INTERPROVINCIAL MIGRATION OF CANADIAN IMMIGRANTS

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SUMMARY

Data from the 1981, 1986, 1991, 1996, 2001, and 2006 censuses of Canada offer evidence on the migration experience of earlier immigrant cohorts in the five years prior to the census. These censuses provide direct data on interprovincial flows of immigration cohorts during the 1976 to 2006 period. They also provide indirect evidence for the internal redistribution of those immigrants who arrived in Canada between during the five years prior to each census. This paper shows that, although interprovincial mobility is common for all segments of Canadian society, including both Canada-born and foreign-born, interprovincial redistribution shifts of immigrants are nonetheless significant. Shifts in provincial populations attributable to migration over five year period may exceed 10 percent, while the short-run effects on the foreign-born of specific ethnic origin may be even larger.

Data on the foreign-born are compared to information about the internal migration patterns of the Canada-born. Foreign-born and Canada-born migration patterns are similar in three ways: (1) migration tends to be out of the Atlantic and Prairie provinces and into Ontario, British Columbia, and Alberta; (2) migration tends to be from less to more populated provinces; and (3) foreign-born and Canada-born migration appears to respond to differences in unemployment, wage rate, and labour force size differences in the same manner. Nevertheless, there are differences. The Canada-born tend to move from provinces with a higher proportion of foreign-born population, while the foreign-born are more likely to stay in provinces with a higher proportion of the foreign-born of the same ethnicity as themselves.

Regarding the question of whether immigrants tend to concentrate or disperse during their initial year of residence in Canada, these data provide no systematic evidence of dispersion of immigrants throughout the Canadian provinces. Immigrants move more than the Canada-born population during their first 20 years in Canada and, at the provincial level, they tend to stay in provinces in which there are a higher proportion of their immigrant co-ethnics. Analysis of the migratory behaviour of recent immigrant cohorts provides evidence that there are distinct patterns of higher and lower migration for some ethnic origin groups. Moreover, groups vary in their response to the proportion of foreign-born of the same ethnicity.
SOMMAIRE


Les données sur l'origine étrangère sont comparées aux données sur les schémas de migration interne de l'Entente Canada-né. Mouvements migratoires nés à l'étranger et au Canada-né sont similaires de trois façons: (1) la migration tend à être hors de la provinces Atlantique et des Prairies et en Ontario, en Colombie-Britannique et de l'Alberta, (2) la migration tend à être de moins à plus provinces peuplées, et (3) d'origine étrangère et migration Canada-né semble répondre à des différences de taux de chômage, taux de salaire, et les différences de taille de la population active de la même manière. Néanmoins, il existe des différences. Personnes nées au Canada ont tendance à passer de provinces avec une plus grande proportion de la population née à l'étranger, tandis que nées à l'étranger sont plus susceptibles de rester dans les provinces avec une proportion plus élevée d'nées à l'étranger de la même ethnie qu'eux-mêmes.

En ce qui concerne la question de savoir si les immigrants ont tendance à se concentrer ou disperser au cours de leur première année de résidence au Canada, ces données ne fournissent aucune preuve systématique de la dispersion des immigrants dans toutes les provinces canadiennes. Les immigrants se déplacent plus que la population du Canada-né pendant ses 20 premières années au Canada et, au niveau provincial, ils ont tendance à rester dans les provinces où il ya une plus grande proportion de leurs co-ethniques immigrés. L'analyse du comportement migratoire des cohortes d'immigrants récents apporte la preuve qu'il existe des modèles distincts de migration supérieur et inférieur pour certains groupes d'origine ethnique. En outre, les groupes varient dans leur réponse à la proportion de Canadiens nés à la même ethnie.
INTRODUCTION

Canadian immigration has played a significant role in the growth of the Canadian population, not only in terms of the character, magnitude, and timing of overall growth, but also as a factor in internal distribution (Beaucourt, 1991 and 1995; Badets and Chui, 1994). Previous research has tended to regard these effects on provincial or metropolitan populations as a function of direct immigration to specific locations. The effects of redistribution from migration after arriving in Canada have received relatively limited research (however, see Moore, et al., 1990 for a study of the geographic redistribution of Canadian immigrants; Belanger, 1993 for discussion of selected factors and migration; Nogle, 1994 for an examination of admission information and internal migration of immigrants; Ram and Shin, 1995 for cohort data on the settlement patterns of recent immigrants; Newbold, 1996b for a comparison of foreign-born and Canada-born internal migration; and Citizenship and Immigration Canada, 2000 for analysis using administrative records).

