

Selectivity Among Various Types of Inter-Provincial Migrants, Canada 1976-1981

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Abstract

This study examines inter-provincial migration in Canada from 1976 to 1981. Using dummy dependent-variable regression analysis and data from the individual file of the 1981 Canadian Census Public Use Sample Tape, the author investigates which factors best differentiate return movers from primary and onward movers. The analysis reveals that the destination region and a composite measure of marital status and family size are best able to differentiate return moves from the other types of moves; education, occupation and age are also significant factors affecting the type of move.

Résumé

La présente étude examine la migration interprovinciale au Canada de 1976 à 1981. L'aide d'une analyse de régression à variable factice et de données issues de la bande-échantillon à grande diffusion du Recensement du Canada de 1981, l'auteur examine les facteurs qui distinguent le mieux les personnes qui retournent dans leurs provinces d'origine et celles qui déménagent ailleurs. L'analyse révèle que ce sont la région de destination et une mesure composite de l'état matrimonial et des dimensions de la famille qui permettent le mieux d'établir cette distinction. L'éducation, la profession et l'âge sont aussi des facteurs importants à cet égard.

Key Words: individual file public use sample tape, return migration, dummy dependent-variable regression

Introduction

Understanding the internal migration process, particularly in Canada, is as important now as it has been in the past. Dumas (1990:105-106) has shown that in Canada from 1901 to 1989, there was a significant amount of internal redistribution of the population. From 1951 to 1989, the total number of inter-provincial movements ranged from a low of 2,868,282 movements in 1981-1989 to a high of 3,849,741 movements in 1971-1980 with a total of over 13 million movements for the whole 1951-1989 period.

It is also important to note that population distribution and redistribution have an economic component. In Canada, there have been two approaches

taken to deal with the "distribution of population on the one hand and of the economic opportunities on the other." One approach has been to "redistribute economic opportunities to conform to the distribution of the population", as carried out by the Federal government via the various policy initiatives of the Department of Regional Economic Expansion until 1983 and, more recently, by the Department of Regional and Industrial Expansion (Beaujot, 1990:171). The second approach is one where "the population redistributes itself in accordance with economic opportunities (Beaujot and McQuillan, 1982:153). This second approach is perhaps best illustrated by the entrenchment in the 1982 Constitution Act and, in particular, The Canadian Charter of Rights and Freedoms (Section 6), the right of citizens and permanent residents "to take up residence in any province and to pursue the gaining of a livelihood in any province."

Although the debate continues surrounding these issues, it appears quite clear that "the inequitable distribution of population in Canada lies at the very heart of regional problems" (Stafford, 1990:35). As well, given that Canada's population is projected to remain stable and/or decline in the long-term (Health and Welfare Canada, 1989), and that mobility, be it a failure or success, has implications at both the individual as well as societal level (DaVanzo, 1981; Grant and Vanderkamp, 1987), a better understanding of the migration process is required. If, as is predicted, the future stable to declining labour force (Foot, 1982) will have to be distributed in such a manner as to maximize the utility of this resource. An improved understanding of the migration process could result in improvements to the well-being of society and the individuals within it (Grant and Vanderkamp, 1987).

This study examines inter-provincial migration, particularly *return migration*, in Canada between 1976 and 1981. Micro-level data from the 1981 Census provided the somewhat unique opportunity for studying the characteristics of those individuals that are most responsible for the migration decision.

In addition to being able to identify Canadian-born individuals who had made inter-provincial moves between 1976-1981, this dataset allowed the identification of three types of inter-provincial movers, namely, *return* movers who made a move between 1976 and 1981 to the province of their birth; *primary* movers who in 1976, lived in the province of their birth and in 1981, lived in a different province; and *onward* movers who had already made at least one inter-provincial move prior to June of 1976, and in 1981, were living in a province other than the province of residence in June of 1976.

The analysis involved comparing primary and onward movers with return movers to determine whether individual-level demographic variables, socio-economic characteristics, or the aggregate level variable of destination-province or region better differentiate one type of mover from another.

Literature Review

In general, the study of the return migration phenomenon has not been examined in great detail. This can be attributed to the difficulties presented by the traditional data sources which have been utilized by researchers interested in this area of migration. Generally, the direction taken in terms of studying the return migration phenomenon has been to focus primarily on the "personal factors" (Lee, 1966), that is, the demographic and socio-economic characteristics of the mover (Miller, 1973; Lee, 1974) and the human capital approach which builds upon the classical model of Sjaastad (1962).

