates returns to any program (event) by calculating changes in participants' outcomes before and after participation net of non-participants. Let  $R$  = returns,  $Y$  = outcome measure, subscripts  $p$  and  $n$  denote participants and non-participants, and subscripts  $a$  and  $b$  denote after and before participation; returns to the event can be expressed as follows:

$$R = (Y_{pa} - Y_{pb}) - (Y_{na} - Y_{nb}).$$

This estimator requires data on at least one pre-participation point. The more data on pre-participation points, the closer the estimate will be to the true returns. See Moffitt (1991) for details, including problem formulation, methodology application, and data requirements.

10 In this particular case, we estimate changes in migrants outcomes net of non-migrants. Since migration took place during 1989, 1988 is used as the pre-migration year and 1990 as post-migration.

11 Change in employment earnings is equal to the sum of three components: i) the change in wages times hours before moving, ii) the change in hours times wages before moving, and iii) the change in wages times the change in hours. Alternatively, let  $Y$  = earnings,  $W$  = hourly wage rates,  $H$  = annual hours of work and subscript  $b$  denote before moving; change in annual earnings can algebraically be expressed as:

$$\Delta Y = \Delta(WH) = \Delta W * H_b + \Delta H * W_b + \Delta W * \Delta H.$$

In Table 12, however, the three components do not exactly sum to the change in earnings. This is because the earnings of multiple-job holders are the sum across all jobs and different jobs pay different wages. But in Table 12, the change in wages for multiple-job holders only applies to the last job of the year.

**Table 12**  
Average Economic Returns to Interprovincial Labour Mobility, Canada, 1989

	Male		Female	
	Non-migrants	Migrants	Non-migrants	Migrants
<b>Annual earnings (\$)</b>				
After	29,175.73	28,852.86	18,689.44	19,229.92
Before	27,013.48	21,170.62	16,331.52	11,651.47
Change <sup>a</sup>	21,62.25	76,82.24	23,57.92	7,578.45
Percent <sup>b</sup>	8.00	36.29	14.44	65.04
Return <sup>c</sup>	5,519.99		5,220.53	
Percent <sup>d</sup>	26.07		44.81	
<b>Hourly wages (\$)<sup>e</sup></b>				
After	15.04	14.45	11.79	10.23
Before	13.51	12.53	10.31	9.72
Change <sup>a</sup>	1.53	1.92	1.48	0.51
Percent <sup>b</sup>	11.32	15.32	14.36	5.25
Return <sup>c</sup>	0.39		-0.97	
Percent <sup>d</sup>	3.11		-9.98	
<b>Annual hours of work</b>				
After	1,837.53	1,853.93	1,519.39	1,704.35
Before	1,856.18	1,564.01	1,474.34	1,283.22
Change <sup>a</sup>	-18.65	289.92	45.05	421.13
Percent <sup>b</sup>	-1.00	18.54	3.06	32.82
Return <sup>c</sup>	308.57		376.08	
Percent <sup>d</sup>	19.73		29.31	
<b>Weeks unemployed<sup>f</sup></b>				
After	2.53	3.87	2.09	3.29
Before	2.31	3.39	2.22	5.39
Change <sup>a</sup>	0.22	0.48	-0.13	-2.1
Percent <sup>b</sup>	9.52	14.16	-5.86	-38.96
Return <sup>c</sup>	0.26		-1.97	
Percent <sup>d</sup>	7.67		-36.55	
<b>Percent receiving UI</b>				
After	16.4	26.9	16.8	30.0
Before	13.7	17.0	14.7	16.9
Change <sup>a</sup>	2.7	9.9	2.1	13.1
Return <sup>c</sup>	7.2		11.0	
<b>Percent receiving Social Assistance</b>				
After	1.3	3.5	1.6	0.2
Before	1.3	0.4	1.8	2.1
Change <sup>a</sup>	0.0	3.1	-0.2	-1.9
Return <sup>c</sup>	3.1		-1.7	

*Includes respondents who had paid employment in the years before and after moving.*

*a Change = level after moving – level before moving.*

*b Changes in % = 100\* changes in levels / levels before moving.*

*c Return = change in migrants' levels – change in non-migrants' levels.*

*d Returns in % = 100\* returns in levels / migrants' levels before moving.*

*e For those who held more than one job in a year, only the last job held is reported.*

*f Sum of official and unofficial unemployment: official unemployment = weeks jobless and in active job search; unofficial unemployment = additional weeks jobless and wanting to work but not in active job search.*

increased by only 0.22 weeks or 9.5 percent, resulting in a net unemployment increase of 0.26 weeks a year or 7.7 percent of male migrants' pre-move level.<sup>12</sup>

The proportion of male migrants who received UI benefits at some point during a year increased by 9.9 percentage points (from 17 percent in 1988 to 26.9 percent in 1990), but that of non-migrants increased by only 2.7 percentage points (from 13.7 percent in 1988 to 16.4 percent in 1990), resulting in a net increase of 7.2 percentage points in the incidence of those receiving UI benefits. And the proportion of male migrants receiving Social Assistance benefits sometime during a year increased by 3.1 percentage points (from 0.4 percent in 1988 to 3.5 percent in 1990), but that of non-migrants remained unchanged at 1.3 percent for both years, a net increase of 3.1 percentage points in the incidence of those receiving Social Assistance benefits.

Relative to males, females' earnings return to mobility was lower in magnitude but higher when expressed as a percentage of the pre-move level because females' pre-move earnings were much lower. On average, female migrants' earnings increased by \$7,578 or 65 percent, and those of non-migrants increased by only \$2,357 or 14.4 percent, a net earnings return to mobility of \$5,220 or 44.8 percent of female migrants' pre-move earnings.

The wage return to female mobility is negative. On average, the hourly wage rate increased by only \$0.51 or 5.3 percent among migrants but by \$1.48 or 14.4 percent among non-migrants, which amounted to a net wage loss of \$0.97 an hour or nearly 10 percent of female migrants' pre-move level. In comparison with males, female migrants' hours return to mobility was higher both in magnitude and expressed as a percentage of the pre-move level. Their average hours of work increased by 421 hours a year or 32.8 percent, while those of non-migrants increased by only 45 hours or 3 percent, which led to a net return to mobility of 376 hours a year or 29.3 percent of female migrants' pre-move level.