The distribution of immigrant groups is a function of two major processes: (i) flows of immigrants to Canada and their initial choices of residence and (ii) subsequent relocation behaviour, a process including moves within Canada, return migration to their home country, and emigration to a third country. Analysis of the changing distribution of the foreign-born population focuses mostly on the net effects of emigration and moves within Canada, without any attempt to isolate either the different types of flow or the impacts of different cohorts.

EMPIRICAL BACKGROUND

The study of the internal migration of immigrants is important in light of the expanding numbers of immigrants to Canada. The ability to predict which areas of the country will receive immigrants and which areas gain and lose from the redistribution of immigrants would help to improve our understanding of future population change. Further, if it is the case that immigrants tend to cluster where their countrymen are located, this has important consequences for the planning of services and for the integration of immigrants within Canadian society.

The issue of the geographic distribution of immigrants, taking into account their initial place of settlement and the redistribution after settlement, has become more important in recent years for Canadian public policy debate. During the past decade, changes have been made in Canadian immigration policy to permit provincial governments, in partnership with the federal Citizenship and Immigration Canada agency, to admit immigrants under the “Provincial Nominee Program.” There has been growing interest in the increasing settlement of immigrants in the three largest cities – Toronto, Vancouver, and Montreal – and the possible concentration of immigrants after initial settlement in these three large metropolitan areas (Citizenship and Immigration Canada, 2001). Where immigrants move, and whether they disperse or concentrate after arrival, has great bearing on these current policy debates.

INTERPROVINCIAL MIGRATION

Migration between the provinces of Canada has been one of the key variables affecting the overall distribution of the population. The flow of population across provincial boundaries has tended to follow changes in economic opportunities, with strong economic growth and increased employment attracting a large proportion of migrants. Economically disadvantaged provinces have had difficulty attracting migrants, and in some cases have had a net outflow of population. Regional economic booms and busts have resulted in shifts in the flow of population.

Table 1 presents the percentage distribution of the Canadian population, by provinces,
from 1871 to 2006. Since the 1930s, net interprovincial migration in Canada generally has been from the Atlantic Provinces, Quebec, Manitoba, and Saskatchewan to Ontario, British Columbia, and more recently to Alberta. As a result, these latter three provinces have claimed an increasing share of the Canadian population at the expense of the other regions.

Atlantic Canada has witnessed a continued net outflow of migrants since 1931. The lack of a strong, diversified economy combined with reduced employment opportunities in fishing and other resource industries has resulted in outflows of several thousand persons per year in recent decades. With natural increase going down and substantial levels of out-migration, Prince Edward Island was the only Atlantic province to experience population growth between 1996 and 2001. Most migrants from Atlantic Canada have moved to Ontario or Alberta in the past decades.

Quebec has experienced large net outflows of migrants for the past four decades, especially since 1976. An excess of about 15,000 more persons departed Quebec each year than arrived. Most migrants leaving Quebec moved to Ontario. To a large extent, the net outflow from Quebec has been the result of a decrease in the flow of persons moving to Quebec. During the early 1960s, Quebec received about 45,000 migrants each year. In-migration dropped to about 25,000 per year in the past 15 years.

Ontario has had a diversified economy and strong employment growth that has attracted in-migrants for many decades, with the exception of the 1970s when there was a net outflow of population. In the past five years, Ontario has had a net gain of about 80,000 immigrants and about 25,000 internal migrants each year. The largest proportion of internal migrants to Ontario comes from Quebec, with the second most common origin from Alberta.

Manitoba and Saskatchewan have had a net outflow of migrants since the 1930s. Many factors have contributed to the outflow: the Depression and drought of the 1930s, the revolution in farm technology and the expansion of larger farms, and an economy heavily dependent upon the farm industry. Net outflows of people were particularly heavy for Saskatchewan during 1931
to 1961 and during 1996 to 2001, when the province experienced an absolute decline in the population. From 1996 to 2001, Manitoba had the smallest province population increase since 1981. In recent years, the net outflow has continued, but at a level of about 1,000 per year for the two provinces combined. Before World War II, most migrants from Manitoba and Saskatchewan went to British Columbia or Ontario. In the past several decades, Alberta has received the major share of migrants from the two provinces.