The human capital approach focuses on the decision-making process and recognizes (a) the importance of information in terms of evaluating potential destinations as well as origins (Ter Heide, 1963; Allen, 1979; Yezer and Thurston, 1976); (b) that costs and benefits are both monetary and non-monetary (psychic), and that making a cost-benefit calculus is, in part, clearly a function of individual characteristics that have an impact on one's satisfaction with the present environment (Speare, 1971). Perhaps the most clearly-stated recent formulation of this approach was put forth by DaVanzo (1976; 1981) who, in formulating a number of hypotheses relating to differences in behaviour between return and non-return migrants, argues that (a) non-monetary (psychic) costs-benefits are more important to return movers than non-return movers; (b) distance is not a factor in return moves since information about the destination is first-hand and complete, and the barrier posed by distance is cancelled out by the psychic benefits provided by family and friends; (c) return moves are seen as the mechanism whereby one corrects a mistake as represented by the initial move; and (d) return moves, if they are to occur, would most likely do so shortly following the initial move.

The work on return migration in Canada has been somewhat limited since data sources which would allow for the meaningful study of this phenomenon have only recently become available to researchers (Grant and Vanderkamp, 1984:62). For the most part, Canadian studies can be seen (to varying degrees) as adopting—the demographic approach in terms of identifying the characteristics of return movers and the human capital

approach (at both the micro and macro level) in terms of identifying the economic forces leading one to make a move (Courchene, 1970; Grant and Vanderkamp, 1976; 1982; 1984; Rosenbaum, 1988).

The literature has generally shown that region or province of destination (a proxy for the opportunity structure as well as cultural and linguistic barriers) is a significant factor. Specifically, we expect to find that the probability of making a return move will be greatest among those returning to the Maritimes region and Quebec. The reasons are two-fold. Specifically, in the case of the Maritimes, the cultural crossing of the East-West border is significant and presents a major obstacle. In the case of Quebec, there is the notion of culture as well, and particularly the barrier posed by the linguistic aspect of culture (Courchene, 1970; Vanderkamp, 1971; 1972; Rosenbaum, 1988). Given the traditional pattern of east-west movement, in order for a return move to take place, a prior move had to have occurred. Consequently, we would expect that return moves would be less likely among those living in a region which is a traditional net gainer of migrants than a region which is a net loser in migration.

In terms of the demographic variables, age has traditionally been thought to be the most important factor in differentiating movers from stayers. It is generally assumed that "persons in their late teens, twenties and early thirties are more migratory than their counterparts" (Shaw, 1975:18). In this study, it is anticipated that age will not be a significant factor as we are looking at a somewhat homogeneous group, that is, we are comparing movers with other movers (Eldridge, 1965; Rosenbaum, 1988). One would expect that if age were to be a significant factor, it would be so in the case of comparing return movers with primary movers, rather than in the comparison of onward movers with return movers. This is anticipated since in the first case, we are comparing first-time movers with at least second-time movers, and in the second case, we are comparing people who have already made at least one move.

Next to age, sex is perhaps the most studied differential. It is generally assumed, that depending upon the type of mobility being considered, females are more migratory than males (Stone, 1978:30) which may simply be a function of the fact that the number of short-distance moves greatly outnumber longer-distance moves. It appears that as distance increases, males are assumed to be more migratory than females since they are considered more "exploratory and less confined by traditions" (Shaw, 1975:20).

Generally, sex has not been a consideration in return migration, although in the U.S., Lee (1974) found differences between the sexes at certain ages. In their Canadian study, Grant and Vanderkamp (1984) noted that sex did not appear to have an impact in terms of differentiating return movers from stayers, primary movers and onward movers. In our study, we expect that the sex differential is unimportant in terms of differentiating return movers from other types of movers. In part, this could be attributed to (a) the fact that we are looking at the longest type of internal move, and given the above stated relationship, we would expect males to be the dominant group; (b) George (1969:160) states that the sex differential may not actually exist if the move takes place within the context of life-cycle stages; and (c) with increasing female labour force participation, females may be influenced by the same sort of factors that influence male mobility (Canada Manpower and Immigration, 1975:43).

It would appear that marital status could be a significant factor in differentiating return movers from primary and onward movers (Grant and Vanderkamp, 1984). The probability of a return move might be decreased by being married as the commitment or motivation behind the initial move is great due to family responsibilities. As well, it is possible that marriage increases the monetary cost associated with a subsequent return move, which thereby reduces the probability of further movement. On the other hand, one could argue that the non-monetary (psychic benefits) may be greater, especially in the case where a marital union dissolves, and may in fact, lead to a greater propensity of a return move to the origin. In general, the effect of marital status is difficult to assess, for one's status at the time of the census may be quite different from one's status at the time of the move.

In terms of family size (specifically the presence or absence of children), children (to a certain degree) might impede further movement due to monetary as well as non-monetary costs associated with making a move. As was the case for marital status, it is conceivable that the presence of children may also lead to a greater probability of making a return move, even with additional monetary costs, simply due to the psychic benefits provided by family and friends.

