RETURN INTER-PROVINCIAL MIGRATION
CANADA, 1966-1971

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Résumé — La migration inter-provinciale de retour, Canada, 1966-71. Nous examinons la migration inter-provinciale au Canada durant la période 1966-71 afin de déterminer les facteurs qui différencient les movements qui impliquent un retour à la province d'origine. Les données d'enchantillon du recensement 1971 permettent d'identifier les migrants qui retournent à leur province d'origine ainsi que la population au risque. A base de regression avec une variable dépendante à deux catégories, nous déterminons que les facteurs suivants différencient ces deux types de migration inter-provinciale: les possibilités d'emploi et la langue de la région de déstination, ainsi que l'âge de l'individu en lieu.

Abstract — This study examines the inter-provincial return migration phenomenon within the context of the 1966-1971 Canadian experience, specifically, what factors differentiate return from non-return inter-provincial movers. Utilizing the individual file of the 1971 Census Public Use Sample Tape, it was possible to identify return movers, as well as the population at risk, in a more meaningful way than is possible using other traditional data sources. The employment of dummy dependent-variable regression revealed that the opportunity structure and language barrier (represented by destination region), as well as the demographic variable age, proved to be the most significant factors differentiating these two types of inter-provincial movers from one another.

Key Words — **return migration, dummy dependent-variable regression**

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Introduction

It is generally accepted that the work of Ravenstein (1885; 1889), particularly the development of the "laws of migration," had a profound influence on the way in which the migration phenomenon has been studied. In part, the research which is reported here is directed towards studying one of these so-called "laws," namely, that for every stream of migration there appears to exist a compensating counter-stream.

The existence of compensating counter-streams has been acknowledged and documented (Bogue *et al.,* 1953, 1957; George, 1969; Lee, 1966; Shryock, 1964; Stone, 1969); systematic study of the return migration component of this counter-stream has been rather limited (Courchene, 1970, 1974; DaVanzo, 1976, 1981; Eldridge, 1965; Grant and Vanderkamp, 1976, 1982, 1984; Lee, 1974; Miller, 1973; Simmons, 1972; Vanderkamp, 1968, 1971, 1972, 1973; Yezer and Thurston, 1976). (Not all counter-stream moves are return moves. Some are simply new moves between areas in a direction opposite to the dominant stream of movement.) For the most part, the lack of attention directed towards studying this one component of the migration counter-stream is clearly related to the limitations presented by the data sources traditionally utilized to study the whole migration phenomenon. Specifically, aggregate census data, which although providing an adequate means of gauging the magnitude and composition of streams of movement between two areas, does not allow one to determine if a counter-stream type of move is of the return variety or simply a move between areas in the opposite direction.

With the somewhat recent availability of census data at the individual level, it is now possible to study the counter-stream and return migration phenomenon in a more meaningful manner. That is, rather than being limited to describing the magnitude and composition of streams between two areas, it is now possible to identify the return migration component of the counter-stream, as well as to identify the characteristics of those individuals making up these opposing streams of movement. Consequently this study, which employs individual level data from the 1971 census describing the 1966-1971 Canadian experience, proposes to address two questions: one, the identification of the magnitude or extent of inter-provincial return migration; and two, the identification of those factors which differentiate return from non-return inter-provincial migrants.

Literature Review

One of the first systematic studies of return migration was undertaken by Eldridge (1965), who, in this study of U.S. migration (1955-1960), identified three types of mobility, specifically, primary, secondary and return mobility. As well, Eldridge began the trend toward examining the operation of migration differentials within the context of these streams and types of moves, which perhaps culminated with one of the most comprehensive works to date being the study by Lee (1974) which examined American return migration differentials, specifically, the operation of the sex, age, race and region (locational) differentials in both 1960 and 1970.

Although other studies of return migration have examined return differentials, the majority of the work in this area has focused on the decision-making process and the underlying economic motivation for return migration. Generally speaking, return migration had been studied within the context of the cost-benefit framework (Sjaastad, 1962); where it is generally assumed that the moves are made in response to pulls rather than pushes, by man who is considered to be rational.