Alberta has had fluctuations in migration flows, reflecting the volatility of its economy. The drought in the 1930s depressed its farm economy and resulted in a net population outflow. With the expansion of the oil and gas industry, there was rapid economic growth from 1941 to 1976, with a net inflow of population. There was a subsequent boom and bust of the oil and gas industry in Alberta, resulting in a massive influx of people during 1976 to 1981, with a net gain of about 186,000 internal migrants, and a substantial outflow during 1981 to 1986, with a net loss of about 29,000 internal migrants. Fluctuations in flows continued during 1986 to 1991 with the result that Alberta had almost the same proportion of the Canadian population in 1991 as it had in 1981. Alberta resumed population growth in the 1990s, becoming Canada’s fastest growing province in the 1996-2001 period. There was a net in-migration of about 30,000 annually from other Canadian provinces to Alberta in recent years, giving Alberta is fastest growth rate since the height of the oil boom in the early 1980s.

British Columbia has historically received net inflows of population from the rest of Canada. It is the only province to grow faster than the national average in every census since it joined Confederation in 1871. Its favourable climate, attractive scenery, and relatively strong economy have all contributed to its attractiveness for Canadian internal migration. The relatively severe economic recession of the early 1980s, however, reduced internal migration from previous levels of about 25,000 net migrants per years. During several years in the early 1980s, British Columbia experienced net outflows of population for the first time. Alberta was the main source of in-migrants to British Columbia and the main destination for those leaving British Columbia. In
recent decades, the flow of population between British Columbia and Alberta has rivalled the stream between Quebec and Ontario as the single largest migration stream in Canada. In the 1996-2001 period, British Columbia’s population growth continued to outpace the national average but the trend was slowing. 2001 census data reveals that the high number of immigrants settling in the province offset a net outflow of British Columbia residents to other provinces in recent years.

Overall, the flow of Canadian internal migration during the past century has contributed to shifts in the provincial distribution of population in a generally westward direction. In the post-World War II period, the proportion of the Canadian population in Ontario, British Columbia, and Alberta has grown, while the remaining provinces and territories have seen their shares of the national population decline. The percentage of the Canadian population in Ontario, British Columbia, and Alberta increased from 48 percent in 1951 to 61 percent in 2001. The Atlantic Provinces have seen their share of the Canadian population decrease the most of any region. The proportion of the population in the Atlantic Provinces halved in the post-war period, from 18 percent of all Canadians in 1951 to less than 8 percent in 2001. Quebec, Manitoba, Saskatchewan, and the Northwest and Yukon Territories and Nunavut experienced declines in their shares of population in the post-war period.

CANADIAN IMMIGRATION

Canada admitted 220,000 immigrants in 2003 and admitted about 170,000 to 260,000 immigrants annually in the past decade. In 2003, Canada admitted 7.0 immigrants per 1,000 population, a figure that is substantially higher than other major immigrant-receiving countries. The comparable immigration rate for Australia, New Zealand, and the United States has averaged about 2 to 4 per 1,000 in recent years (Smith and Edmonston, 1997: 62-65).

Immigration has been an important component of Canadian population growth for the past four centuries. In fact, immigrants from Europe and Asia had come to the present territory of
Canada long before 1867 Confederation. During the past 150 years, the number of immigrants coming to Canada has been quite high relative to other immigrant flows throughout the world. Only Australia and the United States have experienced comparable heavy immigration, albeit there have been larger numbers of immigrants into the larger U.S. population.

The history of immigration to Canada since the inception of official record keeping in 1851 to the present can be summarized as follows. Records clearly show the immigration boom that occurred during the late decades of the nineteenth century through the period immediately preceding World War I. This period, a time of rapid urbanization and industrialization and the settlement of the prairies, saw especially large immigration from Europe and modest labour migration from Asia (mainly from China and less so from Japan and the Philippines). The peak year for immigration was 1913, when over 400,000 immigrants arrived. In the peak 5-year period of 1908 to 1913, about 1,568,000 immigrants arrived in Canada, an addition of almost 5 percent of the population per year (this contrasts to the peak year of 1907 in the United States, when immigration added 3 percent to the population). By 1913, over one-fifth of the Canadian population had arrived in the preceding five years. From the perspective of the foreign-born population, over one-half of the immigrants in Canada in 1913 had arrived in the previous five years. In contrast, few immigrants came during World War I, the Depression, and World War II.