Higher levels of education are expected to have negative effects on the probability of a return move, since the ability to make a successful cost-benefit analysis (as a result of having access to information) and the ability to adapt to a different social environment increases with the level of education (Courchene, 1970).

The relationship between occupation and mobility is very similar to the relationship found between education and mobility. As Stone (1969:88) states, "education influences occupation...Occupations involving technical and professional skills require higher levels of educational attainment." With respect to income, Rosenbaum (1988) did not find that income was significant in differentiating return movers from primary movers, although Grant and Vanderkamp (1984) did find that return movers had lower incomes than primary and onward movers. Income may not be a significant factor since it represents the status after the move, but should it prove to be significant, its anticipated effect would be similar to that of education and occupation.

Methodology

The Sample

The Public Use Sample Tape was created by taking a "one-in-fifty" representative sample of data from the one-fifth sample of the population given the long-form questionnaire (Statistics Canada, 1986:1). As our concern centred around investigating return inter-provincial migration differentials from 1976-1981, we selected all individuals from the over 500,000 cases in this sample who met the following conditions: (a) persons who lived in a province in 1981 that was different from the province lived in on June 1, 1976; b) persons in census families including husband, wife, common law partners, male and female lone-parents, and non-census family persons who were living alone or with non-relatives only; (c) persons who were not inmates, nor employed in the military nor under the age of 16 in 1981; (d) persons who were household maintainers; and (e) persons who were born in Canada.

The first criterion clearly identified those that had made an inter-provincial move during the period in question. The second through fourth criterion attempted to limit the sample to those individuals who would be most responsible for the migration decision. That is, we have assumed that individuals in the military and inmates do not make autonomous moves and consequently their mobility experiences would be quite different from those who are free to choose to move or not to move. This was also the reason for restricting the sample to those persons aged 16 years and over since children are probably not making their own migration decisions. The inclusion of only household maintainers was a further attempt to limit the final sample to individuals who would have a say in the migration process. As we are examining migration differentials, in terms of return inter-provincial

migration to the province of birth, it was necessary to select only those who were born in Canada (excluding P.E.I., Yukon and the N.W.T. due to the small sample sizes). Those individuals satisfying these five criteria resulted in a sample size of 5,922 cases.

Method of Analysis

The method of analysis used here is commonly referred to as "dummy dependent-variable regression". This method is an accepted alternative (Wister and Burch, 1983; Rosenbaum, 1988) to more recent alternatives such as log-linear, logit and probit analysis. S.P.S.S.^x (1983:550) states that: "the logit model is a special case of the general log-linear model in which one or more variables are treated as dependent..."; and Hanushek and Jackson (1977:204) state that "historically, probit analysis has been commonly used whenever one has individual or micro data and is considering a model with a discrete dependent variable. Recent developments provide an alternative, logit analysis. Since the ML logistic estimator is very similar to the probit estimator, the choice between logit and probit is largely one of convenience and program availability".

As Swafford (1980), Gillespie (1977) and Knoke (1975) point out, dummy dependent-variable regression is analogous to ordinary regression and yields results which are similar to log-linear analysis when the split on the dependent variable is in the 25% to 75% range. As our objective is to determine which factors differentiate various types of inter-provincial movers from one another, it was felt that such a technique was appropriate as the splits on the dependent variable fell well within the accepted range.

The Measures

One of the advantages presented by the Public Use Sample is that it allows one to explore the migration experiences of Canadians in a more meaningful way than traditional aggregate data sources. While traditional sources enable one to identify movers from east to west for example, it does not allow for differentiating those making return moves from those making primary moves.

Mobility history (Table 1) for the sample was determined by cross-classifying province of birth with province of residence in 1976.

We found that over half (54.39%) of the sample were making their first inter-provincial move (assuming of course that they had not made a return inter-provincial move prior to the 1976 reference date; or had not made two moves, the second being a return move between the reference and 1981 census date). The others (45.61%) had made what can be classified as at least a secondary (onward) type of inter-provincial move since the province of birth is different from the province in which they resided in 1976.

TABLE 1. MOBILITY HISTORY PRIOR TO 1976

	Frequency	%
No Prior Moves	3221	54.39
Prior Mobility	2701	45.61
Total	5922	100.0

As we can see from the following two tables, the majority of inter-provincial moves made between birth and 1976 (Table 2) and between 1976 and 1981 (Table 3) were in a westerly direction. This finding was not unanticipated given the traditional nature of the migratory stream (Statistics Canada, 1987:51).