The literature has also argued that (i) this type of move results from the employment of incomplete or inaccurate information resulting in an inaccurate assessment of the costs and benefits associated with the original move (Allen, 1979; DaVanzo, 1981; Grant and Vanderkamp, 1984; Yezer and Thurston, 1976), and (ii) that a return move may be the consequence of making a faulty cost-benefit calculus which results in a discrepancy between what Michelson (1976) has termed "experiential and mental congruence" (DaVanzo, 1976, 1981; Grant and Vanderkamp, 1982, 1984; Vanderkamp, 1972).

Although the motivation behind a return move is easily explained within the context of the behavioural or social-psychological processes noted above, much of the research has focused primarily on the economic determinants and the failure of the return migrant to behave in the manner predicted by the cost-benefit framework. Perhaps the most extensive examination (at the conceptual level) of the return migration phenomenon was carried out by DaVanzo (1976, 1981), who formulated a number of hypotheses which attempted to explain the "expected differences between the behavior of (potential) return and non-return migrants." DaVanzo argued that (i) the probability of return migration is expected to be higher than non-return migration given that past mobility makes future mobility easier, (ii) return migrants are less sensitive to economic opportunities (wages) than are non-return migrants, (iii) distance is of marginal importance in return migration since information about the destination is abundant, (iv) the psychic costs and presence of friends and relatives

at the destination compensates for the barrier posed by distance, (v) return migration increases in times of recession, (vi) as the "interval of absence" increases, the propensity to return decreases, (vii) return migration is a "corrective act" — one that may be guided by the migrants superior "information about a familiar area" and (viii) moving "entails some learning by doing," consequently, a successful move raises the probability of making a subsequent move while, conversely, "unsuccessful movers return in the hope of regaining an earlier equilibrium of life."

Generally speaking, the Canadian literature on return migration has been economic in nature and followed the human capital approach advocated by DaVanzo. These Canadian studies (Courchene, 1970; Grant and Vanderkamp, 1982, 1984; Vanderkamp, 1968, 1971, 1972), which also utilized individual records (based on tax returns and unemployment insurance files), had as their major emphasis the discovery of the effects on mobility of distance, prior mobility, unemployment rates and wage losses/gains.

Given, then, the emphasis of previous research, the focus of our analysis is directed solely towards discovering which social, economic and demographic factors (that are available in the PUST sample) differentiate inter-provincial return movers from non-return movers.

Methodology

The Sample

The purpose of this study is to examine return migration differentials in Canada during the 1966-1971 period. With this in mind, investigations will be carried out using data from the individual file of the Public Use Sample Tape provided by Statistics Canada from information gathered during the 1971 census.

One of the major advantages presented by this data source is that it allows one to identify the population at risk, in a manner which is far superior to that offered by aggregate census data. The generation of the primary sub-sample of 11,918 cases was accomplished by taking and drawing a one-in-five-hundred sample from those cases that met the following four conditions. Specifically, individuals that (i) were either heads of a census family or single, (ii) were fifteen years of age or older, (iii) did not attend school (full/part-time) during the 1970-71 academic year, and (iv) were not employed by the military.

A 10 per cent sub-sample (N = 1,206) was then drawn from these 11,918 cases. As our concern is with inter-provincial migration, two further condi-

tions had to be satisfied. Specifically, only those individuals who (i) were Canadian born and residing in Canada in 1966 and (ii) had made an inter-provincial move (1966-71) were included in the final sub-sample of 428 cases.

Method of Analysis

Migration being a "social phenomenon," it is best understood by taking into account the interplay among a number of factors considered simultaneously (Mangalam and Schwarzweller, 1968:4). Given this complex type of interplay, it was felt that a multivariate technique, such as "dummy dependent-variable regression," offered the most fruitful and appropriate way of dealing with and explaining such a complex process.

Generally speaking, this type of regression procedure is based upon assumptions which are similar to ordinary regression, the major difference between the two being that the dependent, as well as independent, variables are categorical or dummy variables (Gillespie, 1977; Knocke, 1975; Miller and Erickson, 1974).

It is quite apparent that to varying degrees some of the basic underlying assumptions are problematic. Consequently, our use of this technique is based on (1) having a dependent variable whose split is well within the 25 to 75 per cent range which Gillespie (1977:105) states makes the violation of the underlying assumptions inconsequential, and (ii) our primary objective being to determine which factors differentiate return from non-return movers and *not* prediction of the conditional probabilities.