Measured by the number of weeks of unemployment and the proportion of workers receiving UI and Social Assistance benefits, the pattern of returns to female mobility was quite different from that of male mobility. The average duration of unemployment decreased by 2.1 weeks a year (or 39 percent) among female migrants but only 0.13 weeks (or 5.9 percent) among non-migrants, a decrease of 1.97 weeks of unemployment in a year or 36.6 percent of migrants' pre-move level.

The proportion of female migrants receiving UI benefits sometime during the year increased by 13.1 percentage points (from 16.9 percent in 1988 to 30 percent in 1990), but that of non-migrants increased by only 2.1 percentage points (from 14.7 percent in 1988 to 16.8 percent in 1990), resulting in a net increase of 11 percentage points in the incidence of those receiving UI. And the proportion

---

<sup>12</sup> The increase in the number of weeks of unemployment is a relative measure and does not necessarily imply a negative return to mobility. It is a product of changes in the number of weeks of both labour force participation and employment. As long as the weeks of labour force participation increase more than the weeks of employment, weeks of unemployment increase. If the weeks of employment remain unchanged or even decrease, annual hours of work can increase due to more hours per day. The positive returns to mobility of earnings and hours should override the increase in unemployment.



of female migrants receiving Social Assistance at some point during a year decreased by 1.9 percentage points (from 2.1 percent in 1988 to 0.2 percent in 1990), but that of non-migrants decreased by only 0.2 percentage points (from 1.8 percent in 1988 to 1.6 percent in 1990). The net return to female mobility is therefore a decrease of 1.7 percentage points in the incidence of those receiving Social Assistance.



### 3. Return Mobility

*In 1990, 7,004 people moved back to their 1988 province of residence, about 5.8 percent of the 120,000 who left their 1988 home province in 1989. However, return mobility differed substantially by province.*

Since the data used here covers three consecutive years, it is possible to identify some patterns and characteristics of return mobility.<sup>13</sup> In 1990, 7,004 people moved back to their 1988 province of residence, about 5.8 percent of the 120,000 who left their 1988 home province in 1989 (Table 13). However, return mobility differed substantially by province. It was much higher than the national average among out-migrants from Newfoundland (7.4 percent), Prince Edward Island (6.2 percent), New Brunswick (12.0 percent), Saskatchewan (15.4 percent), and British Columbia (10.0 percent), and lower than the national average among out-migrants from Nova Scotia (1.4 percent), Quebec (3.0 percent), Ontario (4.6 percent), Manitoba (3.2 percent), and Alberta (0.7 percent).

**Table 13**  
Return Mobility by Province, Canada, 1990

Province	Returnees	Return Mobility Rate (%)	Distribution (%)
Newfoundland	303	7.4	4.3
Prince Edward Island	105	6.2	1.5
Nova Scotia	89	1.4	1.3
New Brunswick	728	12.0	10.4
Quebec	590	3.0	8.4
Ontario	1,446	4.6	20.6
Manitoba	294	3.2	4.2
Saskatchewan	1,812	15.4	25.9
Alberta	110	0.7	1.6
British Columbia	1,528	10.0	21.8
Canada	7,004	5.8	100.0

*Number of returnees as a proportion (%) of provincial migrants in 1989 (see Table A.1)*

**Table 14**  
Return Mobility by Original Reason for Leaving the Province, Canada, 1990

	Returnees	Return Mobility Rate (%)	Distribution (%)
Transferred by employer	540	5.9	7.7
To accept a job	1,956	8.1	27.9
To look for a job	883	10.3	12.6
Spouse/parent moved	753	4.1	10.7
To live with/close to family/friend	358	2.6	5.1
To go to school	210	5.9	3.0
Other	1,760	8.1	25.1
Not stated	545	2.9	7.8
Total	7,004	5.8	100.0

<sup>13</sup> Return mobility is somewhat underestimated because those who moved and returned within the same survey period cannot be identified.

Return mobility also differed significantly according to the reason cited for out-migrating in the previous year. Generally, a higher proportion of returnees had been originally motivated by economic considerations — 5.9 percent had been transferred by their employer, 8.1 percent had moved to accept a job, and 10.3 percent to look for work. A lower proportion originally out-migrated because of family responsibilities — 4.1 percent had moved because their spouse or parent moved and 2.6 percent to live with/close to family/friends.

While 30 percent of returnees who had moved in 1989 did not report any specific reason for moving back in 1990, about 42 percent returned for economic reasons (Table 15). Of these, 15.6 percent were transferred by their employer, 18.3 percent returned to accept a job offer, and 7.6 percent returned to look for work. About 21 percent returned because of family responsibilities. Of these, 6.7 percent returned because their spouses/parents moved and 14 percent returned to live with/close to family/friends. A further 6.8 percent returned for education, and 1.0 percent returned after retiring.

**Table 15**  
Reason for Returning to 1988 Home Province in 1990, Canada

	Returnees	Distribution (%)
Transferred by employer	1,092	15.6
To accept a job	1,282	18.3
To look for a job	535	7.6
Spouse/parent moved	470	6.7
To live with/close to family/friend	984	14.0
To go to school	476	6.8
Retirement	63	0.9
Other	1,343	19.2
Not stated	760	10.9
Total	7,004	100.0

Like interprovincial mobility, return mobility was mainly a phenomenon among the younger population (Table 16). A high proportion of returnees — almost 90 percent — was under 35 years of age, although this age group accounted for only 70 percent of interprovincial migrants in 1989 (see Table 8). The return mobility rate was the highest among those with some secondary to some post-secondary education — they accounted for 70 percent of all returnees.

The proportion of 1989 migrants who returned to their 1988 province of residence in 1990 also varied according to demographic and household characteristics (Table 16). Return migration was 1 percentage point higher among female than male migrants, and it was much higher among migrants who did not belong to a visible minority, whose first language was either English or French, who were not immigrants, who were single, and who were the only member of their family. In terms of distribution, about 60 percent of returnees were women, 99.4 percent did not belong to a visible minority, 82.5 percent spoke English and 17 percent French as their first language, 99.4 percent were not immigrants, 57 percent were single and 39 percent married, and 20 percent were the only member of their family.