TABLE 2. DIRECTION OF MOBILITY PRIOR TO 1976

Direction of Move	Frequency	%
East	1009	37.36
West	1692	62.64
Total	2701	100.0

TABLE 3. DIRECTION OF MOBILITY BETWEEN 1976-1981

Direction of Move	Frequency	%
East	1825	30.82
West	4097	69.18
Total	5922	100.0

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The mobility status variable, as defined by Statistics Canada, is based upon the place of residence in 1976 and 1981. Consequently, identifying return inter-provincial movers returning to the province of residence (1976) is not possible. It is possible, however, to identify *lifetime* inter-provincial return movers by comparing the province of residence in 1981 with the province of birth. As well, we are able to identify individuals who had made either primary or onward inter-provincial moves during the period being examined (Table 4).

TABLE 4. DIRECTION AND TYPE OF MOBILITY 1976-1981

Type and Direction of Move	Frequency	%
<i>Return</i>	1415	23.89
East	853	14.40 (60.28%)
West	562	9.49 (39.72%)
<i>Primary</i>	3221	54.39
East	568	9.59 (17.63%)
West	2653	44.80 (82.37%)
<i>Onward</i> (same direction as previous move(s))	555	9.37
East	60	1.01 (10.81%)
West	495	8.36 (89.19%)
<i>Onward</i> (different direction than previous move(s))	731	12.34
East	344	5.81 (47.06%)
West	387	6.53 (52.94%)
<i>Total</i>	5922	100.00

We note that in this sample, 23.89% (1415) of individuals made return moves to the province of birth, whereas, 76.11% (4507) of the individuals made a move to another province other than the province in which they were born or resided five years earlier. The finding that almost one-quarter of the inter-provincial moves made were return moves is quite consistent with previous studies (Rosenbaum, 1988; Vanderkamp, 1972; Grant and Vanderkamp, 1984; Courchene, 1970).

It should be noted that the magnitude of return mobility represented in the sample is clearly an underestimate of the total universe of 1976-1981 return moves, as the 5,922 cases identified represent individuals who resided in a province in 1981 which differed from the province of residence five years

earlier. That is, "much return migration occurs only a year or so after an initial move. Such moves tend not to be enumerated by the census..." (Shaw, 1985:189). Consequently, the 5,922 individuals identified in the study as the universe of inter-provincial movers fails to include individuals who, within a short-time after their initial move (after the reference date in 1976 and prior to the 1981 Census date), made a subsequent move which was, in fact, a return move. With respect, then, to return migration, we are limited to dealing with individuals who made an inter-provincial move to the province of their birth which took place between the 1976 reference date and the 1981 Census date.

As well, the possibility should be noted that those individuals identified as primary movers in Table 4 may, in fact, be individuals not making their first move but (a) had made a primary or onward move and a subsequent return move to province of birth (prior to the 1976 reference date); or (b) had made at least three moves between 1976 and 1981 i.e., a move from or to province of birth and a third move to some other province where they resided in 1981.

Table 4 also illustrates a number of other interesting points namely, (a) that among multiple mover groups (return and onward movers), approximately half made return moves, while the other half made an onward type move; (b) that the historical pattern of movement (east-west) is more pronounced (in relation to Tables 2 and 3) among both primary movers and onward movers whose second move is in a direction opposite to their previous move than among return movers and onward movers whose second move is in the same direction as their prior move. This second finding tends to further reinforce one of the advantages associated with micro-level data, that is, one can separate streams of movers into various types of movers rather than treating streams as a homogeneous group.

In this study, the primary concern was to identify those factors which differentiate return movers from other types of inter-provincial movers. Specifically, these factors are: destination region which is used as a proxy for the opportunity structure (economic and social); the demographic variables traditionally considered (sex, age and a composite measure of marital status and family size); and finally, three measures of socio-economic status—education, occupation and total family income. In addressing this question, each of the three types of inter-provincial movers were treated as a homogeneous group, that is, ignoring the direction of the move.

In previous Canadian studies, the issue of language/ethnicity has been generally addressed through the inclusion of a variable representing one's

mother tongue, knowledge of either one, both or neither of the official languages, or home language. It was found that the inclusion of any of these measures in the analysis was problematic in that there was a high correlation between one destination-region variable (Quebec) and the measure of language. In fact, we found that in this particular sample of Canadian-born individuals with respect to knowledge of official language, only 1.1% knew French only, whereas about three-quarters of the remaining sample knew English only and one-quarter were bilingual. Also, since the sample consists of native-born Canadians, there was only about 1% who identified themselves as having a mother tongue or home language other than French or English. For these reasons, we refrained from including any measure of language or ethnicity, except as represented by destination region, in the analysis.

The dependent and independent variables are categorical and were created following the accepted convention. It should be kept in mind that the demographic and socio-economic variables represent the individual's status after the move (and perhaps as a consequence of moving) rather than their status at the time of the move.

The Analysis

The analysis was based on three different comparisons using the same model and noting which factors were significant in differentiating one type of mover from another. From a methodological point of view, a hierarchical approach was used (Swafford, 1980; Gillespie, 1977) in that the order of entry of a block of independent variables was based upon temporal priority. As well, an additive model was assumed in part due to (a) the large number of interaction terms needed that would have needed to be created, and (b) the difficulty associated with making any sort of meaningful interpretation of higher order interaction terms.