The Measures

Traditionally, the dependent variable has been measured in terms of in- and out-migration rates (Bogue *et al.,* 1953, 1957; Shryock, 1964; Stone, 1969). Given that individual-level data were being utilized, it was possible to identify three types of return movers and two types of primary movers.

Identifying an individual inter-provincial mover as either a primary or return mover was accomplished by cross-classifying destination province with province of birth and the province where the highest grade of primary or secondary school education was completed. This cross-classification procedure resulted in the identification of five different types of movers (Table 1), namely, three return types and two primary types. That is, an individual who was born and educated in the same province and resided in another province in 1966,

TABLE 1. PERCENTAGE DISTRIBUTION OF INTER-PROVINCIAL
MOVERS BY TYPE OF MOVE FOR CANADA, 1966-1971

Type of Move		Percent (N)
Return -	Born and educated* same province; residing in same province in 1971.	17.8 (76)
Return -	Born and educated* different provinces; residing in province of birth in 1971.	3.5 (15)
Return -	Born and educated* different provinces; residing in province of education* in 1971.	9.8 (42)
Primary -	Born and educated* same provinces; residing in different province in 1971.	60.0 (257)
Primary -	Born and educated* different provinces; residing in different province in 1971	8.9 (38)
TOTAL		100 (428)

* Province where highest grade of primary or secondary school
education completed.

but returned to the province of birth in 1971 was one type of return mover. The other two categories of return movers identified individuals who in 1966 were residing in a province other than the province of birth or schooling and who returned to (i) the province of birth in the case where their provinces of birth and schooling were different or (ii) the province of schooling in the case where their provinces of birth and schooling were different. The primary movers, on the other hand, were simply identified on the basis of their having made an inter-provincial move between 1966-71 to a province other than the province of birth or province of schooling.

Although enabling one to identify these movers in a meaningful way, there is a major limitation presented by this data, namely, that return migrants will refer only to those individuals that were *not* living in either the province of birth or province of schooling five years prior to the date of the 1971 census. The consequence of this being an under-representation of the magnitude of the return migration phenomenon since those individuals that did make return (multiple movers) during the 1966-71 period will not be represented in the sample as return movers because at the time of the census (1971) the origin and destination in both 1966 and 1971 will have been the same.

It is noteworthy that 42.8 per cent of the return movers were not born and educated in the same province, while only 12.9 per cent of the non-return movers were not born and educated in the same province. This large difference could perhaps reflect mobility made in search of further educational opportunities for the latter group, while indicating returning home from that search for the former group. The finding that for those not born and educated in the same province (return movers only), the return move is back to the province of education rather than of birth could perhaps be an indication that these are not return moves after having completed some postsecondary school education in another province partly because it obviously indicates prior inter-provincial movement as a child.

It should also be noted that the magnitude of return migration (31.1 per cent) is about ten percentage points higher than that noted in other studies (Courchene, 1970; DaVanzo, 1976; Miller, 1973; Vanderkamp, 1972). In relation to the Canadian studies, this ten percentage point difference is quite likely due to the fact that these studies have generally examined a much shorter time period. That is, Vanderkamp (1972), for example, found that for 1966-1967, 19.9 per cent of all inter-provincial moves were of the return variety. Consequently, because a five-year interval is being used in this study, a figure of 31.1 per cent would appear to be quite plausible and if anything it would seem to be somewhat low.

With respect to the analysis, the dependent variable was created by treating the three types of return movers as one homogeneous category, whereas, the two primary types of movers were also treated as a homogeneous category.

The independent variables, as has already been noted, are all categorical variables which were created by following the accepted convention for creating dummy variables. These variables fall under three general headings: (i) opportunity structure — region (province of destination) and origin community size as proxies for housing and employment opportunities; (ii) demographic — age, family size, marital status and mother tongue; and (iii) socioeconomic — education, occupation and income.

Before proceeding with the discussion of the results, one further point should be made. Specifically, the demographic and socioeconomic variables (as well as region variable) represent the status of the individual not prior to or at the time of the move but, rather, after the move. The point being that the status of the individual at the time of the move may be quite different from the status represented by these variables as a consequence of having moved.

The Analysis

Ideally, one would have preferred to use the step-wise multiple regression procedure, but due to the violation of certain statistical assumptions, such a procedure would have been inappropriate given that entry is based upon the significance of the corresponding F-ratio (Nie *et al.*, 1975:345-346). Consequently, the hierarchical method was employed (variable entry, as appears in Table 3), with precedence being given to one variable over another using the assumption of temporal priority.