**Table 16**  
**Return Mobility by Demographic and Social Characteristics, Canada, 1990**

	Returnees	Return Mobility Rate (%)	Distribution (%)
<b>Age</b>			
16	114	3.0	1.6
17-19	1,425	10.6	20.3
20-24	2,202	6.5	31.4
25-34	2,507	7.5	35.8
35-44	491	2.0	7.0
45-64	201	4.6	2.9
65-59	63	5.4	0.9
<b>Education</b>			
0-8 years	41	0.7	0.6
Some secondary	1,781	6.7	25.4
High school	1,637	6.1	23.4
Some post-secondary	1,456	8.2	20.8
Post-secondary	924	4.5	13.2
University	1,164	5.0	16.6
<b>Gender</b>			
Male	2,857	5.3	40.8
Female	4,147	6.2	59.2
<b>Visible minority</b>			
Yes	41	0.9	0.6
No	6,962	6.0	99.4
<b>First language</b>			
English	5,776	6.4	82.5
French	1,187	6.3	16.9
Other	41	0.5	0.6
<b>Country of birth</b>			
Canada	6,962	6.6	99.4
Outside Canada	41	0.3	0.6
<b>Marital status</b>			
Married	2,722	4.2	38.9
Single	4,005	7.8	57.2
Other	276	5.1	3.9
<b>Family size</b>			
1	1,368	6.4	19.5
2	1,024	3.1	14.6
3	3,667	15.4	52.4
4 or over	944	2.2	13.5

## 4. Determinants of Interprovincial Labour Mobility



This section econometrically models the determinants of interprovincial migration through nonlinear maximum-likelihood techniques to empirically investigate the effects on interprovincial labour mobility of UI, Social Assistance, and various federal government sponsored training programs. We begin with some theoretical considerations of geographic labour mobility.

### A Model of Interprovincial Labour Mobility

Suppose the objective of all rational individuals is to maximize utility. Let  $V_i$  be a set of labour market outcomes from which individual  $i$  derives his/her utility, given a certain vector of personal characteristics,  $X_i$ . The objective of all rational individuals can thus be written as:

$$\text{Max } U_i = u_i (V_i; X_i). \quad (1)$$

The standard way to analyze the decision to move from one province to another would be to imagine that each individual continuously compares the level of utility they would receive if they stayed in their home province with the level they would receive if they moved to another province. Let subscripts  $m$  and  $s$  indicate moving to another province and staying in the home province, respectively; individual  $i$ 's level of utility for moving and staying can thus be written as:

$$\begin{aligned} U_{im} &= u_{im} (V_{im}; X_i); \text{ and,} \\ U_{is} &= u_{is} (V_{is}; X_i). \end{aligned} \quad (2)$$

The assumption of utility maximization requires that individual  $i$  will move if the level of utility from moving is higher than from staying and will not move if the level from moving is lower than from staying. Define  $M_i = 1$  if individual  $i$  moves to another province and  $M_i = 0$  if individual  $i$  stays in his/her home province; the decision of moving or staying can be written as:

$$\begin{aligned} M_i &= 1 \text{ if } U_{im} \geq U_{is}, \text{ or } U_{im} - U_{is} \geq 0; \text{ and,} \\ M_i &= 0 \text{ if } U_{im} < U_{is}, \text{ or } U_{im} - U_{is} < 0. \end{aligned} \quad (3)$$

Assume that utility ( $U$ ) is a positive function of labour market outcomes ( $V$ ).<sup>14</sup> Given a set of personal characteristics ( $X_i$ ), individual  $i$ 's decision to leave the province or to stay in the home province can alternatively be expressed as:

$$\begin{aligned} M_i &= 1 \text{ if } V_{im} \geq V_{is}, \text{ or } V_{im} - V_{is} \geq 0; \text{ and,} \\ M_i &= 0 \text{ if } V_{im} < V_{is}, \text{ or } V_{im} - V_{is} < 0. \end{aligned} \quad (4)$$

And a general model of interprovincial labour mobility can be expressed as:

$$M_i = f (\Delta V_i; X_i), \text{ where } \Delta V_i = V_{im} - V_{is}. \quad (5)$$

<sup>14</sup> No specific functional form of utility needs to be assumed here. As long as  $U$  is a positive function of  $V$ , we have  $U_2 > U_1$  if  $V_2 > V_1$ .

*The LMAS is an annual survey, administered to five of six rotation groups interviewed for Statistics Canada's monthly Labour Force Survey (LFS). It is therefore a stratified random sample of Canadian individuals.*

## **Data and Variable Specification**

The LMAS is an annual survey, administered to five of six rotation groups interviewed for Statistics Canada's monthly Labour Force Survey (LFS). It is therefore a stratified random sample of Canadian individuals. For each relevant year, it covers all civilians who are not institutionalized, who are aged 16-69 years inclusive, who are residents of a province, and who are not living on an Indian reserve. Respondents are interviewed in January/February of each year about their labour market activities and experiences in the previous year.<sup>15</sup>

The longitudinal file used in this study is the composite of linked surveys for 1988, 1989, and 1990. It contains a wealth of information on demography and the labour market activities and experiences of 55,434 people (27,056 males and 28,378 females).

The data allowed us to examine interprovincial labour mobility for two periods: January/February 1989 to January/February 1990 and January/February 1990 to January/February 1991. The dependent variable is constructed through the province of residence, taking the value of 1 if an individual's province of residence differs between two survey dates and taking the value of 0 otherwise.

The utility individuals receive if they stay in their home province or move to another province depends on the potential earnings they can expect to receive in their home province and somewhere else, which can be decomposed into hourly wages and the number of hours of employment. Therefore, we calculate the weighted averages in all the other provinces for a given occupation as instruments for the potential hourly wages and annual hours of employment individuals in that occupation can expect to receive if they move to another province.<sup>16</sup> And the differences between the expected wages and hours worked in another province and the actual wages and hours worked in the home province enter the model as explanatory variables. Clearly, there is a positive relationship between the difference in wages and hours and interprovincial labour mobility. The larger the difference, the more incentive individuals have to move to another province.