The first model (Table 5) examined the differences between return movers and all "other" inter-provincial movers. The overall fit of the model was somewhat disappointing in that the model explained only 16.34% of the variance in the probability of making a return move as opposed to any "other" type of inter-provincial move. In part, this can be attributed to a number of factors, namely (a) as Grant and Vanderkamp (1982:15) remind readers, "the results are not spectacular in the sense of high coefficients of determination, but it should be noted that we are estimating ... from a large group of micro observations", (b) the "other" group includes onward and primary type movers, and the onward movers may be more similar to return

movers than primary movers, thus obscuring differences between the two groups compared in this case; and perhaps most important is (c) the fact that we are comparing movers with movers, and therefore it makes sense that differences between two groups would not be large since both had made inter-provincial moves.

TABLE 5. RETURN VERSUS "OTHER" MOVERS.

Destination Region	unstandard. b's	s.e. b's	zero order correlation
Quebec	---		
B.C.	-.44256*	.02318	-.16975
Martimes	-.07399*	.02675	.17910
Ontario	-.13921*	.02554	.14426
Prairies	-.22779*	.02338	.08336
Alberta	-.43840*	.02264	-.22391
Sex			
Female	---		
Male	-.01653	.01514	-.04584
Age			
65+	---		
16-26	-.04393	.03588	-.11633
27-31	.01820	.03600	.03354
32-41	.01648	.03626	.04776
42-65	.01505	.03482	.03957
Marital Status and Family Size			
single no children	---		
single children	.18882*	.05217	.03696
married no children	.02567	.01580	-.05606
prev. married no children	.06613*	.02246	.03703
prev.marr.children	.13759*	.02560	.08615
married children	.06667*	.01582	.05946
Education			
less than secondary	---		
univ/non-uni.no cert.	.01734	.01735	-.00325
univ. cert.	-.03365	.02256	-.00106
sec'dy/trade cert.	-.02029	.01730	-.00951
cert./dipl.non-univ.	-.01931	.01583	-.01079
B.A. or higher	-.04489*	.01821	-.02534

Table cont'd.

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Table 5 cont'd.

	unstandard. b's	s.e b's	zero order correlation
Occupation			
unemployed	---		
other	-.03896	.03426	.00031
primary	-.01633	.03521	.01335
managerial	-.05898*	.02834	-.00419
service	-.02826	.02546	.00370
science/med./teach.	-.04673	.02800	-.02428
secondary/transport	-.03069	.02704	-.03289
Income			
<\$4037	---		
\$4037-10628	.00628	.02045	.02040
\$10629-18901	.00682	.02025	-.00209
\$18902+	-.01838	.02087	-.03445

(Constant) .56915

proportion return movers=.2389(N=1415) proportion other movers=.7610(N=4507)

- Reference Category Dependent Variable: Return=1 Other=0.

R²=.16337

*Significant at least .05 level

Detailed examination of these results indicate that the most important factor in differentiating return movers from all other inter-provincial movers is the destination region. Comparing the unstandardized b's, we find that for all regions, the probability of making a return move is less likely if one was born outside the province of Quebec. This finding suggests that the language barrier existing outside the province of Quebec for French-speaking individuals has a substantial effect in terms of leading one to make a return move to Quebec as well as discouraging the unilingual English individual from making a primary or onward move to Quebec. We also note that the probability of a return move is least likely if one were returning to the furthest two western regions (Alberta and B.C.). This is not surprising in that the two areas were major recipients of internal migrants, and in order to return, one must have left at some point in the past.

Of the remaining variables introduced into the model, the next most important contributors appeared to be the composite measure of marital status and family size. In particular, it was found that the probability of making a return move is greatest among those individuals who have children but are in a single-parent situation (be it a result of death, divorce, or never having been married). Within the context of the non-monetary psychic costs

and benefits associated with the migratory process, the greater likelihood of a return move among lone-parent families is not unexpected if one assumes that the return moves results in a significant non-monetary psychic benefit as represented by the presence of family and friends at the origin of the prior move. It also appears from the results that the presence of children decreases the likelihood of making a return, since the probability of making a move is the same for married couples without children as it is for single individuals.

The socio-economic variables of education and occupation appeared to have a significant effect on the probability of making a return move. We found that within education and occupation, the probability of a return move was decreased (in relation to the corresponding reference categories) among those with a B.A. or in higher or managerial occupations, whereas for both education and occupation, the probability of a return move for the remaining categories did not differ from the probability of their respective reference categories. These findings are not surprising since the motivation underlying the move for these two groups might be more of an innovative rather than conservative one, and the ability to evaluate the costs and benefits would be greater, thereby leading to a successful initial move as opposed to a subsequent move which could be interpreted as a response to a failed prior move.