Generally speaking, the overall model explained only 17.62 per cent of the variance in the probability of being a return, as opposed to non-return (primary), inter-provincial mover (Table 2). Normally such results would be considered to be somewhat disappointing, but given that these results are based on micro-level data, the results are quite acceptable.

Further examination of Table 2 reveals that 12.35 per cent of the variance in the probability of making a return move is accounted for by the regional differential. On the other hand, all of the remaining variables (taken together) account for only 5.27 per cent of the variance or 29.9 per cent of the total explained variance.

The more detailed examination of the effect of all the variables is presented in Table 3. Before detailing their effects, it should be noted that for this particular sample there was an almost 30-70 split on the dependent variable. This indicates that without knowing anything about an individual, one could guess correctly almost 30 per cent of the time (by assuming everybody is a return mover), whether an individual was a return or primary (non-return) inter-provincial mover. On the other hand, it is quite noteworthy that the probability of being a return mover is substantially greater for individuals in the reference category. Specifically, the probability is approximately 0.65, assuming of course, an additive model. Additivity was assumed because of (i) the large number of possible interaction terms and (ii) the difficulties associated with testing the statistical significance of these interaction terms.

58

TABLE 2. TOTAL AND PARTIAL R²'S OF OPPORTUNITY
STRUCTURE, DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES
ON DIFFERENTIATING INTER-PROVINCIAL MOVERS
BY TYPE OF MOVE[1]

(N=428)

Variables	Total R^2	Partial R^2
Opportunity Structure		
Region	.12350	.12350
Origin Community Size	.12483	.00152
Demographic		
Mother Tongue	.12518	.00040
Age	.14634	.02419
Marital Status	.15427	.00929
Family Size	.15969	.00641
Socio-Economic		
Education	.16266	.00353
Occupation	.16691	.00501
Income	.17620	.01115

1. Dependent Variable = Return = 1
   Primary = 0

Opportunity Structure Differentials

Of these variables, only region had a significant effect upon the probability of making a return move. Examination of the unstandardized *b*'s reveals that for all regions the probability of making a return move is decreased by simply residing outside Quebec in 1971. Comparing these same unstandardized *b*'s to one another, it is interesting to note that although a return move is less likely to be towards Ontario, the Prairies and British Columbia, a return move is more likely if one originated in the Maritimes.

TABLE 3. REGRESSION OF OPPORTUNITY STRUCTURE, DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES ON DIFFERENTIATING RETURN FROM PRIMARY INTER-PROVINCIAL MOVERS[1]

	Unstandardized b's	Standard Error b	Zero-Order Correlation
Opportunity Structure			
Region			
Maritimes	-.05927	.09676	.19088
Quebec	-	-	-
Ontario	-.39372*	.07871	-.06868
Prairies	-.36047*	.07975	-.03357
B.C.	-.53840*	.08372	-.20969
Origin Community Size			
Urban 30000+	.05565	.05769	.04825
< 30000	.00833	.06280	-.04024
Ruran Non-Farm and Farm	-	-	-
Demographic			
Mother Tongue			
English and "Other"	.03467	.06404	-.10686
French	-	-	-
Age			
15-24	-.11095	.09678	-.00825
25-29	-.14525	.09678	-.03550
30-34	-.07901	.10103	.00727
35-39	-.23444*	.10927	-.06760
40-54	-.02605	.08795	.04159
55+	-	-	-
Marital Status			
Single	-	-	-
Married ≤ 5	-.07762	.07274	-.03195
> 5	-.09636	.07934	-.05333
Other	.04999	.08107	.08297

The finding that return moves are most likely to occur among those originating in Quebec is supportive of the idea of a language barrier. As well, the finding that return moves to Ontario and British Columbia are unlikely is indicative of: in the first instance, the pull having to be quite substantial to have led one to make the initial inter-provincial move out of Ontario, given the large number of opportunities present; and, in the second instance, of the little West-East movement out of British Columbia by those who were born and educated there.