Potential earnings also depend upon whether individuals can find employment, be it in their home province or in another province. The LMAS asks people who experience joblessness or job interruptions about why they thought they had difficulty finding work, including if there were "no jobs available in the locality." The relative frequency of this response can be used as an index of job availability. We calculated this index as the number of individuals who reported difficulty finding a job in each province expressed as a percentage of all interviewees in the same province, and defined the weighted average across all other provinces in the same occupation as an instrument for the index of difficulty individuals in a given occupation can expect in finding a job if they move to another province. The difference between the expected job availability index in another province and the actual job availability index in the home province thus serves as an index of the relative difficulty in finding employment. Obviously, a relatively high value of the difference (interpreted as harder to find employment elsewhere or easier to

<sup>15</sup> For further details on the LMAS, see Statistics Canada, *The Labour Market Activity Survey: Microdata User's Guide*.

<sup>16</sup> The LMAS codes occupations at the 2-digit level, giving rise to a total of 50 occupations.

find employment at home) represents a disincentive to interprovincial labour mobility.<sup>17</sup>

The level of utility individuals receive from potential labour market outcomes if they stay in their home province or move to another province also depends upon a set of personal characteristics. Education indicates generally transferable human capital and possibly wider horizons, so it enters the model as an explanatory variable. In the LMAS, educational attainment is measured in groups rather than actual years of formal schooling. Therefore, dummy variables instead of one continuous variable enter the model to control for educational attainment.

Unlike commodities, people cannot simply be packed up and shipped. A model of geographic labour mobility must also consider the financial and psychological costs of moving. And as people get older they become settled into their communities and establish strong family and social ties. Moving means breaking these ties and starting the settlement process all over again. Therefore, we can expect interprovincial labour mobility to decline with age. In the LMAS, age is also measured in cohorts that have to be included in the model as dummy variables.

By the same token, once members of visible minority groups and immigrants get settled into a particular community, very often close to family members or friends, they can be expected to feel strong attachment to it and be reluctant to move. Therefore, dummy variables indicating visible minority and immigrant status are included in the model as explanatory variables. In Canada, Francophones can be expected to feel a particularly strong attachment to Quebec, and might move there or resist moving out. Therefore we included in the model a dummy variable indicating first language.

Interprovincial labour mobility also involves financial costs. These include the cost of moving, selling non-movable assets such as a house, and relocation and settlement. In the LMAS, marital status and family size are indicated but home ownership is not. We enter the size of family as a proxy for financial costs, because marital status does not exactly measure the number of family members who will accompany the principal mover, and interprovincial labour mobility can be expected to decline as family size increases.

For people who have worked for a period of time, moving may also mean losing job-related benefits, seniority, and union membership. Therefore, job tenure, union membership, and job-related pension-plan coverage are included in the model and can be expected to be negatively associated with interprovincial labour mobility.

A number of questions have to be resolved empirically. First, there is the apparent contradiction in the UI system whereby benefits are, on the one hand, regionally portable, which encourages mobility, and on the other hand, more generous in less prosperous areas, which may discourage it. Second, the Social Assistance

*Unlike commodities, people cannot simply be packed up and shipped. A model of geographic labour mobility must also consider the financial and psychological costs of moving. We can expect interprovincial labour mobility to decline with age.*

---

<sup>17</sup> In other empirical work, local unemployment rates have been used as a proxy for relative labour market tightness, but their influence is not consistent (for example, see Shaw 1985). Local unemployment rates can vary with the incidence or the duration of unemployment or with labour force participation — all of which imply that local unemployment rates may not be a very good proxy for the relative job availability.

system in Canada is largely a provincial/territorial jurisdiction, and the benefit levels vary from one province to another.<sup>18</sup> Do these differences in Social Assistance benefits encourage recipients to move from less to more generous provinces? <sup>19</sup> The answer for any rational individual would be “yes.” However, moving also involves costs. Are these differences sufficiently large to outweigh the costs?

Third, in addition to providing UI benefits and Social Assistance transfer payments, the federal government sponsors various training programs that are administered by Human Resources Development Canada (formerly of Employment and Immigration Canada). Does training encourage participants to move to other provinces? Given that the objective of this training is to provide participants with generally transferable, up-to-date skills above and beyond their formal education, one can expect training to increase mobility. However, if the skills obtained from training are in greater demand locally than elsewhere, trainees may not move.

In summary, the general model of interprovincial labour mobility in equation 5 can be more explicitly expressed with the following explanatory variables:<sup>20</sup>

$$M_i = f (\Delta W_i, \Delta H_i, \Delta JA_i; Educ_i, Age_i, Vismin_i, Immig_i, French_i, Famsiz_i; Tenure_i, Pencover_i, Union_i; UI_i, SA_i, Training_i), \quad (6)$$

where  $\Delta W_i$  measures the difference between the hourly wages respondents expect to get in another province and the actual hourly wages they receive in their home province in the year before moving;  $\Delta H_i$  measures the difference between annual hours of employment expected in another province and actual hours of work in the home province in the year before moving;  $\Delta JA_i$  measures the difference between the expected difficulty in finding a job in another province and the actual relative difficulty finding a job in the home province in the year before moving;  $Educ_i$  signifies the respondent’s educational level in the year before moving;  $Age_i$  signifies the respondent’s age in 1988;  $Vismin_i = 1$  signifies the respondent belongs to a visible minority ;  $Immig_i = 1$  signifies the respondent is an immigrant;  $French_i = 1$  signifies the respondent is Francophone;  $Famsiz_i$  signifies the respondent’s family size in the year before moving;  $Tenure_i$  measures the respondent’s employment duration with the employer in the year before moving;  $Pencover_i = 1$  signifies the respondent is covered by a job-related pension plan (in addition to CPP/QPP) in the year before moving;  $Union_i = 1$  signifies the respondent is either a union member or has wages that are covered by collective agreements in the year before moving;  $UI_i = 1$  signifies the respondent has received UI benefits in the year before moving;  $SA_i = 1$  signifies the respondent has received Social Assistance benefits in the year before moving; and

18 The federal government provides its share in the form of transfer payments. The provincial/territorial governments establish benefit levels and are entirely responsible for the administration of the program, provided they follow national guidelines.