The rationale for testing the remaining two models was that perhaps by disaggregating "others" into onward and primary movers, and then comparing return movers with each group, a clearer picture differentiating return movers from other inter-provincial movers would be seen.

The second model compared return movers with onward movers. Once again, the results were somewhat disappointing in that they only explained about 22% (Table 6) of the variance in the probability of making a return as opposed to an onward type move.

Although the variance explained is somewhat better than the previous model, the disappointing results can be explained in a manner similar to the above model. As well, it should be noted that to a certain degree, even more disappointing results than in the previous model would be expected since in this case, the two types of movers are even more similar to one another than in the preceding model. That is, both these types of movers are making at least a second move—one to birth province, and the other to a third province.

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TABLE 6. RETURN MOVER VERSUS ONWARD MOVERS

	unstandard. b's	s.e. b's	zero order correlation
Destination Region			
Quebec	---		
B.C.	-.57519*	.03460	-.27242
Maritimes	-.11555*	.03779	.16134
Prairie	-.15339*	.03667	.13915
Ontario	-.15867*	.03435	.13800
Alberta	-.54316*	.03443	-.24876
Sex			
Female	---		
Male	.00288	.02595	-.04482
Age			
65+	---		
16-26	.08609	.05618	-.01539
27-31	.10532	.05564	.05943
32-41	.06648	.05582	.00613
42-65	.03324	.05339	-.04687
Marital Status and Family Size			
single no children	---		
single children	.24025*	.08155	.04529
married no children	.01744	.02887	-.06564
prev.marr. no child.	.06705	.03680	.01204
prev.marr.children	.17214*	.04087	.08073
married children	.07183*	.02776	.03049
Education			
less than secondary	---		
cert./dipl.non-univ.	-.01981	.02675	-.00099
univ. cert.	-.06212	.03739	-.01043
univ/non-uni.no cert.	-.04469	.02889	-.00758
sec/dy/trade cert.	-.04145	.02942	-.00415
B.A. or higher	-.07583*	.03060	-.04153
Occupation			
unemployed	---		
other	-.07605	.05598	.00048
primary	-.00557	.05736	.03400
managerial	-.06371	.04513	-.03998

Table cont'd.

Table 6 cont'd.

	unstandard. b's	s.e. b's	zero order correlation
Occupation			
service	-.02707	.03973	.00764
science/med./teach.	-.06007	.04482	-.02485
secondary/transport	-.03295	.04285	-.00380
Income			
<\$4037	---		
\$4037-10628	-.00645	.03459	.03326
\$10629-18901	.02169	.03482	.03500
\$18902+	-.03834	.03554	-.09336

(Constant) .78788

proportion return movers=.5239(N=1415) proportion onward movers=.4761(N=1286)

-Reference Category Dependent Variable:Return=1 Onward=0.

R²=.21738 *Significant at least .05 level

Generally speaking, the same variables appeared to be important in differentiating these two types of movers. Although it is not legitimate to directly compare these results to those discussed above, it seems that the strength of the destination variable is more significant in this case than in the earlier case. It is interesting that the probability of making a return move (in this model) seemed to be greater for Ontario, the prairies and the Maritimes. This might reflect a greater probability of making a return move (although a return move was still most likely to occur if the destination were Quebec) whereas, the probability of having made a return move was least likely if the destination was the either of the two far western regions.

In terms of the remaining variables, once again only the composite variable (marital status and family size) and education seemed to make a difference in differentiating these two groups. It was found that being previously married or single with children does have a significant effect on whether one makes an onward or return move, and that for those previously married, the probability of returning seemed to be increased if children were present (in relation to the reference category-single no children). In the case of education, the presence of a B.A. or higher seemed to decrease the probability of making a return move, while the probability of making a return move for all other levels of education is no different than it is for someone with less than a secondary school education (reference category).

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TABLE 7. RETURN MOVERS VERSUS PRIMARY MOVERS.

	unstandard. b's	s.e. b's	zero order correlation
Destination Region			
Quebec	---		
B.C.	-.46247*	.02704	-.16710
Maritimes	-.04937	.03078	.19613
Prairies	-.11854*	.02940	.15783
Ontario	-.24180*	.02666	.07272
Alberta	-.46869*	.02606	-.25760
Sex			
Female	---		
Male	-.02957	.01822	-.05233
Age			
65+	---		
16-26	-.11093*	.04411	-.16765
27-31	-.02668	.04426	.02848
32-41	-.01701	.04463	.07072
42-65	.00633	.04307	.08217
Marital Status and Family Size			
single no children	---		
single children	.19258*	.06027	.03615
married no children	.02770	.01884	-.06148
prev.marr. no child.	.07565*	.02728	.05207
prev.marr.children	.13930*	.03051	.09572
married children	.07780*	.01893	.07870
Education			
less than secondary	---		
univ/non-uni.no cert.	.00617	.02088	-.00212
univ. cert.	-.02752	.02728	.00231
sec'dy/trade cert.	-.01440	.02075	-.01284
cert./dipl.non-univ.	-.01816	.01896	-.01589
b.a. or higher	-.03837	.02204	-.02326
Occupation			
unemployed	---		
other	-.01946	.04096	.00028
primary	-.00599	.04160	.00768
managerial	-.04867	.03409	.00904

Table cont'd.