Immigration increased steadily in the years after World War II, since Canada enjoyed a high degree of political freedom and economic prosperity compared with Europe and many other parts of the world. Table 2 shows the volume of immigration and country of birth of immigrants for the 1946-2003 period. Available employment in the expanding manufacturing and resource sectors of the economy gave ample opportunities for the new wave of immigrants. Changes in Canada immigration legislation and the removal of national restrictions have affected the composition of immigrants during the past five decades. In the 1946-1955 period, for example, immigration from Europe and the United States accounted for over 90 percent of Canadian arrivals. Immigrants from the United Kingdom contributed more than one-fourth of arrivals in the
10 years after World War II. On the other hand, immigration from Asia and the Pacific accounted for only 4.5 percent of arrivals during 1946 to 1955. The national-origin of immigration shifted somewhat in the late 1950s and early 1960s and then took a noticeably different form by the 1970s, with a marked decline of immigration from Europe and increased immigration from Asia and other areas (the Caribbean, Latin America, and Africa). In recent years, more than 50 percent of Canadian immigrants are from Asia, with the largest source countries being China (16 percent of total immigration), India (11 percent), Pakistan (6 percent), and the Philippines (4 percent). Among non-Asian countries, the major sources in 2000 were the United States (3 percent), Iran (2 percent), Yugoslavia (2 percent), the United Kingdom (2 percent), and Russia (2 percent). Hong Kong, which was the largest source country in the 1980s, has accounted for only a modest amount of immigration in recent years.

PROVINCIAL MIGRATION LEVELS

This section describes the levels of out-migration and in-migration for Canadian provinces for the Canada-born and for three immigrant cohorts (arrivals 5 to 10 years prior to the census, arrivals 10 to 15 years prior to the census, and arrivals 15 to 20 years prior to the census), comparing out-migration rates for 10 Canadian provinces and for the combined population of Yukon, Northwest Territories, and Nunavut (these detailed tabulations are not shown in this paper; they are described here to provide a context for the multivariate analysis reported in the next section). Out-migration rates are higher for recent immigrants than the Canada-born with some exceptions (Ontario, Alberta, and British Columbia have similar out-migration rates for the Canada-born and foreign-born). Out-migration rates are especially high for the foreign-born in several provinces; rates are above 20 per 1,000 in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Saskatchewan, and Yukon and Northwest Territories. It should be noted that there is not a consistent monotonic decrease in out-migration rates with increased duration in Canada for recent immigrant cohorts. There are noticeably high rates of out-migration
for the recent immigrant arrivals in Newfoundland and Yukon and Northwest Territories, but for other areas, out-migration rates sometimes increases for earlier immigrant cohorts.

Ontario, Alberta, and British Columbia are the predominant provinces of destination for both Canada-born and foreign-born persons. In-migration rates for the foreign-born are higher than the Canada-born for Ontario and British Columbia, indicating their favoured position as places for resettlement after arrival in Canada. Among recent immigrant arrivals, an especially high number go to Ontario and British Columbia, although it should be noted that lesser numbers go to Nova Scotia, Quebec, and Alberta. Relatively few Canada-born or foreign-born migrate to other provinces and territories.

In summary, the provincial patterns of migration during the past 25 years reveal a movement out of Atlantic Canada, Manitoba, Saskatchewan, and Yukon and Northwest Territories to a few provinces, primarily Ontario, British Columbia and, to a lesser extent, Alberta. Migration rates for the foreign-born differ from those of the Canada-born in several ways: (1) the out-migration and in-migration rates are higher for recent immigrant arrival cohorts, (2) out-migration rates are especially high for Newfoundland and for Yukon and Northwest Territories, and (3) in-migration rates are much higher for Ontario and British Columbia.

MIGRATION PROCESS

This section describes and provides estimates for a statistical model of the determinants of the interprovincial migration of recent immigrants to Canada. In the first part, the model is described. The second part defines the variables used in the model. The third part presents the results for the immigrants and compares them to results for natives of similar ethnicity as well as the overall Canada-born population.

DETERMINANTS OF INTERNAL MIGRATION

Previous research on Canadian internal migration has often viewed migration as an
adjustment for imbalances between areas. From an economic perspective, migration has been seen as an adjustment mechanism to differentials in incomes and employment opportunities. Such migration followed from economic theory (Sjaastad, 1962) that views an individual's migration as a human capital investment in which a person will move if the discounted net gains from moving are positive. Prior research findings in Canada and other countries have generally reported results in the predicted directions (Newbold and Liaw, 1994). Previous Canadian work has also demonstrated that social imbalances and ethnic affinity affect migration (Trovato and Halli, 1983 discuss ethnicity and migration for Canada; Trovato, 1988 presents a useful discussion of ethnicity, language, and nativity relationships with intraurban mobility). One important provincial difference is language. Language reflects cultural ties, the ability to understand local communication, and consumption patterns. In the past, individuals who speak only French are less prone to emigrate from Quebec and more likely to be out-migrants from other provinces (Belanger, 1993; Langlois, 1993; Langlois and Castonguay, 1993; and Kaplan, 1995 offer recent research on migration and language). Conversely, individuals who speak only English are more likely to leave Quebec and are less likely to move there. There are various results for bilingual speakers, whether Anglophones or Francophones, and these results are not summarized here.