19 Recently the Alberta government was buying one-way bus tickets for its Social Assistance recipients to British Columbia, an example of a provincial government encouraging welfare recipients to move out in order to reduce its own welfare burden.

20 Osberg and Gordon (1991) include in their models the provincial per capita natural resource rents and transfer payments as independent variables. These variables are, however, statistically insignificant in most cases.



$Training_i = 1$  signifies the respondent has participated in at least one training program sponsored by the federal government in the year before moving.<sup>21</sup>

Based on the theoretical discussion above, the explanatory variables can thus be expected to have following signs:

$\Delta W_i$  — “+”,  $\Delta H_i$  — “+”,  $\Delta JA_i$  — “-”;  $Educ_i$  — “+”,  $Age_i$  — “-”,  
 $Vismin_i$  — “-”,  $Immig_i$  — “-”,  $French_i$  — “?” (“-” if living in Quebec  
and “+” if living elsewhere).

Given that most Francophones do live in Quebec, I might expect “-”),

$Famsiz_i$  — “-”;  
 $Tenure_i$  — “-”,  $Pencover_i$  — “-”,  $Union_i$  — “-”;  $UI_i$  — “?”,  
 $SA_i$  — “?”, and  $Training_i$  — “?”.

## Estimation Technique and Empirical Results

Given that the dependent variable is dichotomous rather than continuous (taking the value of 1 if the respondent moves and 0 otherwise), we are modelling the determinants of the probability of interprovincial labour mobility. Therefore, a non-linear maximum-likelihood estimation technique (such as probit or logit) is usually applied,<sup>22</sup> although in earlier work the linear probability estimator (OLS) was often used.<sup>23</sup>

In this particular work, we chose to use the non-linear maximum-likelihood logistic estimation technique, in which the probability of interprovincial labour mobility of equation 5 is given by

$$\ln\{Pr(M_i=1)/[1-Pr(M_i=1)]\} = \beta(\Delta V_i; X_i), \text{ or,} \quad (7)$$

$$Pr(M_i=1) = 1/[1 + \exp[-\beta(\Delta V_i; X_i)]] \quad (8)$$

where  $\beta$  is a vector of coefficients to be estimated and  $(\Delta V_i; X_i)$  is a vector of explanatory variables as specified in equation 6.

Sample statistics are shown in Appendix C, while Appendix A reports the results of the logit model on the probability of interprovincial labour mobility, estimated with the final empirical samples of people who were not full-time students and who had some earnings from paid employment in the year before moving.<sup>24</sup> Since the motivations of men and women who moved differed significantly, I consider male and female mobility separately.

- 
- 21 In addition to the dummy variables specified above, education, age, and family size also enter the model as dummy variables. (See Appendix B for variable definitions.)
- 22 The probit and logit estimators give very similar results. The difference between them is that the underlying functional form of the model in probit is a cumulative normal distribution while in logit it is a logistic distribution. In practice, these distributions are very similar except at the tail-ends.
- 23 When probability models are estimated, probit or logit estimators offer two advantages over OLS: i) OLS violates the assumption of homoscedasticity (the problem of nonuniform variances of the error), and ii) the probability predicted by OLS is not restricted to the 0 to 1 range.
- 24 The LMAS only reports earnings, hourly wages, and annual hours of employment for those with paid employment. In other words, there is no earnings information on those who were self-employed or did not work for the whole year. Therefore, respondents with no paid employment in the year before moving are excluded from our final samples. Although instruments for wages and hours can be estimated through regression techniques involving sample-selection-bias-correction for labour force participation (see Osberg and Gordon, 1991, for example), those who were self-employed or did not work for the whole year before moving did not establish UI coverage and were not eligible for UI benefits anyway. It is thus appropriate to exclude them as well. Furthermore, because they are not available for work, full-time students are not eligible for UI benefits and are also excluded.

The difference in 1989 between the hourly wage that males in 1989 expected to earn in another province and their actual hourly wage is negative but only marginally significant. The difference between the annual hours of employment they expected in another province and their actual annual hours of employment is positive but statistically insignificant. The difference between the difficulty they expected in finding a job in another province and the actual difficulty they had finding a job is negative and highly significant. The dummy variables on educational attainment (the control category is high school or below) are positive and highly significant. The dummy variables on age (the control category is 16-24 years of age) are negative and highly significant. Visible minority status and immigrant status are not statistically significant. The dummy variable indicating first language being French is negative and highly significant. The dummy variables indicating family size (those from single-member families serve as the control category) are generally negative and significant. Tenure at the last job in the year before moving is negative and significant. Being covered by a job-related pension plan at the last job in the year before moving is positive but statistically insignificant. The dummy variable indicating union membership or wages being covered by collective agreements is negative and highly significant. The dummy variables indicating receiving Unemployment Insurance and Social Assistance and participating in a federal government sponsored, job-related training program are all statistically insignificant.

In summary, the logit regression results suggest that among adult, male Canadians in 1989, interprovincial labour mobility decreased if it was harder to find employment in another province relative to the home province, increased with education, decreased with age, was lower among Francophones, decreased with family size, decreased with job tenure, and was lower among those who were union members or had wages that were covered by collective agreements. Receiving Unemployment Insurance or Social Assistance and participating in a federal government sponsored, job-related training program were not significant determinants of interprovincial labour mobility.

The signs and significance of the determinants of female mobility in 1989 are very similar to those of male mobility. *DIFFWAGE* and *DIFFHOUR* are not statistically significant. *DIFFNJA* is negative and significant. The education dummy variables are positive and significant. The age dummy variables are negative and significant. Visible minority and immigrant status are not significant. *FRENCH* is negative and significant. The dummy variables on family size are negative and significant. *TENURE* is negative and significant. Union membership and the dummy variables indicating receiving UI or Social Assistance and participating in a federal training program are not statistically significant.

The determinants of interprovincial labour mobility among adult male and female Canadians in 1990 are very similar to those in 1989. Most explanatory variables have the expected signs and significant levels. The only noticeable difference is that in 1990 receiving UI was a positive and statistically significant determinant of interprovincial labour mobility among adult female Canadians, whereas in 1989 it was not statistically significant.