Table 7 cont'd.

	unstandard. b's	s.e. b's	zero order correlation
Occupation			
service	-.01675	.03044	.00277
science/med./teach.	-.03380	.03342	-.02772
secondary/transport	-.02413	.03225	-.04793
Income			
<\$4037	---		
\$4037-10628	.01294	.02407	.01844
\$10629-18901	.00884	.02382	-.01567
\$18902+	-.00859	.02473	-.01764

(Constant) .66492
 proportion return movers=.3052(N=1415) proportion primary movers=.6948(N=3221)
 -Reference Category Dependent Variable:Return=1 Primary=0.
 R²=.18983 *Significant at least .05 level

The third model (Table 7) compared return movers with primary movers, that is, those who had not made any prior moves. Once again, the region of destination and the marital status/family size variables were significant and operated in much the same way as noted for the preceding two models.

In addition to these variables, age (a traditionally important variable) seemed to be important in terms of differentiating these two types of movers. It was found that the probability of making a return move for all age groups was no different from that for the reference category with the exception of those aged 16-26 where the probability of making a return move was reduced. This finding could perhaps be attributed to the fact that these individuals are young and are not old enough to have made a return move given that their primary move had just taken place.

Summary

In testing these three models it was attempted to shed some light on those factors which might differentiate various types of inter-provincial movers from one another. On one hand, it could be said that the models did not appear to explain much of the variance in the probability of making a return or "other" type of inter-provincial move. As previously noted, this may be due to the fact that we are looking at two groups in each of these cases

which, by virtue of having made a move during the 1976-81 period, are similar in many respects, even though they differ in the type of move made during this period. In all three cases, the models did improve the probability of guessing correctly whether an individual would make a return or "other" type move. That is, guessing whether an individual was a return mover without any other information about the individual would have been correct from about 24% in the case of the first model to about 52% in the case of the second model determined by the split (proportion) on the dependent variable. Knowing the value for factors identified as being significant in the above analysis (specifically: the region of destination, marital status and family size in all three cases; education in the first two models; occupation in model two; and age in model three), one could increase the probability of correctly guessing the type of move an individual had made. The probability of guessing correctly (the constant in Tables 5 through 7) was increased most in the first model examined (Table 5) and least in the second model (Table 6).

Perhaps the most important findings to come out of this study are (a) the barrier (linguistic) posed by the province of Quebec as a region is quite significant in terms of accounting for return moves and discouraging anglophones from making "other" moves to Quebec and its' assumed opportunity structure; (b) almost 46% (Table 4) of the total made what we could consider to be a move (return and onward) which was a response to a failed earlier move. This would seem to indicate that the efficiency of the stream (Lee, 1966) is not high and the notion that a move would result in success is somewhat questionable, in that so many of the moves were responses to failed earlier moves; (c) it appears that the non-monetary psychic benefits represented by family and friends at the original place of origin is quite substantial among those who are lone-parents. As well, it seems that in these cases, the presence of children actually does not seem to inhibit mobility but actually serves to increase the probability that one would return to the province of birth.

It seems fairly apparent that if inter-provincial migration is going to be seen as the means of redistributing the population in order to encourage regional development, while at the same time making the most of Canada's fairly small and projected stable to declining population, more comprehensive studies of the inter-provincial migration process need to be carried out. These future studies have to go beyond the kind of framework presented in this paper and others which are more economic in nature. It appears that the focus needs to be directed towards discovering why failure occurs (as indicated by a return or subsequent move), and how the social ties and experiences of the migrant at the destination increase the chances of a move resulting in success at both the individual and societal level.