In order to study the determinants of the probability of moving, those variables that measure the discounted net return from moving must be identified. Greenwood (1993) provides a survey of the literature on geographic mobility and articles on this subject. Fields (1979) and Shaw (1985) show that researchers have used information on the individual's characteristics and the characteristics of the area in which he or she resides at the beginning of the period under study as proxy variables for the components of human capital.

Courgeau (1995) stresses the important distinction between aggregate and individual level analysis of migratory behaviour. Aggregate analysis deals with group characteristics, attempting to provide explanation, for example, for migratory streams in terms of characteristics of the origin and destination. Such analysis is commonly used in migration studies using an ecological
framework. Individual analysis uses characteristics of the person and attempt to provide explanation of the migrants' behaviour. As Courgeau argues, it has been difficult to integrate these two approaches because aggregate analysis deals with collective behaviour using group characteristics and individual analysis deals with persons experiencing events.

The contrast of aggregate and individual analysis is not new in demography. The debate between ecological and behavioural perspective in the 1950s stresses the value of different approaches, although the debate also polarized discussion and failed to indicate methods of integration. More recently, analysis of multilevel data has provided examples of ways to take the aggregate context into account in individual analysis (Newbold and Liaw, 1995 present an empirical example of this type of analysis). This paper provides a further example of integrating data for individuals and aggregates. Individual and aggregate characteristics are used at the same time to identify results about migratory behaviour.

DATA AND VARIABLES

This analysis begins by specifying a model of the determinants of the interprovincial movement of immigrants – during the five years prior to the census – who arrived in Canada during the 20-year period prior to the census, using microdata from the censuses of 1981, 1986, 1991, 1996, 2001, and 2006. Since the sample is obtained from census public use microdata files, information on personal characteristics as of five years prior to the census is limited to those questions asked in the census and the categories coded for microdata individual file. Data on three variables in this category are available: the individual's age five years prior to the census, the individual's education at the time of the census, and whether the individual is reported to speak either of Canada's two official languages, English or French. Although education is measured at the time of the census, because the individuals in the sample were at least 20 years old at the time of immigration, it is likely that any systematic change in educational attainment during the period five years prior to the census and the time of the census would have been an increase in education.
The estimate of the effect of education on migration is therefore probably an understatement of the true effect.

Because the likelihood of interprovincial migration is greater for younger adult males and decreases for older adults, we expect that the coefficient for age will be negative. Relative to males who are French speaking in Quebec or English-speaking not in Quebec, we expect that English speakers in Quebec and French speakers not in Quebec will be more likely to move and that the coefficients for these two groups will be positive. Relatively few adults do not speak English or French and we have no expectation about the effect of this group on interprovincial migration.

Relative to the Canada-born population, we expect that immigrants are more likely to move interprovincially. Other factors being equal, we expect that the most recent arrivals, those immigrants who arrived 5 to 10 years prior to the census, will have the highest rates of interprovincial migration, those who arrived 10 to 15 years prior to the census will have the next highest, and immigrants who arrived 15 to 20 years prior to the census will have higher rates than the Canada-born reference group.

Several variables are used in regression analysis as determinants of migration from the province in which the individual resided five years prior to the census:

1. the logarithm of the male population, aged 20 to 60 years, of the province;
2. the provincial rate of employment growth, for males 20 to 60 years, during the five years prior to the census;
3. the logarithm of the average annual wage for males,\(^1\) aged 20 to 60 years, in the province, five years prior to the census;
4. the proportion of the province's population that is foreign-born; and

\(^1\) The reported wages and salaries for adult males in the labour force was calculated for fulltime employment, adjusting for the number of weeks worked during the past year and the average hours worked per week. For example, an adult male who reported $5,000 in wages, worked 26 weeks during the past year, and reported working 20 hours per week, had adjusted fulltime wages of $5,000 times (52/26) times (40/20) or $20,000. The annual provincial fulltime wage rate is the average of the adjusted fulltime wages for all adult males in the province.
(5) the proportion of the province's population that is foreign-born and of the same specific ethnic origin and the respondent (for analysis of immigrants).

Data for the variables were obtained from the six censuses of Canada. Population size is expected to have a positive sign because population acts as a measure of job opportunities and general economic activity. Employment growth should have a positive sign because, as the probability of finding a job in the province of origin increases, migration should increase. Wage rates are predicted to have a positive sign because it measures the economic attractiveness of other provinces relative to the province of origin. We do not expect to see any relationship between migration and the proportion foreign-born. We expect to see a positive effect of the proportion foreign-born of the same ethnicity on the probability of migration for immigrants.