## 5. Conclusion

Using the most current national microdata available, this study econometrically models the determinants of interprovincial labour migration in Canada in 1989 and 1990 to empirically investigate the effects of policy interventions in the labour market such as Unemployment Insurance, Social Assistance, and various federal government sponsored, job-related training programs.

In 1989, some 120,000 adult Canadians (16 to 69 years of age) moved from one province to another, accounting for 0.7 percent of the adult population. In 1990 the number increased to about 170,000 and the mobility rate increased to 1.0 percent. While residents of Quebec, Ontario, and British Columbia were relatively immobile, those of the Atlantic and Prairie provinces were much more mobile, in both years.

Immigration to Quebec almost matched emigration from it and there was little change in the adult population. Although there was some immigration to Newfoundland, Prince Edward Island, New Brunswick, Manitoba, and Saskatchewan, these provinces all experienced much higher levels of emigration, and consequently suffered population loss. Contrary to historical trends, Ontario also experienced population loss in this period. In Nova Scotia, Alberta, and British Columbia, on the other hand, despite high emigration there was more immigration, and these provinces experienced net increases in their adult populations.

While the destinations of emigrants from Quebec and Ontario spread out across the provinces fairly evenly, Ontario and Nova Scotia were the main destinations for emigrants from the Atlantic provinces and British Columbia. The majority of emigrants from the Prairie provinces stayed in western Canada.

Nearly one-third of people moving to another province in 1989 were motivated by economic reasons (they were transferred by their employer, or they moved to accept a job offer or to look for work); 27 percent moved for family reasons (their spouses/parents moved or they moved to live with/close to family members/friends); about one-third did not cite any specific reason for moving; and the rest moved to go to school or after retiring. In 1990, those who cited no specific reason for moving increased to over 50 percent, and those citing the other reasons decreased.

There were striking gender differences in the reasons for moving. Males were more often motivated by economic factors while females were more often motivated by family responsibilities. Economic reasons were cited by almost 46 percent of male migrants in 1989 but only 25.7 percent of female migrants. On the other hand, family responsibilities drove nearly 39 percent of female but only 12 percent of male migrants.

The analysis of economic returns to mobility shows that moving to another province pays off greatly. On average, male migrants' nominal earnings from paid employment increased by \$7,682, while those of non-migrants increased by only \$2,162, a net earnings return to mobility of \$5,520 or nearly 26 percent of

*The analysis of economic returns to mobility shows that moving to another province pays off greatly.*

male migrants' pre-move earnings. The earnings return to female mobility was a bit smaller than that of males in magnitude (\$5,220), but even higher (nearly 45 percent) when expressed as a percentage of female migrants' pre-move earnings.

Decomposing earnings into hourly wages and annual hours of employment reveals that the relative earnings gains attributable to mobility are due both to higher wages and longer hours of work. The wages return to male mobility was \$0.39 per hour or 3.1 percent of migrants' pre-move level, and the hours return to male mobility was 308 hours a year, or nearly 20 percent of migrants' pre-move level. The wages return to female mobility was negative. Migrants' hourly wage rate increased by only \$0.51 and that of non-migrants by \$1.48, a net wage return to mobility of -\$0.97 or nearly 10 percent of movers' pre-move level. The hours return to female mobility was higher than that of male mobility, both in magnitude and expressed as a percentage of the pre-move level. Female migrants' average annual hours of employment increased by 421 hours, and those of non-migrants increased by only 45 hours, a net gain to mobility of 376 hours a year or 29 percent of female migrants' pre-move level.

The analysis of return mobility shows that in 1990 around 7,000 people moved back to their 1988 home province. This is 5.8 percent of the 120,000 who left their 1988 home province in 1989. However, return mobility differed substantially across provinces. It was much higher than the national average among those who left Newfoundland, Prince Edward Island, New Brunswick, Saskatchewan, and British Columbia, and lower than the national average among those who left Nova Scotia, Quebec, Ontario, Manitoba, and Alberta. Return mobility was also significantly different according to the reason for leaving the previous year. A higher proportion of people who originally moved for economic reasons and a lower proportion of those who originally moved for family reasons subsequently returned to their home province. While 30 percent of migrants did not report any specific reason for moving back, about 42 percent returned for economic reasons and about 21 percent for family reasons.

The logit regression results suggest that interprovincial labour mobility among adult Canadians decreased if it was harder to find employment in another province relative to the home province, increased with education, decreased with age, was lower among Francophones, decreased with family size, decreased with job tenure, and was lower among those who were union members or had wages covered by collective agreements.

Although overall the interprovincial labour mobility rate was higher among those who did than did not receive UI and among those who did than did not participate in a federal government sponsored training program, after controlling for differentials in relative wages, hours, difficulty in finding a job, and relative personal and job-related characteristics, receiving UI and Social Assistance and participating in a federal government sponsored training program, were not significant determinants of interprovincial labour mobility. Only receiving Unemployment Insurance benefits was positive and significant for female mobility in 1990.

A number of qualifications must be attached to these findings. First, as pointed out earlier, interprovincial labour mobility is one mechanism for labour market adjustment, and is therefore conditional on the phase of the business cycle.

Mobility observed in one phase of the business cycle may be different from that observed in other phases. The data used in this study cover the period 1988-90, which was the peak period between the 1981-83 and 1991-93 recessions. Therefore, the findings in this study should not be generalized to mobility in other periods.

To overcome this time-specific weakness, data covering other phases of the business cycle should be analyzed. Fortunately, Statistics Canada's Survey of Labour and Income Dynamics (which was unavailable for the current study) covers various phases of the business cycle, and the results presented in the current study can be re-estimated to ascertain whether labour market policy interventions affect interprovincial labour mobility in other phases of the business cycle.

Second, the Labour Market Activity Survey provides information on whether a respondent receives Unemployment Insurance benefits, but none on the specific aspects of the Unemployment Insurance system that differ from UI region to UI region, such as the eligibility requirements and benefit durations, which are tied to regional unemployment rates. Their effects on interprovincial labour mobility cannot, therefore, be estimated in the models. Although receiving UI, on average, does not statistically significantly increase the probability of interprovincial labour mobility, it is possible that specific aspects of the UI system positively affect it.