References

- Allen, J. 1979. Information and subsequent migration: Further analysis and additional evidence. *Southern Economic Journal* 45:1274-1283.
- Beaujot, R. and K. McQuillan. 1982. *Growth and Dualism: The Demographic Development of Canadian Society*. Toronto, ON: Gage.
- Beaujot, R. 1991. *Population Change in Canada: The Challenges of Policy Adaptation*. Toronto, ON: McClelland and Stewart Inc.
- Canada. Manpower and Immigration. 1975. *Internal Migration and Immigrant Settlement*. Ottawa, ON: Information Canada.
- Courchene, T.J. 1970. Interprovincial migration and economic adjustment. *Canadian Journal of Economics* 3:551-576.
- DaVanzo, J. 1976. Differences between return and non-return migration: An econometric analysis. *International Migration Review* 10:13-27.
- _____. 1981. Microeconomic approaches to studying migration decisions. In G. Dejong and R. Gardner (eds.) *Migration Decision Making*. New York, NY: Pergamon Press.
- DeJong, G. and R. Gardner. 1981. *Migration Decision Making*. New York, NY: Pergamon Press.
- Dumas, Jean. 1990. *Report on the Demographic Situation in Canada 1990*. Ottawa, ON: Statistics Canada Cat. No.91-209.
- Eldridge, H.T. 1965. Primary, secondary and return migration in the United States: 1966-1960. *Demography* 5:249-267.
- Foot, D.K. 1982. *Canada's Population Outlook*. Toronto, ON: James Lorimar and Company Publishers.
- George, M.V. 1969. *Internal Migration in Canada*. Ottawa, ON: Dominion Bureau of Statistics (1961 Census Monograph).
- Gillespie, M. 1977. Log-Linear techniques and the regression analysis of dummy-dependent variables: Further basis for comparison. *Sociological Methods and Research* 6(1):103-122.
- Grant, E.K. and J. Vanderkamp. 1987. The role of migration in balancing regional supply and demand discrepancies. Discussion Paper 87.A.6. *Studies in Social Policy*. Ottawa, ON.
- _____. 1976. *The economic causes and effects of migration*. Economic Council of Canada. Ottawa, ON: Minister of Supply and Services.
- _____. 1982. *Repeat migration and disappointment*. Discussion Paper No. 1982-4. Department of Economics. Guelph, ON: University of Guelph.
- _____. 1984. A descriptive analysis of the incidence and nature of repeat migration within Canada 1968-71. *Canadian Studies in Population* 11(1):61-78.
- Hanushek F. and T. Jackson. 1977. *Statistical Methods for Social Scientists*. New York, NY: Academic Press.

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- Health and Welfare Canada. 1989. Charting Canada's future: A report of the demographic review. Ottawa, ON: Minister of Supply and Services.
- Knocke, D. 1975. A comparison of log-linear and regression models for systems of dichotomous variables. *Sociological Methods and Research* 3(4):416-434.
- Lee, E. 1966. A theory of migration. *Demography* 3:47-57.
- Lee, A. 1974. Return migration in the United States. *International Migration Review* 8:283-300.
- Miller, E. 1973. Return and nonreturn in-Migration. *Growth and Change* 4:3-9.
- Rosenbaum, H. 1988. Return inter-provincial migration Canada, 1966-1971. *Canadian Studies in Population* 15(1):51-65.
- Shaw, R.P. 1975. Migration theory and fact. bibliography Series No.5. Philadelphia: Regional Science Research Institute.
- _____. 1985. Intermetropolitan Migration in Canada: Changing Determinants Over Three Decades. Toronto, ON: NC Press Ltd.
- Sjaastad, L.A. 1962. The costs and returns of human migration. *Journal of Political Economy* 70:s.80-s.93.
- Speare, Jr., A. 1971. A cost-benefit model of rural to urban migration in Taiwan. *Population Studies* 25:117-131.
- S.P.S.S. 1983. S.P.S.S.X User's Guide. New York, NY: McGraw-Hill.
- Stafford, James. 1990. Regions and Migration in Comments on "Charting Canada's Future". London, ON: Federation of Canadian Demographers.
- Statistics Canada. 1986. 1981 Census of Canada Public Use Sample Tapes User Documentation. Ottawa, ON: Minister of Supply and Services.
- Stone, L. 1969. Migration in Canada: regional aspects. 1961 Census Monograph. Ottawa, ON: Dominion Bureau of Statistics.
- Stone, L. 1978. The frequency of geographical mobility in the Population of Canada. Ottawa, ON: Minister of Supply and Services. Cat. No.99-751E.
- Swafford M. 1980. Parametric techniques for contingency table analysis. *American Sociological Review* 45(4):664-690.
- Ter Heide, H. 1963. Migration models and their significance for population forecasts. *The Millbank Memorial Fund Quarterly* 41:56-76.
- Vanderkamp, J. 1972. Return migration: its significance and behaviour. *Western Economic Journal* 10:460-465.
- _____. 1971. Migration flows, their determinants and the effects of return migration. *Journal of Political Economy* 79:101222-1031.
- Yezer A.M. and L. Thurston. 1976. Migration patterns and income change: implications for the human capital approach to migration. *Southern Economic Journal* 42:693-702.

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Wister, A.V. and T.K. Burch. 1983. Fertility and household status of older women in Canada, 1971. *Canadian Studies in Population* 10:1-13.

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