**REGRESSION RESULTS**

Two logistic regression equations are estimated, separately for each of the six census periods. Table 3 reports logistic regression results for a model with main effects. Table 4 presents similar results for a model that includes a term for the interaction of ethnic origin and proportion foreign-born that have an ethnicity similar to the respondent. It should be noted that the variable measuring the proportion foreign-born for immigrants is the proportion foreign-born in the province of origin for the ethnicity of the respondent. There are different measures for each of the 7 main ethnic origin groups.

**Model I: Main Effects**

Table 3 provides logistic regression estimates for each of the six census periods. The variables are similar for each equation, except that the definition of specific ethnic groups within the main ethnic groups varies somewhat in the six Canadian censuses and no data are available for South Asians and East Asians from the 1981 census.

Education, age, and official language abilities have the predicted effects. Schooling has a
positive impact on the odds of interprovincial migration. Each additional year of school increases the likelihood of moving by 6 to 9 percentage points. Age has a negative effect on migration, with each year of age reducing the odds of migration by 1 to 4 percentage points. Three language variables are examined. Adult males who reside in Quebec and speak English, but not French, have a 3 to 9-fold increase in the odds of moving. Residents outside Quebec who speak French, but not English, are a relatively small population; they are somewhat more likely to move than the Canada-born population. Although we had expected that males who speak neither English nor French would have a lower migratory propensity, the results are mixed: they were more likely to move in 1976-81, 1981-86, 1986-91, 1996-2001, and 2001-2006 and less likely to move in 1991-96.

The variables that measure relative economic opportunities in the provinces (employment growth rates, wage rates, and labour force size) have the predicted effects. Interprovincial migration tends to be reduced from provinces with higher employment growth levels. Previous research on interprovincial migration has examined the relationship of unemployment and migration rather than the role of employment growth rates considered here. Foot and Milne (1981) rejected a test for homogeneity in their cross-sectional times series analysis of Canadian interprovincial migration rates for all variables except unemployment rates. They found that interprovincial migration rates do not respond to proportional changes in unemployment rates in all provinces in a similar way. Evidently, the migration response to unemployment varies for provinces. Regarding provincial employment growth rates, this analysis finds consistently lower interprovincial migration rates in association with higher levels of employment growth.

Wages have an expected negative effect for adult males. For a $1,000 increase in average provincial wage levels, these results suggest a reduction of migration to about .85 to .95 of the original level.

Increases in the labour force size are correlated with reductions in interprovincial migration, as expected. A 100,000 person increase in labour force size is associated, for adult
males, with a migration rate of about 0.9 the original level.

There are distinctive differences in migration rates for ethnic origin groups, taking other factors into account. East European, South European, and other single-origin immigrant ethnic groups are less likely to move than other groups. Of these three main ethnic groups, however, only South European immigrants have consistent negative coefficients for each of the six census periods. West European immigrants are unusual in that they tend to move more often – for three of the six census periods – than other groups. There does not seem to be a consistent pattern of immigration levels for South Asians and East Asian immigrants.

The relationships of proportion foreign-born and interprovincial migration are consistent for the six census periods. Migration rates are reduced in association with increases in the proportion foreign-born of a similar ethnic origin. The migration reductions are moderate, however. For each percentage point gain in the proportion foreign-born of similar ethnic origin, migration rates are about .8 to .9 of the original level.

Model II: Main Effects and Interaction of Ethnic Origin and Foreign-Born

Table 4 provides logistic regression estimates for each of the six census periods, similar to those shown in Table 3, but includes a term for the interaction of ethnic origin and the proportion foreign-born of an ethnic origin similar to the respondent. These results are only for immigrant cohorts in order to examine whether ethnic groups respond differently to variations in the proportion of immigrants.

As before, education, age, and official language abilities have the predicted effects. Additional schooling increases the likelihood of moving by 5 to 9 percentage points. An additional year of age reduces the odds of migration by 1 to 3 percentage points. Immigrants who reside in Quebec and speak English, but not French, have an increased odds of moving. Immigrants who do not reside in Quebec and speak French but not English have a greatly increased odds of moving. Although we had expected that immigrants who speak neither English
nor French would have a lower migratory propensity, as previously the results are mixed.

The variables that measure relative economic opportunities in the provinces (employment growth rates, wage rates, and labour force size) have coefficients comparable to prior results consistently have the effects predicted. For each of the six census periods, internal migration is reduced for provinces of origin with higher employment growth levels. Wages have an expected positive effect for adult males. Increases in the labour force size are correlated with reductions in interprovincial migration, as expected.