Third, many have argued that LMAS respondents cannot accurately distinguish among the great number of job-related training programs sponsored by the federal government. In other words, the variable *TRAINING* does not distinguish one training program from another, so it represents the average influence of all government training programs instead of a particular one. Although according to this average measure, receiving federal government sponsored training does not statistically significantly increase the probability of interprovincial labour mobility, it is possible that some specific training programs would favourably influence interprovincial labour migration.

With these three qualifications, I conclude that most of the significant determinants of interprovincial labour mobility in 1989 and 1990, such as relative job availability, education, age, family size, job tenure, and union membership, are beyond the influence of government labour market interventions, and that direct labour market policy interventions do not influence the probability of interprovincial labour mobility.

Interprovincial migration, however, is only part of geographic labour mobility, and *intraprovincial* migration may be an even more important labour market adjustment mechanism. Largely due to the lack of data,<sup>25</sup> there is little analysis of it and how policy interventions affect it. As Osberg and Gordon (1991, p. 86) argue, "it is simply not true that Kapuskasing and Toronto possess similar labour markets, nor is there much in common between Guysborough county and Halifax

*We conclude that most of the significant determinants of interprovincial labour mobility in 1989 and 1990, such as relative job availability, education, age, family size, job tenure, and union membership, are beyond the influence of government labour market interventions, and that direct labour market policy interventions do not influence the probability of interprovincial labour mobility.*

25 The LMAS allows the identification of those who moved within the province. However, due to confidentiality considerations, the public-use sample has suppressed all sub-provincial identifiers. As a result, those who simply moved within the municipality cannot be separated from those who moved to another area in the province.

or between northern Manitoba and Winnipeg.” Indeed, the difference between northern Ontario and Toronto or between outport Newfoundland and Saint John’s is at least as great as, if not greater than, the difference between Toronto and Vancouver or Edmonton and St. John.

## Appendix A: Logit Model Analysis



**Table A.1**  
Estimated Logit Model on the Probability of Interprovincial Mobility,  
Canada, 1989 and 1990<sup>a</sup>  
(Dependent Variable = 1 if Province<sub>t-1</sub> ≠ Province<sub>t</sub>)

Explanatory variable	1989		1990	
	Male	Female	Male	Female
DIFFWAGE	-0.0222* (0.013)	0.006 (0.0225)	-0.0085 (0.0079)	0.0227 (0.0142)
DIFFHOUR	0.0001 (0.0001)	0.0000027 (0.0001)	0.000006 (0.000008)	0.0001 (0.00009)
DIFFNJA	-0.0671*** (0.0223)	-0.0533** (0.0231)	0.0505** (0.0231)	0.0043 (0.022)
POSSEC	0.5376** (0.2107)	0.2184 (0.2082)	0.2077 (0.1389)	0.1739 (0.1393)
UNIV	0.9452*** (0.2522)	0.6199** (0.291)	0.8393*** (0.1701)	0.8168*** (0.1857)
AGE2544	-0.5483** (0.231)	-0.7299*** (0.216)	-0.7993*** (0.1412)	-0.6218*** (0.1426)
AGE4569	-1.5393*** (0.3574)	-0.9634*** (0.3052)	-1.4822*** (0.2211)	-1.0642*** (0.2083)
VISMIN	-1.1815 (0.7392)	-0.521 (0.6233)	-0.2366 (0.3459)	-0.2793 (0.3541)
IMMIG	0.1344 (0.3234)	-0.2973 (0.3941)	-0.4167* (0.2517)	0.07 (0.2305)
FRENCH	-1.2116*** (0.3495)	-0.5641** (0.2792)	-0.7935*** (0.1935)	-0.6979*** (0.1916)
FAMSIZ2	0.1069 (0.2804)	-0.541** (0.2914)	-0.3309** (0.1755)	-0.3493** (0.1833)
FAMSIZ3	-0.5583* (0.3135)	-0.4329 (0.2991)	-0.5704*** (0.1823)	-0.7453*** (0.2014)
FAMSIZ4	-0.4503* (0.2639)	-0.5143** (0.2775)	-0.7928*** (0.1619)	-0.8781*** (0.189)
TENURE	-0.0007* (0.0003)	-0.0017* (0.0005)	-0.0005** (0.0002)	-0.0018*** (0.0004)
PENCOVER	0.1825 (0.2153)	0.4185** (0.2268)	-0.1173 (0.1458)	-0.0046 (0.1552)
UNION	-0.51** (0.2091)	-0.2285 (0.2265)	-0.3558** (0.141)	-0.0064 (0.1499)
UI	0.0969 (0.2368)	-0.3498 (0.2371)	0.1849 (0.1542)	0.3843*** (0.1413)
WELFARE	0.0163 (0.6058)	0.4322 (0.4101)	0.4884 (0.3418)	0.2171 (0.311)
TRAINING	0.2006 (0.7266)	0.0037 (0.7273)	-0.9617 (1.014)	-0.6464 (0.7215)
CONSTANT	-3.9315*** (0.3102)	-3.4848*** (0.3228)	-2.489*** (0.1757)	-2.7472*** (0.2155)
STATISTICS				
N	16,823	14,937	16,911	15,049
% right prediction	99.2	99.1	98.2	98.1
-2 LL (0)	1562.1	1482.8	3005.6	2833.4
-2 LL Function	1451.3	1409.9	2795.1	2648.0
$\chi^2_{(19)}$	110.8	72.9	210.5	185.4

<sup>a</sup> Standard errors are given in parentheses

\* significant at 10 percent

\*\* significant at 5 percent

\*\*\* significant at 1 percent



## *Appendix B: Variable Definitions*

- DIFFWAGE* = Weighted average hourly wages in another province  
- actual hourly wages
- DIFFHOUR* = Weighted average annual hours in another province  
- actual annual hours
- DIFFNJA* = Weighted average NJA index in another province  
- average NJA index in home province
- POSSEC* = 1 if respondent's education was above high school  
and below university
- UNIV* = 1 if respondent's education was university or higher
- AGE2544* = 1 if respondent's age was between 25 and 44 in 1988
- AGE4569* = 1 if respondent's age was between 45 and 69 in 1988
- VISMIN* = 1 if respondent belongs to a visible minority
- IMMIG* = 1 if respondent's country of birth was outside Canada
- FRENCH* = 1 if respondent's first language is French
- FAMSIZ2* = 1 if respondent's family size was 2
- FAMSIZ3* = 1 if respondent's family size was 3
- FAMSIZ4* = 1 if respondent's family size was 4 or bigger
- TENURE* = Number of weeks worked at the last job
- PENCOVER* = 1 if respondent was covered by a job-related pension plan
- UNION* = 1 if respondent was a union member or had  
wages covered by collective agreement
- UI* = 1 if respondent received Unemployment Insurance benefits
- WELFARE* = 1 if respondent received Social Assistance benefits
- TRAINING* = 1 if respondent participated in any government  
sponsored job-related training

Note: NJA index — No job availability index.