TABLE 3. CONTINUED

	Unstandardized b's	Standard Error b	Zero-Order Correlation
Number of Children			
0	-	-	-
1	.05861	.06927	-.01979
2	.12207	.07200	.01639
3+	.09158	.07664	.00767
Socio-Economic			
Education			
≤ Primary	-	-	-
Gr. 9-11	.03651	.06336	-.01052
Gr. 12-13	.09712	.07457	.01104
Some University	.04222	.08200	.01797
Occupation			
Unemployed	-	-	-
Managerial and Professional	-.02362	.10811	.00582
Service	-.07157	.09658	-.03206
Manufacturing	-.03025	.10123	-.05565
Primary and Other	.03401	.10435	.05897
Income			
≤ 2480	-	-	-
2481-5620	.09886	.06664	.09412
5621-8640	.01916	.07602	-.02948
8640+	-.02445	.08272	.06040

Constant = .65076 (proportion return movers = .31; proportion primary movers = .69)

R^2 = .17620   N = 428   - Reference Category   *Significant at least .05 level

1.   Dependent Variable: Return = 1; Primary = 0

Demographic Differentials

Both the literature and the demonstrated effect of the regional differential lead us to believe that mother tongue might be an important factor. Specifically, one could assume that there is a greater propensity among the French to return, due to the problems created by the language barrier which exists outside of the province of Quebec.

The results indicate no support for the above hypothesis. It is quite possible that, given the way in which the variables are coded and entered into the regression equation, adjusting for region removes any of the effects of mother tongue since those with French as the mother tongue are found primarily in Quebec.

Although age is generally thought to be the most useful of the demographic differentials (Eldridge, 1965; Grant and Vanderkamp, 1982, 1984; Lee, 1974), there is reason to suspect that its effect in this study will be marginal. There are two reasons for this belief: the first being that inter-provincial movers of all types are assumed to be similar in age to one another; the second being that grouping primary (non-return) movers into one category tends to diminish the effect of age, since some of these movers are making their second inter-provincial move. Consequently, one could assume that they are more similar in age to return movers than primary movers (first-time movers).

Examination of Table 3 tends to support the above hypothesis, what with only those aged 35-39 (in 1971) having a pattern of movement that is substantially (statistically) different than those in the reference category (55+). This finding is probably accounted for by the motivation behind the original inter-provincial move. That is, the commitment (and reasons for moving) are probably greater for this group given that the original move was presumably made in response to career aspirations.

Socioeconomic Differentials

Generally speaking, not one of these differentials appeared to be important (statistically) in differentiating these two groups of movers from one another. Once again this finding is perhaps attributable to the idea that we are essentially comparing two groups that are similar, and perhaps as important is the fact that these variables represent the status of the individual after the move and not necessarily status at the time of the move.

Summary

The operation of the examined differentials proved to yield results that were somewhat disappointing. Although only the region and age differentials were of any consequence from a statistical point of view, the results did appear to be consistent with the somewhat limited research that has been done in this area to date.

It appears, given the almost 30-70 split on the dependent variables, one could substantially increase the chances of guessing correctly if an individual were going to make a return move, simply by knowing their region of residence and their age.

In part, one could attribute the lack of more significant results to the following factors:

1. The *ex-post facto* nature of many of the examined differentials, the implication being that status after the move may be more representative of status achieved as a consequence of moving, rather than status at the time of the move.

2. The fact that although the direction of the move is in an opposite direction, the type of move is similar for these two groups. Consequently, one would expect them to be similar in characteristics.

3. The way in which the dependent variable was created, that is, by collapsing all inter-provincial movers into two cagegories. The problem created by this crude classification is that although return movers have made at least one inter-provincial move, an undetermined proportion of those classified as primary movers are individuals who have also made at least one (if not more than one) inter-provincial move in a direction away from the origin. Consequently, these second-time or more-time inter-provincial movers are probably more similar in their make-up to return movers than to first-time inter-provincial movers, thereby possibly explaining the lack of statistically significant differences between these two groups.

Perhaps the major contribution made by this study was the discovery that (during this period) at least 30 per cent of the inter-provincial moves resulted in failure, that is, a return move. Consequently, a better understanding of this phenomenon is needed, if for no other reason than to be able to help deal with the problems that are created at the individual level as a result of this failure. Not only is it important to understand this phenomenon at the individual level, but it is obviously important to understand it at the aggregate level as well. It is quite clear, given government attempts to promote regional development and the efficient distribution of labour through migration policy, that such policies are likely to result in failure given the somewhat high failure rate found among inter-provincial movers in Canada.

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