There continue to be variations in migration rates by ethnic origin, taking other factors into account. Compared with the excluded category (multiple origin ethnicity), West European and other single ethnic origin immigrants tend to have the same or higher interprovincial migration. South Asian immigrants have consistently higher migration rates. The pattern of migration rates for East European and East Asian immigrants, compared with the multiple origin category, is mixed. South European immigrants have lower migration rates.

As in Model I, an increase in the provincial foreign-born population of similar ethnic origin is associated with decreased interprovincial migration. In Model II, we examine whether this relationship varies for ethnic origin groups. The results suggest that ethnic groups vary in their responsiveness to the proportion of immigrant countrymen in the province of origin.

For all immigrant ethnic groups, compared to the reference group of Canada-born and multiple-origin immigrants, adult males are less likely to leave areas where there are a higher proportion of co-ethnics. Among the major ethnic groups, East European immigrants are noticeably less likely to move from areas with a higher proportion of co-ethnics. Other immigrant ethnic groups, compared to Canada-born and multiple-origin immigrants, are about one-half less likely to move for every percentage point increase in the proportion of immigrant co-ethnics.

Summarizing the overall comparisons of changes in the coefficients for the six census periods.

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2 These regression results were replicated for 1991 census data using the full list of 26 specific ethnic groups. The results indicate, for almost all ethnic groups, that the there are stronger effects of the proportion of co-ethnics on immigrant’s interprovincial migration. This suggests that the closer the definition of “co-ethnic” the stronger the effect of ethnic groups on the likelihood of migration.
periods, West European, East European, South Asian, other single origin, and multiple origin immigrants tend to be less response to the presence of their immigrant countrymen with increased residence in Canada. The coefficients for these groups indicate that the earlier immigrant cohorts are less affected by the proportion of their foreign-born countrymen than recent immigrant cohorts. The coefficients for East Asian immigrant demonstrate no change between the cohorts. Only in the case of South European immigrants is there evidence than migration rates are more responsive to the proportion foreign-born with increased residence in Canada.

**CONCLUSION**

The major finding of this paper is that, although recent immigrants to Canada move between provinces at a rate that is comparable to or in some cases exceeds that of Canada-born residents, there is little systematic evidence that the immigrant population becomes more geographically dispersed as time in Canada elapses.

The regression analysis of the determinants of interprovincial migration shows that the variables that measure relative economic opportunities in the provinces (employment growth rates, area wages, and labour force size) had significant effects on the probability that an immigrant changes provinces. For immigrants, we found that the concentration of immigrants in the province was an important determinant of migration, reducing interprovincial migration rates.

While it is difficult to explain satisfactorily why immigrants migrate across provinces in Canada, it is possible to conclude that whatever migration does occur is unlikely to lead to a substantial increase in the geographic dispersion of newer immigrants in Canada. It is important to note that this conclusion presumes that, if geographic dispersion occurs at all, it takes place within the first 20 years of experience in Canada. At best, treating cross-sectional data as a quasi-panel, one is able to observe the new immigrants only 20 years after arrival in Canada. If one relies only on the actual panel data analyzed here, then the conclusion is extrapolated from interprovincial migration during the five years prior to the census. By analyzing these quasi-panel
data, however, for recent censuses, it seems clear that there have been no substantial dispersion of immigrants.

An even larger question, of course, remains unanswered by this research. Is the lack of geographic dispersion a problem? On the one hand, some may argue that geographic concentration may inhibit the process of assimilation. But an equally valid argument could be made that ethnic enclaves provide the financial and community support necessary for immigrants to achieve success in Canada.
Table 1. Percentage Distribution of Provincial Populations, Canada: 1871 to 2006

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Source: Statistics Canada, Historical Statistics from the Census of Canada.
Table 2. Percent Distribution of Country of Birth of Immigrants, by Period of Immigration, Canada: 1946-2006

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Source: Employment and Immigrant Canada, annual publications; Citizenship and Immigration Canada, annual publications.

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<tr>
<td>Canada-born or Immigrant French-speaking in Quebec</td>
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Table 3 (continued).

**Immigrant Ethnic Origin**

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**Percent Foreign-Born of Same Ethnic Origin**

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--- Reference category.

² Not included as a separate ethnic origin category in the census microdata files.

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22
Table 4 (continued).