Most explanatory variables are defined according to information given for the year prior to moving, except variables related to visible minority status, immigrant status, and first language, which never change anyway. For those who held more than one job in a year, job-related variables are defined according to the last job held (the most relevant one) before moving.



## *Appendix C: Sample Means and Standard Deviations*



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

	1989		1990	
	Male	Female	Male	Female
DEP. VAR.	0.01 (0.09)	0.01 (0.09)	0.02 (0.13)	0.02 (0.14)
DIFFWAGE	-1.68 (6.55)	1.89 (5.29)	-1.66 (7.34)	1.94 (6.47)
DIFFHOUR	-306.35 (739.08)	150.5 (757.43)	-257.58 (772.21)	161.87 (748.69)
DIFFNJA	-1.42 (3.9)	-1.28 (3.83)	-0.98 (2.88)	-0.86 (2.83)
POSSEC	0.23 (0.42)	0.3 (0.46)	.031 (0.46)	0.36 (0.48)
UNIV	0.13 (0.34)	0.12 (0.33)	0.14 (0.35)	0.14 (0.34)
AGE2544	0.59 (0.49)	0.62 (0.49)	0.59 (0.49)	0.62 (0.49)
AGE4569	0.28 (0.45)	0.25 (0.43)	0.27 (0.44)	0.24 (0.43)
VISMIN	0.04 (0.19)	0.04 (0.2)	0.04 (0.19)	0.04 (0.2)
IMMIG	0.1 (0.31)	0.1 (0.3)	0.1 (0.3)	0.1 (0.3)
FRENCH	0.21 (0.4)	0.2 (0.4)	0.21 (0.4)	0.2 (0.4)
FAMSIZ2	0.22 (0.41)	0.26 (0.44)	0.22 (0.41)	0.25 (0.43)
FAMSIZ3	0.22 (0.41)	0.22 (0.42)	0.21 (0.41)	0.22 (0.42)
FAMSIZ4	0.46 (0.5)	0.42 (0.49)	0.45 (0.5)	0.42 (0.49)
TENURE	398.16 (446.69)	282.1 (338.41)	374.64 (441.94)	264.68 (334.83)
PENCOVER	0.52 (0.5)	0.38 (0.49)	0.54 (0.5)	0.4 (0.49)
UNION	0.44 (0.5)	0.36 (0.48)	0.46 (0.5)	0.38 (0.49)
UI	0.22 (0.41)	0.23 (0.42)	0.21 (0.41)	0.21 (0.41)
WELFARE	0.02 (0.13)	0.03 (0.17)	0.02 (0.13)	0.02 (0.15)
TRAINING	0.01 (0.09)	0.01 (0.1)	0.01 (0.07)	0.01 (0.09)
N	16,823	14,937	16,911	15,049



## *Bibliography*

- Bartel, A. (1979), "The Migration Decision: What Role Does Job Mobility Play?" *American Economic Review*, vol. 69, pp. 775-86.
- Cahill, I. (1993), *The Effect of Unemployment Insurance on the Geographic Mobility of Labour in Canada*, Ottawa: Program and Policy Analysis, Employment and Immigration Canada.
- Goss, E. and C. Paul (1990), "The Impact of Unemployment Insurance Benefits on the Probability of Migration of the Unemployed," *Journal of Regional Science*, vol. 30, no. 3, pp. 349-58.
- Grant, E. and J. Vanderkamp (1976), *Economic Causes and Effects of Migration: Canada, 1965-71*, Ottawa: Economic Council of Canada.
- Moffitt, R. (1991), "Program Evaluation with Non-Experimental Data," *Evaluation Review*, vol. 15, no. 3, pp. 291-314.
- Molho, I. (1986), "Theories of Migration: A Review," *Scottish Journal of Political Economy*, vol. 33, no. 4, pp. 396-419.
- Osberg, L. (1991), "Unemployment and Inter-Industry Labour Mobility in Canada in the 1980s," *Applied Economics*, vol. 23, pp. 1707-18.
- Osberg, L. and D. Gordon (1991), *Inter-Regional Migration and Inter-Industry Labour Mobility in Canada: The Role of Job Availability and Wage Differentials*, Ottawa: Program and Policy Analysis, Employment and Immigration Canada.
- Osberg, L., D. Gordon, and Z. Lin (1994), "Inter-Regional Migration and Inter-Industry Labour Mobility in Canada: A Simultaneous Approach", *Canadian Journal of Economics*, vol. 27, no. 1, pp. 58-80.
- Robinson, C. and N. Tomes (1982), "Self-Selection and Inter-Provincial Migration in Canada," *Canadian Journal of Economics*, vol. 15, no. 3, pp. 474-502.
- Shaw, R. (1985), *Inter-Metropolitan Migration in Canada: Changing Determinants of Three Decades*, Toronto: New Canada Publications.
- Vanderkamp, J. (1977), "Industrial Mobility: Some Further Results," *Canadian Journal of Economics*, vol. 10, no. 3, pp. 462-71.
- Winer, S. and D. Gauthier (1982), *Internal Migration and Fiscal Structure: An Economic Study of the Determinants of Inter-Provincial Migration in Canada*, Ottawa: Economic Council of Canada.

# 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 Economique, 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. (*To be released when available*)
- **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 Stabiliser 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 Stabiliser**  
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 Economiques, 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*)
- **Implications 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 Economiques, 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 and Social Assistance**  
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. Erksøy, 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.