**Immigrant Ethnic Origin**

<table>
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<tr>
<th>Canada-born or Immigrant</th>
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<td>West European</td>
<td>1.70</td>
<td>2.05</td>
<td>1.60</td>
<td>5.84</td>
<td>1.58</td>
<td>17.26</td>
<td>1.46</td>
<td>10.84</td>
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<td>3.06</td>
<td>0.76</td>
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<td>1.24</td>
<td>2.15</td>
<td>1.51</td>
<td>7.87</td>
<td>1.82</td>
<td>15.03</td>
<td>1.90</td>
<td>14.03</td>
<td>2.11</td>
<td>12.67</td>
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<td>0.19</td>
<td>0.81</td>
<td>0.18</td>
<td>0.94</td>
<td>0.05</td>
<td>0.43</td>
<td>0.51</td>
<td>3.15</td>
<td>0.37</td>
<td>2.72</td>
<td>-0.05</td>
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<tr>
<td>South Asian</td>
<td>---b</td>
<td>---b</td>
<td>1.57</td>
<td>15.49</td>
<td>1.40</td>
<td>11.81</td>
<td>1.54</td>
<td>7.92</td>
<td>1.28</td>
<td>3.79</td>
<td>0.88</td>
<td>7.08</td>
</tr>
<tr>
<td>East Asian</td>
<td>---b</td>
<td>---b</td>
<td>1.81</td>
<td>11.54</td>
<td>1.60</td>
<td>18.09</td>
<td>1.57</td>
<td>15.28</td>
<td>1.43</td>
<td>3.81</td>
<td>-0.32</td>
<td>-4.00</td>
</tr>
<tr>
<td>Other Single-Origin</td>
<td>0.78</td>
<td>2.96</td>
<td>0.85</td>
<td>5.05</td>
<td>0.81</td>
<td>7.14</td>
<td>0.64</td>
<td>6.57</td>
<td>0.43</td>
<td>5.07</td>
<td>0.08</td>
<td>3.17</td>
</tr>
</tbody>
</table>

**Percent Foreign-Born of Same Ethnic Origin**

| | West European | -0.51 | -11.64 | -0.64 | 12.97 | -0.54 | 14.16 | -0.68 | 9.02 | -0.92 | 2.97 | -0.72 | -4.61 |
| | East European | -1.76 | -5.97 | -1.98 | -8.57 | -2.49 | -11.29 | -1.54 | -8.59 | -1.20 | -5.88 | -1.27 | -6.34 |
| | South European | -0.74 | -3.24 | -0.51 | -3.51 | -0.36 | -4.10 | -0.66 | -6.33 | -0.87 | -7.54 | -0.81 | -7.94 |
| South Asian | ---b | ---b | -0.61 | -8.12 | -0.56 | -9.04 | -0.67 | -9.22 | -0.68 | -10.40 | -0.76 | -8.29 |
| East Asian | ---b | ---b | -0.94 | -18.74 | -0.91 | -20.11 | -0.55 | -12.07 | -0.31 | -3.14 | -0.48 | -8.61 |
| Other Single-Origin | -1.07 | -6.67 | -0.87 | -6.57 | -0.98 | -5.68 | -0.74 | -4.89 | -0.87 | -2.29 | -0.76 | -3.84 |

**Number**

| | 835,965 | 886,071 | 939,170 | 984,518 | 1,032,055 | 1,086,176 |

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a Reference category.

b Not included as a separate ethnic origin category in the census microdata files.
REFERENCES

Aubry, Bernard

Badets, Jane and Tina W.L. Chui

Bartel, Ann P.

Bartel, Ann P. and Marianne J. Koch

Beaujot, Roderic

Beaujot, Roderic and J. Peter Rappak

Belanger, Alan

Citizenship and Immigration Canada

Courgeau, Daniel
Edmonston, Barry and Jeffrey S. Passel (editors)

Ekberg, Jan

Fang, Di and David Brown

Finnie, Ross

Foot, David K. and William J. Milne

Fields, Gary

Frey, William H. and Kao-Lee Liaw

Greenwood, Michael J.

Hou, Feng and Roderic Beaujot

Kaplan, David H.
Langlois, Andre

Langlois, Andre and Charles Castonguay

Moore, E.G., B.K. Ray, and M.W. Rosenberg

Newbold, K. Bruce

Newbold, K. Bruce and Kao-Lee Liaw

Nogle, June Marie

Ram, Bali and Y.E. Shin
Rosenbaum, Harry

Sjaastad, Larry A.

Shaw, R. Paul
Toronto, Ontario: NC Press.

Smith, James P. and Barry Edmonston (editors)

Trovato, Frank

Trovato, Frank and S.S. Halli

White, Michael and Zai Liang